

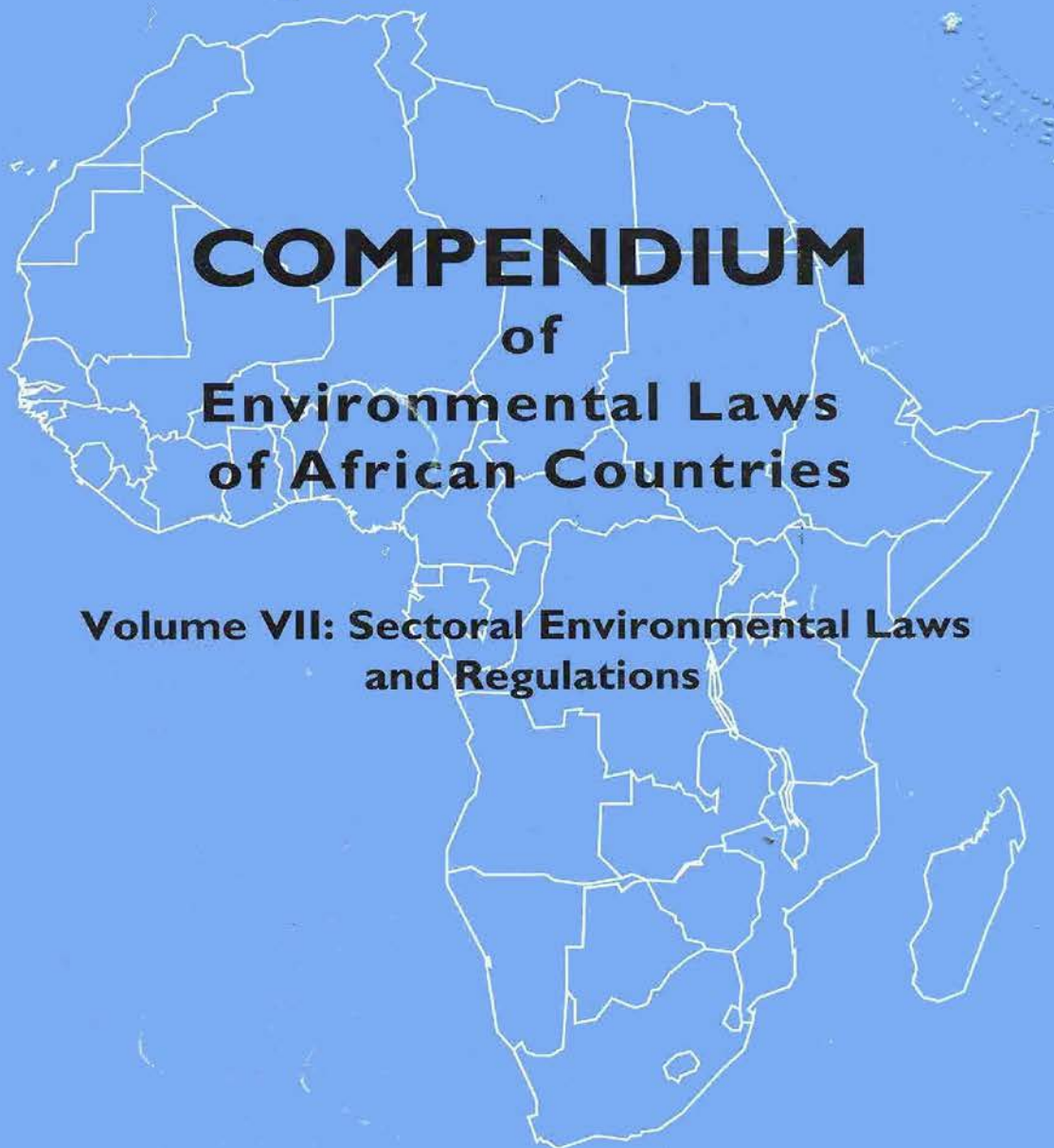


**UNEP**  
United Nations  
Environment Programme

# UNEP/UNDP Joint Project on Environmental Law and Institutions in Africa



United Nations  
Development Programme



# **COMPENDIUM** of **Environmental Laws of African Countries**

**Volume VII: Sectoral Environmental Laws  
and Regulations**

October 1998

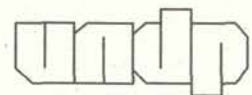
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**Volume VII: Sectoral Environmental Laws  
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Environmental Law  
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## PREFACE

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The Compendium of Environmental Laws of African Countries was published for the first time in 1996. The four volumes which were released are in two categories: Volume I contains texts of framework laws as well as EIA Regulations, which had been received by that time. The other three volumes contained sectoral laws and implementing regulations.

Since then, additional texts of framework laws and implementing regulations have been submitted by some governments to the UNEP/UNDP Joint Project on Environmental Law and Institutions in Africa. This was clear evidence that they support the idea and are prepared to be part of it.

A quick decision was taken to continue the series of volumes of sectoral laws and implementing regulations. Therefore, Volume V, VI and beyond have been released in 1998, and the series will continue thereafter. Furthermore, the framework laws and EIA regulations received from 1997 and beyond will be released as Supplements to Volume I. The second such supplement has been released this year.

The management of UNEP/UNDP/Dutch Joint Project on Environmental Law and Institutions in Africa wishes to record deep gratitude to the African governments which have supported this initiative. The various volumes of the Compendium and the supplements will provide useful tools for analogies to those countries in the process of developing their laws. Besides, this is an important resource for policy makers, teachers and researchers in comparative environmental law.

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## INTRODUCTION

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The Compendium of Environmental Law of African Countries is prepared by the Environmental Law and Institutions Programme Activity Centre (ELI/PAC) under the auspices of the UNEP/UNDP Joint Project on Environmental Law and Institutions in Africa which is funded by the Dutch Government. The objective of the Joint Project is to mobilize the expertise and guidance of six different agencies in working with selected African countries towards the enhancement of their legal and institutional capabilities in the field of environmental law. The agencies involved in this exercise are UNEP, UNDP, FAO, The World Bank, and the IUCN, all of which constitute the Project's Steering Committee. The World Health Organization (WHO) which originally participated as an observer, has since withdrawn from the status due to exigencies of their situation.

Eight African countries were selected for the first phase of the project. Activities which are national in character have commenced in Burkina Faso, Malawi, Mozambique and Sao Tome and Principe. The project's work has also commenced in Kenya, Tanzania and Uganda, except that here the focus is on issues of sub-regional character and the concentration is on harmonization of laws and standards to deal with the priority subjects, identified by the respective countries together. Except for consultations with UNDP, Pretoria, no systematic activities have commenced in South Africa where the national concern hitherto has been the evolution of the new constitution and the development of a national environmental policy, both essential for subsequent work on the structure of the national and provincial environmental laws.

The necessity for the compendium has been increasingly evident during the foregoing activities, particularly given the *modus operandi* in the project. The approach seeks to operationalize the concept of capacity building by involving the nationals of the project countries in the assessment of their environmental problems, review of the existing environmental laws and drafting of new and streamlined statutes consistent with the modern philosophy and enforcement of environmental law.

In this process, there have been frequent enquiries for the supply of environmental laws of other countries to provide analogies and inspiration for the national teams. It is often the case that laws from the developed countries of Europe and North America are readily available while one will only occasionally find such texts from other African countries. To date, there have been several efforts to collect laws related to environment and natural resources in Africa. An outstanding collection is at the IUCN Environmental Law Centre in Bonn. But there has been no collection which is published and readily available to prospective users in the region.

Over the years, the Environmental Law and Institutions Programme Activity Centre (ELI/PAC) has collected several texts of national environmental laws from all over the world. African texts from that collection formed the core of materials for the compendium. In addition, all African countries were requested to supply up to date texts of their national environmental laws and the response has been highly impressive and very encouraging. In fact, enquiries are frequently being received from those who would like to receive the compendium. So the production of the compendium will proceed in order to fill that gap. Fresh requests will be sent out for more and updated texts in readiness for subsequent volumes.

In our opinion, consumers of the compendium may be in the following five categories: First, the project countries which prompted the initiative to publish the compendium will utilize the handy texts in their on-going work. Secondly, other African countries will find use for the collection for similar endeavours. The Environmental Law and Institutions Programme Activity Centre (ELI/PAC) is working with a number of countries, beside the Joint Project, in the development of environmental laws, and additional requests are in the pipeline. Thirdly, the texts will be used in the same countries for teaching and research in environmental law, which is an exercise in capacity building. It is a fact that those engaged in research and teaching in Africa invariably rely on legislative texts published from North America and Europe because texts from Africa are difficult to obtain. Fourthly, researchers and commentators from different jurisdictions will find an easy access to the texts from African countries and, therefore, facilitate comparative analysis and the evolution of the relevant doctrines on a global scale. The lack of access to the texts of African environmental laws has impeded this development. Fifthly, donor countries which, like the Dutch Government, may wish to work with countries in Africa or other continents, on the development of environmental laws, will find handy comparative materials. Similarly, partner agencies, which are all active in the development of environmental and natural resources laws in developing countries, should find the compendium to be a handy source of analogies.

Sharing of comparative texts of national statutes will have the significance of promoting progressive development of environmental laws and countries outside the region would also benefit from recent environmental legislation from Africa. But it may, in addition, lead to gradual harmonization of the respective laws, which may, in turn, be a powerful path to avoidance of conflicts. The 1996 edition of the Compendium was produced in four volumes. The Volume I contains the framework environmental laws and EIA Regulations only. After the 1996 edition, only supplements to Volume I will be issued for the succeeding years to reflect development and these will be distinguished by the year of issue. The remaining volumes are sectoral laws, organized country by the country as the texts are received.

The Environmental Law and Institutions Programme Activity Centre (ELI/PAC) records profound gratitude to the governments which have made texts available for compilation of the Compendium. The process of creating laws is long and complex. But the development of environmental laws is particularly difficult because of the principles and requirements of the different stakeholders. Therefore, it is fitting that countries which complete the process should be proud to share such texts with the others. The Joint Project commends the initiative of African countries which is leading to the rapid growth of environmental laws in Africa.

September 1998

# BURUNDI

## Décret N°.100/130 du 14/12/1982 fixant les mesures d'exécution du Décret-Loi n°.1/138 du 17 Juillet 1976 portant Code Minier et Pétrolier de la République du Burundi, et portant la fiscalité minière.

Le Président de la République,

Vu la Constitution de la République du Burundi, spécialement en ses articles 32 et 33:

Vu le Décret-Loi no.1/138 du 17 Juillet 1976 portant Code Minier et pétrolier de la République du Burundi;

Sur proposition du Ministre des Travaux Publics, de l'Energie et des Mines et après avis du Conseil des Ministres;

Décète:

frappés d'un cachet dateur et enregistrés sur le registre du courrier à l'arrivée.

**Article 4:** Toutes les demandes, requêtes, correspondances, rapports et documents doivent être datés et signés lisiblement avec indicatif de la qualité du signataire.

**Article 5:** Il est rappelé que les demandes, contrats et conventions doivent être rédigés en Kirundi ou en Français (article 19 du Code Minier et Pétrolier de la République du Burundi). Il en est de même de tous les autres documents visés aux articles précédents.

### TITRE I

#### DISPOSITIONS GENERALES

##### CHAPITRE I FORME DE DEMANDES

**Article 1:** Toute demande et requête relatives à l'exploitation du Code minier et pétrolier de la République du Burundi doit, à peine d'irrecevabilité, être adressé en trois exemplaires au Ministre ayant les Mines dans ses attributions (qui sera désigné dans ce qui suit comme le Ministre) sous-couvert du Directeur des Mines et Carrières, par lettre recommandée avec avis de réception, ou être déposée contre reçu en ses bureaux. Les pièces annexées sont fournies dans le même nombre d'exemplaires.

**Article 2:** Les correspondances sont adressées, suivant leur objet, impersonnellement au Ministre ou au Directeur des Mines et Carrières (qui sera désigné dans ce qui suit comme le Directeur). Les rapports techniques, plans, coupes, comptes-rendus périodiques, logs sont adressés au Ministre.

**Article 3:** Les demandes et requêtes, les correspondances, rapports, documents sont à leur arrivée

##### CHAPITRE II CONTENU DES DEMANDES ET REQUÊTES

**Article 6:** Toute demande ou requête doit contenir tous renseignements utiles sur l'identité du demandeur et notamment:

a) pour les personnes physiques:

- nom, prénoms, qualité, nationalité, date et lieu de naissance, résidence habituelle et domicile élu.

b) pour les personnes morales:

- raison sociale, forme de la société, siège social, loi nationale régissant les statuts, nom et adresse du mandataire, capital social avec indication des montants libérés et non libérés.

**Article 7:** A la première demande doivent être annexés:

a) pour les personnes physiques:

- une copie certifiée conforme ou une photocopie de sa carte d'identité nationale ou de la première page de son passeport (la présentation des originaux peut être exigée).

- un extrait du casier judiciaire de moins de trois mois de date.

b) pour les personnes morales:

- un exemplaire certifié conforme des status.
- une copie du dernier bilan, avec compte de profits et pertes, comptes d'exploitation, rapport du commissaire aux comptes, rapport du Conseil d'Administration à l'Assemblée Générale ou documents équivalents, le tout certifié conforme.
- les références bancaires.
- une liste avec nom, prénoms, nationalité, profession et adresse suivant le cas, du président et des membres du Conseil d'Administration, du Conseil ou comité de direction ou de gérance, ou du gérant et des associés.
- les pouvoirs, avec nom, prénoms, nationalité, qualité et profession, domicile des directeurs, fondés de pouvoir, administrateurs-délégués, et d'une manière générale, de toute personne ayant la signature sociale.
- les pouvoirs du signataire.

**Article 8:** Lors des demandes ou requêtes ultérieures, les documents énumérés ci-dessus peuvent être remplacés par une attestation du signataire rappelant qu'ils ont été antérieurement déposés et confirment que les renseignements contenus restent valables.

**Article 9:** Toutes modifications apportées aux renseignements énumérés à l'article 7 ci-dessus doivent être portées sans délai par écrit à la connaissance du Ministre ayant les Mines et les Carrières dans ses attributions.

**Article 10:** Le Ministre peut à tout moment demander à toute société titulaire d'autorisation de prospection ou détentrice de titres miniers ou carriers de lui communiquer tous renseignements sur la composition de son capital.

**Article 11:** Les sociétés visées à l'article 10 doivent adresser au Ministre dans les trois mois suivant l'assemblée au cours de laquelle ils ont été arrêtés les documents financiers énumérés ci-dessus à l'article 7 point b 2e alinéa.

### CHAPITRE III NATIONALITÉ DES SOCIÉTÉS

**Article 12:** Les personnes morales désireuses d'obtenir des titres miniers d'exploitation doivent être constituées suivant les lois de la République du Burundi, y avoir leur

siège social, y conserver leurs archives et y tenir leur comptabilité en monnaie burundaise.

### CHAPITRE IV PROTOCOLES, CONTRATS, CONVENTIONS ET ACCORDS

**Article 13:** Une copie certifiée conforme des contrats d'option, et des protocoles, contrats, conventions et accords, ainsi que toute modification qui leur est apportée ou tout avenant ultérieur, doit être adressée pour déclaration dans le mois suivant la signature, au Ministre dans les mêmes conditions que les demandes et requêtes.

**Article 14:** Elle doit être accompagnée d'une lettre expliquant et justifiant la teneur et donnant sur les contractants les renseignements énumérés à l'article 7 ci-dessus. Ces protocoles, contrats, conventions et accords sont enregistrés, avec date de réception, sur le registre spécial prévu à cet effet.

**Article 15:** En cas d'approbation du Ministre, mention est faite sur le registre spécial.

### CHAPITRE V ELECTION DE DOMICILE, MANDATAIRE

**Article 16:** Tout titulaire d'autorisation de prospection, tout détenteur de titre minier ou carrier est tenu de notifier par écrit au Ministre le domicile élu sur le territoire du Burundi.

**Article 17:** Tout titulaire d'autorisation de prospection, tout détenteur de titre minier ou carrier est tenu de notifier par écrit au Ministre le nom et l'adresse d'un mandataire résidant au Burundi. Le ministre peut récuser sans avoir à formuler de motif, un mandataire proposé ou déjà désigné, dans ce cas, un autre mandataire doit être désigné sans délai.

**Article 18:** Toutes modifications de domicile élu et de mandataire doivent être notifiées par écrit sans délai au Ministre.

**Article 19:** La correspondance accréditant un mandataire doit préciser l'étendue de ses pouvoirs; s'il s'agit d'une société, cette correspondance doit être signée d'un responsable ayant lui-même pouvoir d'engager la société et de déléguer.

**Article 20:** Toutes notifications ou mises en demeure émanant de l'Administrateur, toute signification pariers de tous actes de procédure concernant l'application du Code minier et pétrolier du Burundi faites au domicile



élu ou au mandataire sont réputées valablement faites au titulaire de l'autorisation ou au détenteur du titre minier ou carrier concerné.

## CHAPITRE VI CAPACITÉS TECHNIQUES FINANCIÈRES

**Article 21:** Les demandeurs de titres miniers doivent justifier de leurs capacités et moyens techniques et financiers.

**Article 22:** La justification des capacités techniques est faite :

- a) pour une personne physique sur la présentation de tout diplôme, certificat, attestation ou références établissant sa compétence, ou par l'engagement écrit de recruter un chef de travaux pouvant présenter l'un de ces documents.
- b) pour une personne morale par la présentation d'un état de son personnel qui sera affecté aux travaux envisagés.
- c) dans les deux cas par la liste des permis et concessions déjà détenus soit au Burundi soit à l'étranger, avec un rapport sur les résultats obtenus.

**Article 23:** La justification des capacités financières est faite:

- a) par la fourniture de références bancaires.
- b) en outre pour personnes morales par la présentation pour les deux derniers exercices du bilan et des documents annexés énumérés à l'article 7 point b.

## CHAPITRE VII DÉCLARATION DE DÉCOUVERTE

**Article 24:** Pour obtenir le droit à une prime, l'inventeur d'une substance minérale ou fossile ou d'un indice sérieux de minéralisation doit en avoir fait la déclaration écrite au Ministre.

Cette déclaration est accompagnée d'une description de la découverte, (type de minéral, quantité de réserve et teneur moyenne), de la désignation précise de l'emplacement, d'un extrait de la carte de référence situant cet emplacement et si possible d'un ou plusieurs échantillons.

**Article 25:** Cette déclaration est enregistrée sur un registre spécial tenu par le Ministre, avec mention de la date et l'heure, et un récépissé de sa déclaration est délivré à l'inventeur.

**Article 26:** Ce registre, le dossier de déclaration et le ou les échantillons sont tenus sans déplacement par le Ministre à la disposition du public.

## CHAPITRE VIII CESSION ET AMODIATION

**Article 27:** Une copie certifiée conforme des contrats de cession entre vifs et des contrats d'amodiation de titres miniers est adressée au Ministre pour autorisation et levée de la condition suspensive dans les mêmes conditions que les demandes et requêtes. Elle doit être accompagnée d'une lettre signée du cédant et du cessionnaire ou du titulaire et de l'amodiataire, en expliquant et en justifiant la teneur et donnant sur le cessionnaire ou l'amodiataire les renseignements énumérés à l'article 7 ci-dessus.

**Article 28:** L'autorisation de cession de l'amodiation est donnée par ordonnance ministérielle. Cette autorisation ne comporte aucune certification des caractéristiques techniques du titre minier cédé ou amodié, ni aucune appréciation sur les termes ou conditions du contrat de cession ou amodiation.

**Article 29:** Les mêmes règles s'appliquent aux titres carriers.

**Article 30:** Mention de l'ordonnance ministérielle est portée sur le registre spécial du titre concerné.

## CHAPITRE IX TRANSFERT À CAUSE DE DÉCÈS

**Article 31:** Les personnes appelées à recueillir des titres miniers ou carriers par voie d'héritage doivent, dans un délai de douze mois après la clôture de la succession, saisir le Ministre d'une demande à l'effet de régulariser leurs droits. Si la transmission est faite au profit d'une indivision, il pourra être procédé aux partages et licitation nécessaires pour permettre l'accomplissement des formalités ci-dessus. Le délai imparti peut alors, si nécessaire être prolongé de douze mois.

**Article 32:** A la demande doivent être annexés:

- les renseignements sur le nouveau titulaire proposé énumérés à l'article 7 ci-dessus;
- les justifications techniques et financières.

**Article 33:** Si ces justifications sont jugées satisfaisantes, la mutation est autorisée par ordonnance ministérielle et mention en est portée sur le registre spécial du titre concerné.

**Article 34:** Dans le cas contraire, le Ministre donne aux ayants-droit un délai de douze mois pour présenter de nouveaux candidats remplissant les conditions données aux articles 22 et 23 cités ci-dessus, faute de quoi l'autorisation ou le permis sont annulés, et la concession est mise à la disposition de l'Etat.

**Article 35:** Les dispositions qui précèdent sont applicables aux sociétés de personnes en cas de décès de l'un des associés.

## CHAPITRE X

### FERMETURE ET OUVERTURE DE ZONES

**Article 36:** Les zones interdites et les zones réservées sont instituées par décret. On entend par droit acquis les titres miniers ou carrières en vigueur à la date de la décision. Ces titres conservent leur droit au renouvellement.

**Article 37:** L'ouverture d'une zone interdite ou d'une zone réservée est prononcée par décret.

**Article 38:** La prospection est immédiatement possible dans la zone ouverte. Les demandes de titres miniers reçus pendant les trois mois qui suivent la publication officielle du décret au Bulletin Officiel du Burundi, sont enregistrées à leur arrivée, mais leur instruction n'est commencée qu'à l'expiration du délai précité.

## CHAPITRE XI

### DÉFINITION DU PROPRIÉTAIRE DU SOL

**Article 39:** On entend par "propriétaire" ou "propriétaire du sol" et par "titres de propriété" aussi bien le titulaire de droits réels enregistrés par le Conservateur des titres fonciers ou ces titres fonciers eux-mêmes, que le titulaire de droits réels sur les terres régies par les coutumes et usages locaux et les actes de notoriété ou procès-verbaux d'enquête établis par les autorités compétentes et constatant ces droits réels.

## CHAPITRE XII

### PUBLICITÉ DES ACTES

**Article 40:** Tous les décrets, ordonnances et décisions de caractère général ou individuel sont publiés in extenso ou par extraits au Bulletin Officiel du Burundi, à l'exception des approbations ou oppositions relatives aux protocoles, contrats et conventions.

**Article 41:** Ces décrets, ordonnances et décisions sont mentionnés sans retard sur les registres; les périmètres correspondants sont reportés sur les retombes minières.

## TITRE II

### Définition des périmètres.

#### CHAPITRE I

##### CARTE DE RÉFÉRENCE

**Article 42:** La carte de référence, sur laquelle doivent être reportées les limites de périmètres et les déclarations de découvertes est au 1/50,000e.

#### CHAPITRE II

##### SOMMETS DES PRÉRIMÈTRES

**Article 43:** Les sommets des périmètres polygonaux des permis A et des permis d'exploitation en dérivant, les sommets des prérimètres polygonaux des permis H, ou angles des périmètres carrés des permis B, un angle des périmètres rectangulaires des concessions dérivant des permis A et H, sont définis de façon précise et unique par rattachement à un point repère.

**Article 44:** Ce rattachement consiste:

- soit en longueur en mètres et en azimut géographique du vecteur de rattachement;
- soit en longueurs en mètres des coordonnées Ouest-Est géographique et sud-North géographique de ce vecteur.

**Article 45:** Dans toute la mesure du possible, ce vecteur doit être inférieur à dix mille mètres (10.000 m): dans le cas de périmètres limitrophes, il est recommandé de définir un angle au sommet commun.

**Article 46:** Cette définition est complétée, à titre purement indicatif par les coordonnées géographiques approximatives mesurées sur la carte de référence.

**Article 47:** Après institution du titre minier, les sommets et angles doivent être matérialisés par des poteaux construits en matériaux durables.

#### Chapitre III

##### POINT-REPÈRE.

**Article 48:** Le point-repère doit être un point remarquable et invariable du sol, bien défini et aisément reconnaissable, dont le demandeur a l'obligation de constater au préalable l'existence et la fixité tel que point géodésique ou astronomique cimenté, angle de bâtiment en dur ou ouvrage d'art, axe d'un croisement de routes.

A défaut de point répondant à ces conditions, le demandeur peut établir une borne repère maçonnée et en décrire dans sa demande la position par rapport à des points remarquables, mais imprécis, du sol tels que, par exemple, confluent des rivières ou sommet de montagne.

**Article 49:** Ne sont pas acceptées les désignations imprécises ou relatives à des points susceptibles de disparaître ou d'être déplacés, tels que centre de village, construction précaire, arbre quelconque, croisée de sentier, signal en bois, bornes kilométriques.

**Article 50:** En cas de demande visant l'institution d'un titre empiétant sur un titre minier préexistant, ou très voisin d'un tel titre, le Directeur peut exiger le rattachement topographique du titre demandé au point-repère du titre antérieur, ou le cheminement d'un point-repère à l'autre.

**Article 51:** A toute époque, le Directeur peut décider qu'il sera procédé sur place à la reconnaissance officielle du point-repère ou de la borne-repère, le demandeur ou le détenteur du titre minier est invité à assister ou se faire représenter à cette reconnaissance; il est dressé un procès-verbal de cette opération.

#### CHAPITRE IV CÔTÉS DES PÉRIMÈTRES

**Article 52:** Les côtés des périmètres sont les lignes droites de sommet à sommet. En cas de contestation, la définition unique est le tracé de ces lignes droites sur la carte de référence en vigueur à la date de l'institution du titre minier.

**Article 53:** Sur les eaux territoriales, les côtés des périmètres peuvent être des méridiens ou des parallèles.

#### CHAPITRE V ABONNEMENT DES CONCESSIONS

**Article 54:** Les concessions doivent être abornées dans les six mois de l'institution de la concession. L'opération doit être faite par un géomètre assermenté, aux frais du concessionnaire; il en est dressé un procès-verbal: Une borne cimentée ou maçonnée est alors érigée à chaque angle et des bornes cimentées ou maçonnées sont placées sur chaque côté à des distances ne pouvant excéder mille mètres de borne à borne.

### TITRE III

#### DE L'AUTORISATION DE PROSPECTION

##### CHAPITRE I DEMANDE

**Article 55:** La demande d'autorisation de prospection est présentée dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 11 ci-dessus.

**Article 56:** Elle indique la durée, le ou les substances concessibles, les communes, les arrondissements ou la province pour lesquelles elle est demandée.

**Article 57:** Elle comporte les justifications techniques et financières.

**Article 58:** Elle prend l'engagement de remettre au Directeur au plus tard trois mois après l'expiration de l'autorisation, un rapport technique circonstancié sur les études effectuées et les résultats obtenus.

**Article 59:** A la demande doit être annexé le récépissé de versement du droit fixé.

##### CHAPITRE II RENOUVELLEMENT

**Article 60:** La demande de renouvellement d'autorisation de prospection est présentée dans les mêmes formes que la demande d'autorisation. Doit être annexé le rapport technique prévu à l'article 59.

##### CHAPITRE II RELATIONS AVEC LES TIERS - RETRAIT

**Article 61:** Lorsqu'une autorisation de prospection porte sur une surface couverte par des titres miniers et si les titulaires de ces titres miniers estiment que les opérations entreprises ou projetées par les titulaires de l'autorisation de prospection sont de nature à leur occasionner une gêne directe et matérielle, ils en saisissent le Ministre. Ce dernier adresse en tant que de besoin, les injonctions nécessaires au titulaire de l'autorisation.

**Article 62:** Encas de contestation survenant entre plusieurs titulaires d'autorisation de prospection, le Minsitre prend toutes les mesures nécessaires.

**Article 63:** Une autorisation de prospection peut à tout moment être restreinte ou retirée. Cette mesure, prise par décret, est immédiatement exécutoire à compter de sa notification.

## TITRE IV

### DES PERMIS DE RECHERCES

#### CHAPITRE I DEMANDE

**Article 64:** La demande de permis de recherches est présentée dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 11 ci-dessus.

**Article 65:** Elle indique en outre:

- 1° la ou les substances concessibles pour lesquelles le permis est demandé;
- 2° la définition du périmètre demandé et du ou des points-repères utilisés, et en cas d'utilisation d'une borne-repère la date de sa mise en place et sa description, le rattachement du ou des sommets ou angles aux points-repères;
- 3° la durée du permis demandé.

**Article 66:** Il doit y être annexé:

- 1° un programme général des travaux projetés avec un calendrier indicatif;
- 2° les justifications techniques et financières;
- 3° l'effort financier minimal que le demandeur s'engage à consacrer à ces travaux pendant la première période de validité du permis;
- 4° un extrait de la carte de référence de la région où le permis est demandé faisant apparaître les limites du périmètre et les points-repères aux bornes-repères servant à la définir;
- 5° des croquis cotés de rattachement des sommets ou angles du périmètres aux points et bornes-repères;

6° le récépissé du versement du droit fixe.

**Article 67:** La demande doit être accompagnée en outre des documnts suivants:

- 1° le cas échéant du rapport technique sur les résultats de la campagne de prospection autorisée;
- 2° une déclaration des protocoles, contrats, conventions ou accords, ou, si la déclaration a été faite précédemment, une référence à cette déclaration;
- 3° s'il y a lieu des dispositions particulières que le demandeur propose d'introduire dans une convention en vue d'un permis de recherches ou dans une convention d'établissement.

#### CHAPITRE II CAS DES PERMIS A ET B

**Article 68:** Dans le cas des permis A ou B, si la demande est reconnue recevable en la forme, le Ministre la fait compléter en tant que de besoin, puis il instruit, provoque toutes enquêtes qui lui paraissent nécessaires, le cas échéant, il établit avec le demandeur les règles particulières de la convention en vue de permis de recherches, cette convention prend notamment acte de l'effort financier minimal que le demandeur s'engage à consacrer aux travaux du programme général, cet engagement pouvant être complété par la définition d'un indice correcteur de révision annuelle.

#### CHAPITRE III CAS DES PERMIS

**Article 69:** Dans le cas de permis H, si la demande est reconnue recevable en la forme, le Minsitre le fait compléter en tant que de besoin, puis il fait publier au Bulletin Officiel du Burundi un avis qui:

- 1° porte à la connaissance du public des renseignements prévus aux articles 64 et 65 ci-dessus;
- 2° invite les candidats éventuels à se port demandeur d'un permis H en concurrence partielle ou totale avec le premier demandeur dans un délai maximal de trois mois à compter de cet avis.

**Article 70:** La plus large publicité peut être donnée cet avis par les moyens de la presse et de la radi. Il est rappelé que les renseignements prévus aux articles 62 et 63 ci-dessus restent confidentiels.

**Article 71:** Les demandes concurrentes sont instruite dans les mêmes conditions et en même temps qui la première demande.

**Article 72:** En fin d'instruction, le Ministre établit avec le demandeur agréé les règles particulières des conventions en vue du permis H. celui-ci prend notamment acte de l'effort financier minimal que le demandeur s'engage à consacrer aux travaux du programme général.

Cet engagement peut être complété par la définition d'un indice correcteur de révision annuel.

#### CHAPITRE IV INSTITUTION ET REJET

**Article 73:** Le décret fixe le ou les substances concessibles pour lesquelles le permis est délivré, il définit son périmètre et sa durée: Le permis prend effet sauf dispositions contraires, de la date de ce décret.

**Article 74:** Le décret approuve expressément la convention qui lui est annexée. Il est, le cas échéant, pris après approbation de la convention d'établissement lorsqu'une telle convention a été passée avec le demandeur.

**Article 75:** En cas de rejet de la demande, le refus est notifié par le Ministre au demandeur, sans qu'il y ait droit à indemnité ou dédommagement; le montant est fixé en fonction du budget.

#### CHAPITRE V JUSTIFICATION DE L'EFFORT FINANCIER

**Article 76:** L'évaluation du coût des travaux dont il faut être justifié au titre de l'engagement minimal ne retient que les dépenses liées directement aux recherches pendant la période de validité du permis; les immobilisations y sont comptées pour la durée d'amortissement normal; les frais généraux doivent être justifiés; le montant peut être plafonné à un pourcentage de l'ensemble des dépenses directes fixé par la convention.

#### CHAPITRE VI RENOUVELLEMENT

**Article 77:** La demande de renouvellement d'un permis de recherches doit être, à peine de forclusion, déposée avant la date d'expiration de la période en cours (avant le 31 décembre). Elle est formulée et traitée dans les mêmes formes et conditions que la demande initiale.

**Article 78:** Elle indique:

Il s'agit d'un permis A, la nouvelle définition du périmètre après réduction éventuelle de la superficie;

La durée de la prolongation demandée.

**Article 79:** Il doit y être annexé:

Un programme général des travaux projetés avec un calendrier indicatif;

l'effort financier minimal que le demandeur s'engage à consacrer à ses travaux pendant la nouvelle période de validité;

cas échéant, un extrait de la carte de référence faisant apparaître les limites du périmètre;

4° le récépissé de versement du droit fixe.

**Article 80:** La demande doit être accompagnée en outre de toutes justifications nécessaires pour établir que l'effort financier minimal a été satisfait pendant la période de la validité précédente.

**Article 81:** Le renouvellement est accordé par décret après instruction par le Ministre, la nouvelle période de validité prend date du lendemain de l'expiration de la période précédente.

#### CHAPITRE VII RENONCIATION

**Article 82:** La renonciation totale ou partielle à un permis de recherches est présentée dans les mêmes formes que la demande de permis et doit comporter les indications prévues aux articles 64 et 65 ci-dessus.

Il doit y être annexé un rapport technique circonstancié sur les études effectuées et les résultats obtenus. Ces renseignements sont couverts par le secret professionnel.

**Article 83:** Il est pris acte par décret de la renonciation totale à un permis de recherches.

**Article 84:** En cas de renonciation partielle à un permis A ou à un permis H, il est procédé comme il est dit aux articles 78 à 82 ci-dessus pour les renouvellements.

### TITRE V

#### DE L'AUTORISATION PROVISOIRE D'EXPLOITER LES HYDROCARBURES

##### CHAPITRE I DEMANDE

**Article 85:** La demande d'autorisation provisoire d'exploiter les hydrocarbures est présentée par le détenteur

d'un permis H en cours de validité ou en cours de prorogation dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 11 ci-dessus.

**Article 86:** Elle indique en outre :

1° la dénonciation et la situation géographique exacte des puits et sondages productifs que le demandeur se propose de mettre en production ;

2° les moyens de stockage et de transport dont il dispose ;

3° si les puits et sondages sont situés off-shore, les mesures proposées pour assurer la sécurité de la navigation et éviter la pollution.

**Article 87:** Il doit y être annexé:

1° un rapport détaillé sur les résultats des travaux de recherches à la date de la demande;

2° les résultats des essais de production des puits et sondages à mettre en production;

3° le programme de développement du champ;

4° le programme de production des puits et sondages à mettre en production pour la durée de l'exploitation provisoire;

5° les cartes et plans, à la plus grande échelle possible, indiquant la situation de tous les puits et sondages forés sur le gisement depuis l'institution du permis H;

6° les plans des installations de productions projetées.

**Article 88:** Le Ministre fait en tant que de besoin compléter la demande.

## CHAPITRE II OBLIGATIONS

**Article 89:** Le bénéficiaire d'une autorisation provisoire d'exploiter doit tenir tous les registres et conillises prévus à l'article 202 ci-après et remettre au Ministre tous les documents périodiques prescrits à l'article 193 ci-après. Il doit respecter toutes les obligations incombant aux exploitants d'hydrocarbures qui découlent aussi bien de la législation générale que du Code Minier et Pétrolier, des textes d'application, et de la convention annexée au décret institutif du permis H.

## CHAPITRE III FORME DE L'AUTORISATION

**Article 90:** L'autorisation provisoire est accordée décret.

## TITRE VI

### DES TITRES D'EXPLOITATION

#### CHAPITRE I DEMANDE

**Article 91:** La demande de permis d'exploitation ou concession est présentée dans les formes et de comporter les renseignements et documents per vus aux articles 1 à 11 ci-dessus.

**Article 92:** Elle indique en outre:

1° a) si la demande ne dérive pas d'un permis recherches ou d'exploitation préexistant ou les substances concessibles pour laquelle la demande est formulée;

b) si la demande dérive d'un titre préexistant le ou les substances concessibles, parmi celles pour lesquelles ce titre était valable, pour les quelles la demande est formulée;

2° la définition du périmètre demandé et des points-repères utilisés et, en cas d'utilisatin de bornes-repères, la date de leur mise en place et leur description;

3° s'il s'agit d'une cencession d'hydrocarbures liquides ou gazeux, la durée du titre demandé.

**Article 93:** il doit y être annexé:

1° un rapport détaillé fournissant la preuve de l'existence d'un gisement exploitable (type de minérai, réserves et teneur moyenne);

2° un programme de travaux d'équipement et de préparation du gisement;

3° une estimation des investissements, nécessaires et un calendrier pour l'exécution de ce programme de travaux;

4° une justification détaillée des moyens technique et

financier avec plan de financement et indication de l'origine des capitaux;

5° des croquis cotés de rattachement des sommets ou angles du périmètres aux points et bornes-repères;

6° le récépissé du versement du droit fixe.

## CHAPITRE II INSTRUCTIONS ET ENQUÊTE

**Article 94:** Si la demande est reconnue recevable en la forme, le Ministre en ordonne l'instruction et le fait compléter en tant que de besoin.

**Article 95:** Il fait publier au Bulletin Officiel du Burundi un avis qui:

1° porte à la connaissance du public u'une demande du titre d'exploitation a été déposée avec indication des substances visées et de la commune concernée;

2° informe le public de l'ouverture d'une enquête publique d'une durée d'un mois et fixe la date d'ouverture de cette enquête à une date qui ne saurait être endéans de deux semaines.

**Article 96:** La plus large publicité peut être donnée à cet avis par les moyens de la presse et de la radio. L'avis est affiché jusqu'à la clôture de l'enquête dans les bureaux du Ministère et de l'Administrateur de la commue où est situé le périmètre.

**Article 97:** Pendant la durée de l'enquête, le public peut prendre connaissance sans déplacement et sans frais, et sur justifications d'identité, dans les bureaux du Ministère et dans les bureaux de la commune, de documents prévus aux articles 94 et 95 et programme de travaux d'équipement et de préparation du gisement prévu à l'article 96 point 2. Il est rappelé que les renseignements prévus aux autres points de l'article 96 restent confidentiels.

## CHAPITRE III ENQUÊTE.

**Article 98.** Pendant la durée de l'enquête, l'Administrateur de la commune procède à une instruction au cours de laquelle il recherche notamment, les droits réels affectant les terrains sur lesquels porte la demande de titre d'exploitation, estime les répercussions de celle-ci sur l'environnement et recueille les observations qui peuvent être formulées.

**Article 99.** Le Ministre fait procéder à une instruction au cours de laquelle, notamment, on vérifie, les plans

présentés par le demandeur et contrôle les conditions d'exploitabilité du gisement. On recherche également s'il existe les titres miniers ou carriers recouverts totalement ou partiellement par la demande, et si les déclarations de découvertes ont été déposées, par des inventeurs sur des terrains couverts par la demande. Le Ministre recueille les observations qui peuvent être formulées et s'efforce de régler par amiable composition les difficultés qui peuvent se présenter.

## CHAPITRE IV OPPOSITION

**Article 100:** Pendant la durée de l'enquête, toutes oppositions peuvent être formulées par des tiers./ Elles doivent être portées devant le tribunal de Grande Instance dans le ressort duquel est situé le gisement concerné par exploit d'ajournement signifié au demandeur pendant la durée de l'enquête et notifiées au Ministre par acte extrajudiciaire.

## CHAPITRE V CLÔTURE DE L'INSTRUCTION

**Article 101:** A la clôture de l'enquête, l'Administrateur de la commune et le Ministre établissent un certificat d'affichage et un rapport sur les observations qu'ils ont recueillies et sur l'instruction qu'ils ont conduite.

**Article 102:** Le Ministre rédige alors un cahier des charges qui tient compte, notamment et s'il y a lieu, des observations recueillies au cours de l'enquête. Il s'assure que ce cahier des charges est accepté par le demandeur.

## CHAPITRE VI INSTITUTION

**Article 103:** Si aucune opposition n'a été formulée dans le délais et formes prescrits à l'article 101 ci-dessus, ou si les opposition ont été levées, le permis d'exploitation est délivré, ou la concession instituée, par décret.

Dans le cas contraire, il n'est statué qu'après jugement définitif sur les motifs d'opposition.

**Article 104:** Ce décret fixe le ou les substances consensibles pour lesquelles le titre est institué, il en définit les limites et il approuve expressément le cahier des charges qui lui est annexé.

**Article 105:** Le titre minier prend effet, sauf dispositions contraires, de la date du décret.

**Article 106:** Si le titre minier institué est une concession, un exemplaire certifié conforme du décret institutif

est remis au concessionnaire; il appartient à ce dernier de procéder, à ses frais, à l'enregistrement de sa concession sur les livres du conservateur des titres fonciers.

## CHAPITRE VII RENOUVELLEMENT DES PERMIS D'EXPLOITATION

**Article 107:** La demande de renouvellement d'un permis d'exploitation doit être à peine de forclusion, déposée au moins six mois avant la date d'expiration de la période en cours. Elle est formulée dans les mêmes formes que la demande initiale.

**Article 108:** Il doit y être annexé :

- a) un rapport sur l'ensemble des activités du demandeur dans le permis depuis son institution ;
- b) un rapport sur l'ensemble des activités du demandeur dans les autres titres miniers dont il est éventuellement titulaire sur le territoire de la République du Burundi ;
- c) un rapport sur l'importance des réserves connues justifiant le renouvellement du permis, avec rappel des quantités, qualités et teneur des minerais exploités et des concentrés produits depuis le début de l'exploitation ;
- d) un plan à grande échelle des travaux de surface et des travaux souterrains.

**Article 109:** Si la demande est reconnue recevable en la forme, le Ministre en ordonne l'instruction et le fait compléter en tant que de besoin.

**Article 110:** Il fait publier dans les journaux officiels et à la radio un avis qui:

- 1° porte à la connaissance du public la demande de renouvellement;
- 2° informe le public qu'il reçoit pendant une durée d'un mois les observations ou remarques que cette demande pourrait susciter.

**Article 111:** Le renouvellement est accordé par décret la nouvelle période de validité prend date au lendemain de l'expiration de la période précédente.

## CHAPITRE VIII RENOUVELLEMENT DES CONCESSIONS

**Article 112:** Avant le commencement de la troisième année antécédent l'expiration de la première et de la deuxième

période de validité, le concessionnaire qui en a l'intention présente au Ministre une demande de renouvellement dans les mêmes formes que la demande initiale.

**Article 113:** Il doit y être annexé:

- a) un rapport sur l'ensemble des activités du concessionnaire dans la concession au cours des cinq dernières années, et sur l'ensemble des activités du demandeur dans les autres titres miniers dont il est éventuellement titulaire sur le territoire de la République du Burundi;
- b) un rapport sur l'importance des réserves connues justifiant le renouvellement de la concession, avec rappel des quantités, qualités et teneurs des minerais exploités et des concentrés produits depuis le début de l'exploitation;
- c) un plan à grande échelle des travaux de surface et des travaux souterrains.

**Article 114:** L'enquête, l'instruction et l'institution se déroulent comme pour une concession nouvelle.

**Article 115:** Si la demande de renouvellement n'est pas agréée, le Ministre en informe le concessionnaire.

**Article 116:** Il établit avec lui une convention fixant les conditions dans lesquelles sont continués dans des conditions normales les travaux d'entretien, de renouvellement du matériel et de préparation des chantiers pour permettre la continuation de l'exploitation au-delà de la date d'expiration.

**Article 117:** L'exploitant continue son activité productive dans le respect des objectifs de protection et d'exploitation rationnelle du gisement posés par l'article 13 du Code Minier et Pétrolier.

**Article 118:** L'Etat participe aux frais occasionnés par les travaux prévus à l'article 116 ci-dessus dans la mesure où ils concernent la période postérieure à l'expiration de la concession.

## CHAPITRE IX FIN DES CONCESSIONS

**Article 119:** A l'expiration de la concession, en cas de retrait ou de renonciation, le concessionnaire dispose d'un délai de six mois pour enlever des chantiers et de surface tous les biens meubles et immeubles lui appartenant, à l'exception des dépendances immobilières de la concession, telles que définies à l'article 69 du Code minier et pétrolier.



## CHAPITRE X OPÉRATIONS DIVERSES - RENONCIATION

**Article 120:** Les demandes de fusion, division, renonciation totale ou partielle aux concessions, ou extension à la nouvelle substance minérale, sont présentées dans les mêmes formes et instruites de la même manière que les demande de concession. Il est notamment procédé à publicité et enquête publique.

**Article 121:** La concession résultant d'une fusion vient à expiration à la date à laquelle expire normalement la concession la plus ancienne dont elle dérive.

**Article 122:** Les concessions résultant d'une division viennent à expiration à la date à laquelle eût normalement expiré la concession la plus ancienne dont elles dérivent.

## CHAPITRE XI ADJUDICATION APRÈS DÉCHÉANCE

**Article 123:** Lorsqu'il est procédé à l'adjudication d'une concession après déchéance, le Ministre fait publier dans les journaux officiels et à la radio un avis qui:

- 1° arrête les conditions de cette adjudication;
- 2° invite les soumissionnaires éventuels à demander l'agrément du Ministre dans un délai déterminé qui ne saurait être inférieur à trois mois.

**Article 124:** La plus grande publicité pour être donnée à cet avis par les moyens de la presse et de la radio.

**Article 125:** Les candidatures à l'agrément doivent comporter les renseignements et documents sur leurs capacités techniques et financières.

**Article 126:** Le Ministre arrête la liste des candidats admis à soumissionner. Il fixe la date et le lieu de l'adjudication et en informe le concessionnaire déchu et les soumissionnaires agréés par lettre recommandée. Le refus d'agrément n'ouvre aucun droit à indemnité ou dédommagement.

**Article 127:** Au jour et au lieu, il est procédé publiquement à l'adjudication dans les mêmes formes que pour une licitation.

**Article 128:** Si l'adjudication est fructueuse, le produit en est remis à l'ancien concessionnaire après retenue des frais de l'adjudication et des créances prioritaires, y compris les créances hypothécaires; l'adjudication éteint ces dernières même si leur montant n'a pu être recouvré sur le produit de l'adjudication.

**Article 129:** La mutation est prononcée par décret.

## TITRE VII

### DU TRANSPORT DES HYDROCARBURES PAR CANALISATION

#### CHAPITRE I DEMANDE

**Article 130:** La demande d'autorisation de transport des hydrocarbures par canalisation est présentée dans les formes et doit comporter les renseignements et documents prévus aux articles 1 3 2 ci-dessus.

**Article 131:** En cas de demande d'autorisation de transfert à des tiers du droit de transport reconnu au concessionnaire ou au bénéficiaire d'une autorisation provisoire, cette demande doit comporter tous les documents et renseignements sur ces tiers, ainsi que la copie conforme, certifiée par la concessionnaire ou le bénéficiaire, de tous protocoles, contrats, conventions ou accords.

**Article 132:** La demande doit parvenir au Ministre au plus tard six mois avant la date prévue pour le commencement des travaux.

**Article 133:** Il doit y être annexé un mémoire descriptif de l'ouvrage indiquant notamment:

- la nature des produits à transporter;
- le diamètre, le sectionnement, la pression maximale en service, le débit maximal horaire dans différents tronçons et les principales dispositions des institutions faisant partie de la conduite en aval du ou des principaux centres de collecte et notamment les stations et installations de stockage;
- le programme et l'échéance de réalisation des travaux;
- le cas échéant, le détail des empiétements sur le domaine public de l'Etat.

**Article 134:** On doit y trouver un exemplaire des plans, tes et croquis ci-après:

- carte de tracé à la plus grande échelle possible;

- profil en long;
- plans et croquis détaillés des installations projetées et notamment des statins de pompage et installation de stockage et de l'aménagement terminal.

**Article 135:** Un mémoire économique et financier doit y être annexé, il indique notamment:

- les quantités d'hydrocarbures dont le transport est prévu chaque année;
- les investissements prévus pour la construction de l'ouvrage et les moyens de leur financement;
- les prévisions de dépenses annuelles d'exploitation et charges de toutes natures;
- un bilan prévisionnel d'exploitation.

**Article 136:** Le récépissé de versement du droit fixe doit y trouver également.

## CHAPITRE II OCCUPATION DU SOL ET SERVITUDES

**Article 137:** En cas où le tracé proposé traverse des terrains couverts par des titres de propriété et où il serait nécessaire de recourir soit à l'occupation des terrains, soit à l'expropriation pour cause d'utilité publique ou aux servitudes de passage, il sera procédé comme prévu par les dispositions légales.

**Article 138:** La demande devra comporter tous les éléments nécessaires à ces procédures et notamment les renseignements prévus aux articles 142 et 143 ci-après.

## CHAPITRE III CONVENTION ET AUTORISATION

**Article 139:** En tant que de besoin, il est passé une convention entre le demandeur et le Ministre, dans la mesure où la convention d'origine ou une convention d'établissement, n'a pas réglé la question du transport.

**Article 140:** L'autorisation est accordée par décret, après qu'aient été terminées toutes les enquêtes et procédures

visées aux articles 144 et 145, ce décret approuve expressément la convention visée à l'article 146, il fixe la durée de l'autorisation et en arrête les conditions.

## TITRE VIII

### DES MINIERES

#### CHAPITRE I DEMANDE

**Article 141:** La demande d'autorisation de mine est rédigée dans une forme simplifiée, elle est adressée au Directeur par les soins de la personne qui désire exploiter avec l'accord éventuel du titulaire du titre minier sur lequel elle doit s'exercer.

**Article 142:** Le récépissé du versement du droit fixe doit y être annexé.

**Article 143:** Ce titulaire doit prendre l'engagement :

- 1°. de mettre à la disposition de l'artisan les moyens techniques nécessaires et lui prodiguer les conseils nécessaires ;
- 2°. de veiller, sous sa responsabilité à ce que l'exploitation de la mine soit intégrale et rationnelle ;
- 3°. d'acheter la production de la mine à un prix juste et équitable compte tenu de l'état de concentration du minerai, et de sa valeur sur le marché mondial ;
- 4°. de tenir dans sa comptabilité un compte spécial des achats en provenance de la mine.

#### CHAPITRE II AUTORISATION

**Article 144:** L'autorisation est accordée pour un an par ordonnance ministérielle. Elle peut comporter des conditions particulières notamment en ce qui concerne la prévention de l'écrémage des gisements.

## TITRE IX

### DES CARRIERES

#### CHAPITRE I EXPLOITANTS

**Article 145:** Les carrières peuvent être exploitées par une personne physique, par une coopérative ou par une entreprise constituée en Société.

#### CHAPITRE II DEMANDE

**Article 146:** La demande d'autorisation préalable d'exploitation de carrière est présentée dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 2 ci-dessus.

**Article 147:** Elle indique en outre :

- 1°. si l'exploitation prévue doit avoir un caractère permanent ou temporaire, et, dans ce dernier cas, la durée prévue de l'exploitation ;
- 2°. la nature des matériaux de carrière, et son utilisation prévue ;
- 3°. la localisation de la carrière (zone, commune, arrondissement et province) ;
- 4°. le périmètre à l'intérieur duquel se développent la carrière et sa dépendance ;
- 5°. le titre de propriété du demandeur, ou nature des droits coutumiers ou droits d'occupation en vertu desquels il exerce des droits réels sur le terrain où il se propose d'ouvrir une carrière ;
- 6°. si l'exploitation prévue est souterraine ou à ciel ouvert.

**Article 148:** Il doit y être annexé un plan à grande échelle (au moins 1/2.000) de situation de la carrière (le cas échéant, extrait du plan cadastral) montrant le périmètre visé à l'article précédent, la délimitation du droit réel, l'emplacement prévu de l'exploitation et sa situation par rapport aux habitations, bâtiments, chemins, ouvrages d'art et travaux d'utilité publique situés à moins de cinq cents mètres des limites prévues pour l'extension de la carrière.

**Article 149:** Si l'exploitation doit être souterraine, le plan doit en outre indiquer l'emplacement des puits ou des galeries projetées, s'il existe déjà des travaux souterrains,

ceux-ci doivent figurer sur le plan.

**Article 150:** Dans les cas où la carrière doit être ouverte sur le terrain d'autrui, le propriétaire sera indemnisé suivant les tarifs d'expropriation en vigueur au Burundi. Le propriétaire ne peut en aucun cas s'opposer à l'ouverture d'une carrière jugée utile par le ministère ayant les carrières dans ses attributions.

**Article 151:** Dans le cas des carrières prévoyant d'extraire plus de 100.000 m<sup>3</sup> du matériau par an, il doit également être annexé:

- 1° une copie des levés topographiques de situation de la carrière;
- 2° une estimation des réserves;
- 3° un programme indicatif des travaux.

#### CHAPITRE III L'INSTRUCTION ET LA DEMANDE

**Article 152:** Si la demande est reconnue recevable en la forme, et après l'avoir fait compléter en tant que de besoin, le Ministre en ordonne l'instruction et provoque toutes enquêtes qui lui paraissent nécessaires. Il s'assure notamment que l'ouverture de la carrière ne fait obstacle à aucune disposition d'intérêt général; il vérifie les titres de propriété relatifs aux parcelles couvertes par la demande; il fait si nécessaire, procéder à une enquête par l'Administrateur de la commune.

**Article 153:** L'ordonnance ministérielle fixe:

- 1° le périmètre de la carrière et de ses dépendances;
- 2° la durée de l'autorisation;
- 3° la profondeur maximale et les conditions de l'exploitation;
- 4° le cas échéant, le montant et les conditions de paiement de l'indemnisation.

**Article 154:** Si la carrière doit être ouverte sur le domaine public, cette autorisation vaut autorisation d'occupation du domaine public.

#### CHAPITRE IV RENOUVELLEMENT

**Article 155:** La demande de renouvellement de permis d'exploitation de carrières est présentée et instruite de la même manière que la demande.

## CHAPITRE V ZONES SPECTACLES DE CARRIÈRES

**Article 156:** Dans le cas où il apparaît nécessaire de créer des zones spéciales de carrières, l'enquête publique se déroule comme il est dit aux articles 92 et 105 ci-dessus pour les enquêtes relatives aux titres d'exploitation de mines.

**Article 157:** Les autorisations de recherches sont délivrées par le Ministre ayant les Carrières dans ses attributions. Le propriétaire sera indemnisé suivant les tarifs officiels en vigueur au Burundi.

**Article 158:** Les permis d'exploitation de carrières sont accordés comme il est dit pour les permis d'exploitation de mines.

## CHAPITRE VI EXTENSION RÉDUCTION ET ABANDON

**Article 159:** Les demandes d'extension, de réduction et d'abandon de carrières sont déposées et instruites dans les mêmes formes que la demande d'autorisation d'exploitation. En cas d'abandon, les dispositions légales en la matière seront appliquées.

## CHAPITRE VII OUVERTURE ET FERMETURE DE CHANTIER

**Article 160:** L'ouverture et la fermeture des carrières doivent être déclarées.

## TITRE X DES RELATIONS DES PERMISSIONNAIRES ET CONCESSIONNAIRES VEC LES PROPRIÉTAIRES DU SOL ET ENTRE EUX

### CHAPITRE I OCCUPATION DU SOL

**Article 161:** Le titulaire du titre minier peut demander l'autorisation d'occuper la surface d'une propriété privée ou de terrains domaniaux. Cette demande est présentée

dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 11 ci-dessus.

**Article 162:** Elle doit indiquer:

- 1° le titre minier en vertu duquel elle est formulée;
- 2° les propriétés privées ou les terrains domaniaux sur lesquels elle porte;
- 3° la durée probable de l'occupation.

**Article 163:** Il doit y être annexé un plan à grande échelle (au moins 1/2000e) (si possible un extrait du plan cadastral) situant les installations prévues, les limites du terrain dont l'occupation est demandée, avec la délimitation des titres fonciers régulièrement immatriculés ou régulièrement occupés, ainsi que la situation des habitations, bâtiments, chemins, ouvrages d'art et travaux d'utilité publique se trouvant à proximité.

**Article 164:** Une carte portant le tracé des voies de communication, lignes électriques, canalisations, moyens de transport qu'il est projeté d'établir doit y être annexée.

**Article 165:** On doit aussi trouver en annexe une description détaillée des travaux projetés avec toutes justifications sur la nécessité d'occuper les terrains à cet effet.

**Article 166:** L'enquête est ensuite conduite comme le prévoient les dispositions légales en la matière.

**Article 167:** L'autorisation est accordée par ordonnance prise par le Ministre ayant les mines et carrières dans ses attributions.

### CHAPITRE II USAGE COMMUN OU PUBLIC DES VOIES DE COMMUNICATION

**Article 168:** L'usage comme des voies de communication et s'il y a lieu les tarifs de transport sont fixés par une convention passée entre les intéressés. Cette convention est soumise à homologation par le Ministre. En cas de refus ou de désaccord, il est statué par décret, les intéressés entendus, ce décret fixe les tarifs et indemnités.

**Article 169:** L'usage public des voies de communication peut être décidé par le Ministre, l'intéressé entendu. Cet usage, son indemnisation et les tarifs éventuels donnent lieu à une convention passée entre l'exploitant d'une part, le Ministre ayant les mines dans ses attributions et le Ministre des Travaux Publics, d'autre part.

**TITRE XI****DISPOSITIONS SPECIALES POPRES  
AUX SUBSTANCE PRECIEUSES****CHAPITRE I  
DÉFINITION**

**Article 170:** On entend par substances précieuses:

- les métaux précieux, c'est-à-dire l'or, l'argent, le platine, et les métaux du groupe platine;
- les pierres précieuses, c'est-à-dire le diamant, les rubis, le saphir, l'émeraude, le topaze et le grenat.

**CHAPITRE II  
TRANSPORT**

**Article 171:** Les titulaires de permis d'exploitation et les concessionnaires de substances précieuses, ainsi que leurs employés par eux mandatés, sont autorisés à transporter et faire transporter les produits en provenance de leurs exploitations. Ces produits doivent être accompagnés d'un laissez-passer portant mention du numéro d'inscription au registre de commercialisation.

**CHAPITRE III  
VENTE D'OR**

**Article 172:** Les opérations sur l'or non oeuvré produit au Burundi ou y importé doivent être réglementées par le Ministère ayant les mines dans ses attributions, en collaboration avec tous les services concernés, y compris la Banque de la République du Burundi.

**Article 173:** A cet effet, le Ministère ouvrira soit directement, soit par l'intermédiaire de personnes physiques ou morales agréés par lui, des comptoirs d'échat dans les localités déterminées par lui.

**Article 174:** L'or produit au Burundi est payé en monnaie burundaise à un prix fixé par le Ministère concerné compte tenu de sa valeur sur le marché mondial et est déposé à la Banque de la République du Burundi.

**TITRE XII****DES ZONES PROTEGEES****CHAPITRE I  
LES SUBSTANCES CONCERNÉES**

**Article 175:** Les exploitations minières des substances précieuses, les exploitations des substances utiles aux recherches et réalisations concernant l'énergie atomique, les exploitations des sels de potasse et sels connexes peuvent être entourées de zones protégées.

**CHAPITRE II  
ZONES PROTÉGÉES**

**Article 176:** Par application de l'art.21 du C.M.P., peuvent être définis:

- 1°. des zones protégées constituées d'un périmètre A englobant le chantier d'exploitation de la mine, et d'un périmètre B contigu, au précédent et destiné à protéger celui-ci.
- 2°. les routes et chemins publics qui sont seuls ouverts à la circulation à l'intérieur du périmètre A.

**Article 177:** L'accès du périmètre A n'est permis qu'aux personnes munies d'un permis de séjour ou de circulation, ou aux magistrats et fonctionnaires du Burundi dans l'exercice de leurs fonctions ou aux citoyens burundi établis dans ce périmètre et porteurs d'une pièce d'identité.

**Article 178:** Nul ne peut établir un commerce à l'intérieur du périmètre A sans autorisation du Ministre. Celui-ci détermine, dans chaque cas particulier, le Directeur de l'exploitation minière entendu, le lieu et les conditions de l'installation.

**Article 179:** Nul ne peut entrer dans le périmètre A, ni en sortir, si ce n'est pas les routes et chemins publics, visés à l'article 184.

**Article 180:** La circulation peut être réglementée et contrôlée à l'intérieur des zones protégées, périmètre A et périmètre B.

**Article 181:** Est interdit, à l'intérieur des zones protégées, tout commerce ambulante, à l'exclusion de la vente par le producteur des produits de son propre fonds, de sa basse-cour ou de son troupeau.

### CHAPITRE III DEMANDE

**Article 182:** La demande de création d'une zone protégée est présentée dans les formes et doit comporter les renseignements et documents prévus aux articles 1 à 11 ci-dessus.

**Article 183:** Elle indique :

- le titre minier d'exploitation et les chantiers à l'intérieur de ce titre pour lesquels la protection est demandée ;
- les raisons qui justifient cette demande de protection ;
- la définition des périmètres A et B qui constitueront la zone protégée et la définition des routes et chemins publics qui seront seuls autorisés à l'intérieur du périmètre A.

**Article 184:** Il doit y être annexé un plan à grande échelle (au moins 1/2.000e) montrant la situation des chantiers, sur lequel figureront les habitations, terrains de culture, pâturage, bâtiments chemins, ouvrages d'art et travaux d'utilité publique située à l'intérieur de la zone protégée demandée.

### CHAPITRE IV ENQUÊTE ET CRÉATION DE LA ZONE

**Article 185:** L'enquête est conduite comme le prévoient les dispositions légales pour les autorisations d'occuper la surface.

**Article 186:** La zone est créée par décret. Ce décret fixe les conditions dans lesquelles la circulation des personnes est contrôlée à l'intérieur de la zone protégée et les modalités d'établissement des permis de séjour et de circulation.

**Article 187:** La réouverture de la zone est décidée par décret, lorsque cette réouverture n'est pas demandée par l'exploitant, celui-ci doit avoir été entendu et la réouverture ne peut pas intervenir endéans les trois mois suivant cette consultation.

Dans les autres cas son effet est immédiat.

## TITRE XIII

### DE LA SURVEILLANCE ADMINISTRATIVE

#### CHAPITRE I INCOMPATIBILITÉ

**Article 188:** Par intérêt direct, on entend la détention par les fonctionnaires, agents de l'Etat, magistrats et officiers, agents et employés des établissements et offices publics, par leurs épouses ou époux, par leurs ascendants et descendants au premier degré et par les ascendants et descendants au premier degré de leurs épouses ou époux, de titres miniers ou carriers, individuellement ou sous forme conjointe, la participation à une société de personnes ayant parmi ses objets les activités minières ou de carrières au Burundi, le fait de percevoir sous quelque forme que ce soit, des participations aux résultats, commissions, honoraires d'une entreprise de mines ou de carrières ou d'une entreprises faisant le commerce des produits de mines et de carrières au Burundi.

**Article 189:** Par intérêt indirect, on entend la détention, par les personnes citées à l'article précédent, de parts ou d'actions dans une société de capitaux ayant parmi ses objets les activités minières ou de carrières au Burundi.

#### CHAPITRE II DÉCLARATIONS DE TRAVAUX

**Article 190:** Les déclarations incombent au titulaire du titre minier ou carrier ou du maître de l'oeuvre. L'amodiateur ou l'entrepreneur doivent s'assurer qu'elles ont été effectuées, et ils sont tenus s'il y a lieu, de les effectuer eux-mêmes.

**Article 191:** Elles indiquent, avant le commencement des travaux :

- l'identité du titulaire ou du maître d'oeuvre et le cas échéant, l'identité de l'amodiateur ou entrepreneur ;
- l'emplacement exact des travaux, leur objet, leur consistance et la profondeur que l'on se propose d'atteindre ;
- la date prévue pour le commencement des travaux et leur durée probable ;
- la méthode d'exploitation, les mesures de sécurité et de sauvetage ;

- le plan de reconstitution du terrain après exploitation.

**Article 192:** Quand les travaux sont terminés, le déclarant est tenu de remettre au Ministre les logs complets des sondages et les résultats des campagnes géophysiques et géochimiques.

**Article 193:** Ces renseignements sont couverts par les règles de confidentialité prévues à l'article 187 C.M.P. pour les titres miniers.

### CHAPITRE III RAPPORTS PÉRIODIQUES - DÉCLARATIONS DES RÉSERVES

**Article 194:** Les titulaires de titres miniers sont tenus d'adresser au Ministre:

- 1° trimestriellement un rapport statistique sur leur activité;
- 2° annuellement un rapport d'ensemble sur leur activité;
- 3° annuellement la déclaration des réserves numériques en distinguant les réserves certaines, possibles et probables.

### CHAPITRE IV REGISTRES, PLANS ET RAPPORTS

**Article 195:** Le Ministre arrête par ordonnance:

- 1° la consistance des registres et plans qui doivent être tenus sur les chantiers;
- 2° la consistance des rapports périodiques prévus à l'article précédent.

## TITRE XIV

### DISPOSITIONS TRANSITOIRES

#### CHAPITRE I DES DÉLAIS

**Article 196:** Le délai fixé pour les titulaires de permis et de contrats d'exploitation court de l'expiration de ces permis ou de ces contrats. Toutefois, les titulaires de ces permis et de ces contrats sont soumis à toutes les obligations du présent décret et les titulaires des contrats à toutes

les obligations du présent décret qui ne sont pas en contradiction avec les termes de leurs permis ou contrats.

**Article 197:** Faute d'avoir introduit auprès du Ministre une demande de permis de recherches, du permis d'exploitation ou de concession dans les formes prévues et endéans le délai fixé à l'article précédent, les titulaires des permis et contrats seront considérés comme ayant renoncé à leurs titres miniers, ceux-ci seront annulés par décret et ils seront rayés des livres miniers.

**Article 198:** Les exploitants de carrières sont tenus de présenter pour régularisation une demande d'autorisation dans la forme prévue. Ils disposent pour ce faire d'un délai de six mois à compter de la date du présent décret; passé ce délai, ces exploitations pourront être interdites.

### CHAPITRE II DE LA RÉSERVE MINÉRALE

**Article 199:** L'ordonnance n° 040/29 du 25 février 1965 créant une réserve minérale nationale est abrogée. La réserve minérale nationale couvre la totalité du territoire de la République du Burundi, sans restriction ni limitation, et est désormais régie par le Code minier et pétrolier du Burundi et par ces textes pris pour son application.

## TITRE XV

### DE LA FISCALITÉ MINIÈRE

#### SECTION I DROITS FIXES

#### CHAPITRE I DROITS FIXES

**Article 200:** Les droits perçus à l'occasion des domaines prévus par le Code minier et pétrolier dits "droits fixes" sont fixés comme suit:

- délivrance et renouvellement des autorisations de prospection: 30.000 FBUs;
- institution de permis de recherches A,B ou H: 4FBUs par ha avec un minimum de 20.000 FBUs par permis;
- premier renouvellement de permis de recherches: 6

FBU par ha avec un minimum de 30.000 FBU par permis;

- deuxième renouvellement de permis de recherches: 8 FBU par ha avec un minimum de 40.000 FBU par permis;
- institution et renouvellement de permis d'exploitation: 10 FBU par ha avec un minimum de 50.000 FBU par permis;
- institution, extension, réduction, renouvellement, fusion et division des concessions minières (hydrocarbures et substances autres que les hydrocarbures: 40.000 FBU avec un minimum de 200.000 FBU par concession;
- autorisation de recherches de carrières: 500 FBU/ périmètre;
- permis d'exploitation de carrières et de minières: une ordonnance sera signée par le Ministre sur proposition du Directeur;
- autorisation de transports d'hydrocarbures par canalisation: 10.000 FBU par Km avec un minimum de 200.000 FBU par autorisation.

## CHAPITRE II RÉCÉPISSÉ

**Article 201:** Les récépissés de versement de droits fixes sont établis par le comptable public désigné sur réquisition du demandeur et après versement en sa caisse de la somme fixée à l'article précédent.

**Article 202:** Ils ne sont pas remboursables sauf dans les cas prévus par la loi. Ces récépissés non remboursables sont annulés de façon indélébile par le Directeur des Mines dès enregistrement des dossiers de demande en ses bureaux.

## CHAPITRE III DROIT DE DÉLIVRANCE DE DOCUMENT

**Article 203:** Le droit de délivrance de document ayant trait au domaine géologique, minier et carrier, est fixé par ordonnance, sur proposition du Directeur.

**Article 204:** Un récépissé extrait d'un carnet à souches est établi à l'occasion de chaque versement.

## SECTION 2 REDEVANCE ORDINAIRE ET REDEVANCE SUPPLEMENTAIRE DES MINES

### CHAPITRE I LE TAUX FIXE PAR SUPERFICIE TAXABLE

**Article 205:** Pour le calcul de la redevance ordinaire des mines, la superficie taxable est divisée en tranches et le taux est fixé comme suit: pour chaque tranche, en FBU par hectare et par an;

Superficie détenue par un même titulaire sous forme de permis d'exploitation.

**Article 206:** Les décrets institutifs ou de renouvellement fixeront le montant en fonction de la superficie taxable de chaque titre minier.

### CHAPITRE II REDEVANCE SUPPLÉMENTAIRE

**Article 207:** Le taux de la redevance supplémentaire est fixé au double du taux de la redevance ordinaire. Un décret fixera, en tant que de besoin, les tonnages moyens par ha et par an pour chaque substance concessible réputée exploitée.

**Article 208:** La dérogation sur justification emporte exonération de la redevance supplémentaire.

### CHAPITRE III LIQUIDATION ET RECOUVREMENT

**Article 209:** Les redevances ordinaires et supplémentaires sont liquidées et mises en recouvrement comme en matière de redevance domaniale sur matrices établies par le Directeur des Mines et rendues exécutoires par le Conservateur des Titres Fonciers.

## SECTION 3 TAXE AD VALOREM DES MINES

### CHAPITRE I TAUX

**Article 210:** La taxe ad valorem des mines est fixée aux taux de base suivant:



- cassitérite, wolframite, colombo-tantalite et terres rares: 9%
- autres substances concessibles autres que les hydrocarbures: 7%
- hydrocarbures liquides: 12,5%
- hydrocarbures gazeux: 5,0%

**Article 211:** Elle est exigible à l'occasion de la première transaction commerciale portant sur la matière imposable ou l'occasion de la sortie de cette matière imposable des installations minières vers d'autres installations même appartenant au titulaire de la mine.

## CHAPITRE II VALEUR CARREAU-MINE ET VALEUR DÉPART- CHAMP

**Article 212:** Par "valeur carreau-mines", il faut entendre la valeur marchande de produit extrait tel qu'il se présente à la sortie des ateliers de concentration ou lavage ou enrichissement par un procédé technique.

**Article 213:** Par "valeur départ-champ", il faut entendre la valeur marchande de l'hydrocarbure à l'entrée de la première station de pompages vers la canalisation de transport.

## CHAPITRE III LIQUIDATION ET RECOUVREMENT

**Article 214:** La redevance ad valorem est liquidée et mise en recouvrement comme en matière de redevance domaniale. Elle est perçue avant toute exportation et avant toute vente pour les matières à consommation locale.

## CHAPITRE IV ACOMPTÉ TRIMESTRIEL

**Article 215:** Un acompte de 80% de la redevance est perçu trimestriellement sur les états de recouvrement établis par le Directeur au vu des rapports trimestriels des exploitants.

En cas d'absence ou de retard de ces rapports, le Directeur établit les états de recouvrement sur estimation forfaitaire au plus tard dans le deuxième mois de chaque trimestre.

**Article 216:** La valeur carreau-mine ou départ-champ est calculée d'après une valeur mercuriale de substance concessible au marché mondial et est fixée par ordonnance du Ministre ayant les mines dans ses attributions.

## CHAPITRE V AJUSTEMENT ANNUEL

**Article 217:** Dans le premier trimestre de chaque année, tout exploitant de mine est tenu d'adresser au Directeur, en double exemplaire, une déclaration dûment certifiée des quantités vendues au cours de l'année précédente, avec toutes justifications comptables sur la valeur de ces quantités du carreau de la mine ou au départ du champ. Le Directeur établit alors, compte tenu des acomptes précédemment liquidés, des états d'ajustement que rend exécutoires le Conservateur des Titres Fonciers.

**Article 218:** Les trop-perçus sont conservés en comptes à valoir sur l'exercice suivant, sauf décision contraire du Ministre ayant les Mines dans ses attributions.

## CHAPITRE VI DROITS DE SORTIE

**Article 219:** Les substances minérales concessibles sont exemptés de droits de sortie à l'exportation. Toutes dispositions contraires sont et demeurent abrogées.

## SECTION 4 IMPORTS SUR LES BÉNÉFICES DES EXPLOITATIONS MINÉRIÈRES

### CHAPITRE I DÉCLARATION

**Article 220:** Les exploitants de substances concessibles et les entreprises qui leur sont associées sont passibles de l'impôt sur les bénéfices.

Ils sont tenus d'adresser au Directeur des Mines une copie de la déclaration adressée au vérificateur des impôts.

**Article 221:** Le Directeur des Mines communique directement et confidentiellement au vérificateur des impôts ses observations relatives à cette déclaration.

### CHAPITRE II PROVISION POUR RECONSTITUTION DE GISEMENT

**Article 222:** En cas de constitution d'une provision pour reconstitution de gisement, les exploitants doivent à peine de réintégration d'office fournir au vérificateur des impôts et au Directeur des Mines, toutes justifications sur l'emploi de ces provisions dans les délais impartis.

**Article 223:** Le Directeur des Mines a qualité pour de-

mander toutes justifications complémentaires utiles sur l'emploi de ces provisions, il rend compte confidentiellement au vérificateur des impôts de ses constatations.

## SECTION 5 DISPOSITIONS DIVERSES

**Article 224:** Les taxes et redevances de mines et l'impôt sur les bénéfices des exploitations de mines sont applicables à toutes les sociétés mixtes, paraétatiques ou sociétés d'Etat, sauf dispositions contraires des conventions prévues aux articles 40 et 49 du C.M.P.

## TITRE XVI

### DISPOSITIONS FINALES.

**Article 225:** Par application de l'article 208 du C.M.P., sont abrogés les articles 48 à 56 inclus de la loi du 28 septembre 1962 portant législation générale sur les mines et carrières.

**Article 226:** Par application de l'article 209 du C.M.P., sont abrogés :

1°. l'ordonnance du 20 avril 1914 relative au transport et à l'exportation des substances précieuses ;

2°. le décret du 20 avril 1928 relatif aux mesures de po-

lice destinées à protéger contre les vols, les mines et substances précieuses ;

3°. l'arrêté ministériel du 12 Novembre 1937 relatif à la tenue des livres miniers ;

4°. l'ordonnance n°42/8 du 27 Janvier 1948 relatif aux zones de protection contre les vols ;

5°. l'ordonnance n°42/8 du 2 Mars 1950 relative à l'agrégation d'organismes et sociétés pour donner les garanties, preuves et cautionnement prévus à l'article 13 du décret du 24 Septembre 1937 susvisé ;

6°. l'ordonnance n°42/275 du 23 Août 1954 relative au tarif des frais de vérification des limites des polygones miniers et de rattachement de ceux-ci aux points géodésiques ;

7°. l'ordonnance n°43/324 du 13 Octobre 1955 relative à la communication des renseignements miniers ;

8. l'ordonnance no. 43/305 du 4 Octobre 1956 portant mesure d'exécution du décret du 4 Mai 1956, en ses dispositions relatives aux mines et carrières, en matières de renseignements statistiques ;

9. l'arrêté ministériel no. 041/173 du 10 Octobre 1966 relatif aux mesures particulières d'exécution de la loi susvisée du 28 Septembre 1962 portant législation générale sur les mines et carrières.

**Article 227:** Le Ministre ayant les Mines et les Carrières dans ses attributions est chargé de l'exécution du présent décret qui entre en vigueur le jour de sa signature.

Fait à Bujumbura, le 14 Décembre 1982.

Jean-Baptiste BAGAZA, Colonel.

Par le Président de la République,

Le Ministre des Travaux Publics, de l'Energie et des Mines,

ir. Isidore NYABOYA.

## Loi No. 1/02 du 25 mars 1985 portant Code forestier

Nous, Jean-Baptiste Bagaza,

Président de la République,

Vu la Constitution de la République du Burundi, spécialement en ses articles 40, 41,, 45, 46, 52 et 56;

Revu le décret du 18 décembre 1930 relatif aux coupes et ventes de bois;

Revu l'O.R.U. 17/Agri du 12 mars 1931 portant mesures d'exécution du décret du 18/12/1930;

Attendu que les textes antérieurs partiels et non adaptés ne répondent plus aux besoins actuels exigés par la protection, l'aménagement et l'agrandissement du patrimoine forestier burundais;

Attendu qu'il est devenu impérieux d'élaborer un texte législatif devant régir le domaine forestier naturel du Burundi ainsi que les récents boisements de l'Etat, des Communes, des Etablissements Publics et des Particuliers;

Sur rapport du Ministre ayant les forêts dans ses attributions;

Le Conseil des Ministres ayant délibéré;

L'Assemblée nationale ayant adopté;

**Promulguons la présente loi**

### Titre préliminaire

**Article 1:** Aux termes du présent Code, on entend, d'une manière générale, par forêts ou boisements:

1. les terrains recouverts d'une formation végétale à base d'arbres ou d'arbustes, que cette formation soit naturelle ou résultant de semis ou de plantations faits de main d'homme:

a. capables de produire du bois ou des produits forestiers;

b. ou exerçant un effet indirect sur le climat, le régime des eaux ou le sol.

2. les terrains qui étaient recouverts de forêts ou boisements récemment coupés à blanc ou incendiés, mais qui seront susceptibles de régénération naturelle ou de reboisement artificiel.

**Article 2:** Acquièrent notamment le caractère forestier et sont soumis aux prescriptions du présent Code, les terrains nus ou insuffisamment boisés dont la protection aura été déclarée suivant les procédures particulières, nécessaire:

a. pour leur reboisement ou leur restauration;

b. pour la protection des pentes contre l'érosion;

c. pour la protection des sources et des cours d'eau;

d. pour l'exécution de travaux présentant un caractère d'utilité ou des salubrité publique.

**Article 3:** Les forêts naturelles font partie du domaine public de l'Etat et sont à ce titre inaliénables, imprescriptibles et insaisissables. Les boisements appartiennent aux personnes physiques ou morales qui les ont réalisés ou fait réaliser, sous réserve que celles-ci aient des droits réels sur les terrains ainsi reboisés. Les boisements du domaine public de l'Etat et des Communes sont hors commerce tant qu'ils n'ont pas été régulièrement désaffectés.

**Article 4:** Au titre du présent Code, on appelle service forestier l'administration forestière chargée de mettre en oeuvre la politique forestière du Gouvernement dans le cadre du présent Code. Ses niveaux d'intervention vont du Ministre ayant les forêts dans ses attributions, au personnel de terrains (agronomes, assistants, moniteurs et cadres forestiers) en passant par le service central (actuellement le Département des Eaux et Forêts).

## TITRE I

### Du domaine forestier de l'Etat, des communes et des Etablissements Publics

**Article 5:** Le présent Code fixe l'ensemble des règles particulières régissant l'administration, l'aménagement, l'exploitation, la surveillance et la police des forêts.

**Article 6:** Sont soumis au Code forestier et administrés conformément aux dispositions du présent titre:

1. les forêts naturelles, les boisements, les terrains à boiser ou à restaurer qui font partie du domaine de l'Etat.
2. les boisements, les terrains à boiser ou à restaurer appartenant aux Communes et aux Etablissements publics.

**Article 7:** Les forêts, boisements, terrains à boiser ou à restaurer, quels qu'en soient les propriétaires à l'origine et qui se trouvent englobés dans les périmètres des parcs nationaux ou de réserves naturelles sont soumis aux dispositions du présent titre, sauf en ce qui concerne les règles d'exploitation. Celles-ci sont régies par les articles 13, 14, 15 et 16 du décret loi 1/6 du 3 mars 1980.

#### Chapitre I DU DOMAINE FORESTIER DE L'ETAT

##### Section 1 DE L'ACQUISITION DES TERRAINS BOISÉS OU À BOISER

**Article 8:** Lorsque des biens soumis aux dispositions de l'article 6 sont incorporés au domaine public national ou affectés à des Communes ou à des Etablissements publics nationaux, conformément aux dispositions de la législation domaniale, des indemnités déterminées dans des conditions fixées par ordonnance ministérielle sont mises à la charge du service de la Commune ou de l'Etablissement bénéficiaire de cette incorporation ou de cette affectation. Ces indemnités sont versées au trésor à titre de fonds de concours. Dans le cas où le bénéficiaire est un service de l'Etat, elles font l'objet du rattachement par transfert de crédits en vue d'être employées à l'achat, sur le budget de l'Etat, de terrains boisés ou à boiser.

**Article 9:** Lorsque, dans les cas prévus par la loi, des boisements soumis aux dispositions du présent titre en vertu des dispositions de l'article 6 sont aliénés après désaffectation, le produit de l'opération est encaissé par le trésor à titre de fonds de concours en vue d'être

employé à l'achat par l'Etat ou les Communes, de terrains boisés ou à boiser.

##### Section 2 DE LA DÉLIMITATION ET DU BORNAGE

**Article 10:** La séparation entre les forêts, boisements et terrains à boiser de l'Etat et les propriétés riveraines peut faire l'objet, soit d'une délimitation partielle, soit d'une délimitation générale.

La séparation par délimitation partielle peut être requise soit par le Ministre ayant les forêts sans ses attributions ou son délégué, soit par les propriétaires riverains.

L'action en délimitation partielle est intentée soit par l'Etat, soit par les propriétaires riverains dans les formes de droit commun en matière de délimitation des propriétés riveraines.

La délimitation générale d'une forêt, d'un boisement ou d'un terrain à boiser est affectée selon une procédure fixée par des dispositions réglementaires.

Il est sursis à statuer sur l'action en délimitation partielle si le Service forestier offre, dans un délai de quatre mois, d'ouvrir la procédure de délimitation générale.

##### Section 3 DE L'AMÉNAGEMENT ET DE L'ASSIETTE DES COUPES

**Article 11:** Tous les boisements et forêts du domaine de l'Etat sont assujettis à un aménagement réglé par ordonnance ministérielle.

**Article 12:** Par dérogation aux dispositions de l'article précédent et à titre transitoire, l'exploitation des forêts et boisements de l'Etat pourra se faire soit par permis de coupe portant sur un nombre déterminé d'arbres, soit par permis d'exploitation portant sur une superficie déterminée.

##### Section 4 DE LA VENTE DE COUPES OU DE PRODUITS DE COUPE

**Article 13:** Toute vente doit être conforme aux dispositions soit de l'article 18, soit de l'article 19 et des règlements pris pour leur application sous peine d'être considérée comme vente clandestine et déclarée nulle.

**Article 14:** Les cautions de la vente sont solidairement tenues du paiement des dommages, restitutions et amendes qu'aurait encourus l'acheteur des coupes.

**Article 15:** Toute manoeuvre entre individus tendant à nuire aux ventes, à les troubler ou à obtenir les bois à plus bas prix, donne lieu à l'application d'une amende d'un minimum de 1000F et 10,000F au maximum contre chaque individu ayant participé à la manoeuvre indépendamment de tous dommages et intérêts. Si la vente a été faite au profit des auteurs desdites manoeuvres, elle sera déclarée nulle.

**Article 16:** Faute, par l'acheteur de coupes, de fournir les cautions exigées par les clauses de la vente dans le délai prescrit, il sera déclaré déchu de la vente et il sera procédé, dans les formes prescrites par l'article 18 à une nouvelle vente de la coupe à la folle enchère. L'acheteur déchu sera tenu de la différence entre son prix et celui de la revente sans pouvoir réclamer l'excédent s'il y en a.

**Article 17:** Tout contrat de vente emporte exécution obligatoire contre les acheteurs, leurs associés, et cautions tant pour le paiement du prix principal de la vente que pour accessoires et frais.

**Article 18:** Dans les forêts et boisements de l'Etat, les coupes et le produit des coupes sont vendus par le service forestier avec publicité et appel à la concurrence dans les conditions fixées par ordonnance ministérielle. Toutefois, le Ministre ayant les forêts dans ses attributions peut exceptionnellement autoriser des coupes gratuites dans les boisements de l'Etat au profit des oeuvres sociales qui en justifient la nécessité.

**Article 19:** Dans les forêts et boisements de l'Etat, qui n'ont pas encore fait l'objet d'un aménagement, le service forestier peut vendre dans les conditions fixées par ordonnance ministérielle, les permis de coupe et les permis d'exploitation ainsi que les produits provenant de tels permis.

**Article 20:** Le Service forestier peut confier à un organisme spécialisé, moyennant une redevance, l'exploitation et la commercialisation des bois provenant des coupes, permis de coupe et permis d'exploitation dans les boisements de l'Etat.

## Section 5 DE L'EXPLOITATION DES COUPES

**Article 21:** Après la vente, il ne peut être fait aucun changement à l'assiette des coupes, ni ajouté aucun arbre ou portion de bois sous quelque prétexte que ce soit, à peine contre l'acheteur d'une amende égale au triple de la valeur des bois non compris dans la vente sans préjudice de la restitution de ces mêmes bois ou de leur valeur. Les agronomes forestiers et agents assermentés du Service forestier qui auraient punis de pareille amende, sans préjudice s'il y a lieu, de l'application des disposi-

tions du Code pénal. Les amendes prévues au présent article sont toujours supérieures à 20.000F.

**Article 22:** Les acheteurs ne peuvent commencer l'exploitation de leurs coupes avant d'avoir obtenu, par écrit, le permis d'exploiter, sous peine d'être poursuivis comme délinquants ou contrevenants, les bois qu'ils auraient coupés.

**Article 23:** Chaque acheteur de coupes peut avoir un garde-coupe agréé par le Service forestier. Ce garde coupe est autorisé à dresser des procès-verbaux dans les limites de la coupe. Ces procès-verbaux font foi jusqu'à preuve du contraire.

**Article 24:** L'acheteur de coupe doit respecter tous les arbres marqués ou désignés pour demeurer en réserve quelle que soit leur qualité, même si leur nombre excède celui qui est porté au procès-verbal de martelage. Il ne peut y avoir compensation entre arbres coupés en infraction et arbres destinés à être coupés que l'acheteur aurait laissé sur pied.

**Article 25:** Les amendes encourues par les acheteurs de coupes pour abattage ou déficit d'arbres réservés sont fixées en fonction de la circonférence de ces arbres lorsque celle-ci peut être constatée, et ce, comme pour la coupe ou l'enlèvement frauduleux de bois. Dans le cas contraire, l'amende est fixée par des dispositions réglementaire.

Dans ce cas, la restitution des arbres ou de leur valeur, s'ils ne peuvent être restitués en nature, est obligatoire. Cette valeur est estimée à une somme au moins égale à l'amende encourue majorée de moitié que la circonférence des arbres ait pu ou non être constatée. Les dommages et intérêts sont au moins égaux à cette valeur de restitution.

**Article 26:** La coupe et la vidange des bois seront faites dans les délais fixés par les clauses de la vente, à moins que les acheteurs de coupes aient obtenu une prorogation de délai du Service forestier. L'inexécution de ces obligations entraîne une amende fixée par ordonnance ministérielle et des dommages-intérêts dont le montant est égal au double de la valeur estimative des bois restés sur pied ou gisant sur coupes. Les bois sont saisis à titre de garantie pour les dommages-intérêts.

**Article 27:** Les acheteurs de coupes doivent exécuter, dans les délais fixés, les travaux imposés par les clauses de la vente, pour relancer et faire façonner les houppiers et pour nettoyer les coupes des rémanants que pour réparer les chemins de vidange et fossés ou repiquer les places à charbon, combler les fosses de sciage et réaliser les autres ouvrages à leur charge. En cas d'inexécution dans les délais fixés, ces travaux seront exécutés à leurs frais.

**Article 28:** Les acheteurs de coupes ne peuvent déposer dans leurs coupes d'autres bois que ceux qui en proviennent, sous peine d'une amende de 4.000 F à 80.000 F.

**Article 29:** Si, dans le cours de l'abattage ou de la vidange, il est dressé des procès-verbaux pour infractions ou vices d'exploitation, il peut y être donné suite, sans attendre le récolement. En cas d'insuffisance d'un premier procès-verbal sur lequel il ne sera pas intervenu de jugement, agronomes forestiers et agents assermentés du service forestier peuvent, lors du récolement, constater les infractions par un nouveau procès-verbal.

**Article 30:** Les acheteurs de coupes, à dater du permis d'exploiter, jusqu'à ce qu'ils aient obtenu leur décharge, sont responsables de tous délits et contraventions forestiers commis dans leurs coupes si leurs gardes-coupes n'en font leurs rapports. Ces rapports doivent être remis à l'agronome forestier de l'Etat chargé des forêts qui est compétent pour entamer les enquêtes dans un délai d'une semaine.

**Article 31:** Les acheteurs de coupes et leurs cautions sont responsables du paiement des dommages-intérêts et restitutions encourus pour délits et contraventions forestiers commis dans la coupe par les gardes-coupes, ouvriers, bûcherons, voituriers et tous les autres employés des acheteurs. Cette responsabilité a lieu aussi longtemps que les acheteurs ne prouvent pas qu'ils n'ont pu empêcher le fait incriminé. Dans le cas contraire, le contrevenant est civilement responsable.

**Article 32:** Dans le cas où l'acheteur de coupes est reconnu coupable ou responsable d'une infraction aux dispositions des articles précédents, le tribunal peut en outre, prononcer le *retrait du permis d'exploiter*.

**Article 33:** Les dispositions des articles 21 à 32 s'appliquent aux détenteurs de permis d'exploitation délivrés dans les conditions prévues à l'article 19.

**Article 34:** Tout détenteur d'un permis de coupe délivré dans les conditions prévues à l'article 19, qui aura abattu ou fait abattre des arbres non spécifiés sur son permis, sera poursuivi pour coupe illicite et passible des sanctions prévues à l'article 110.

### Section DES RÉCOLEMENTS

**Article 35:** Il est procédé au *récolement de chaque coupe dans les trois mois qui suivent le jour de l'expiration des délais accordés pour la vidange des coupes*. Ces trois mois écoulés, les acheteurs peuvent mettre en demeure le service forestier; si dans le mois suivant la signification de la mise en demeure, le Service forestier n'a pas

procédé au récolement, l'acheteur demeurera libéré.

**Article 36:** Dans le délai d'un mois après la clôture des opérations de récolement, le Service forestier et l'acheteur de coupes peuvent requérir l'annulation du procès-verbal de ces opérations pour vice de forme ou pour fausse déclaration. Ils saisissent à cet effet, le tribunal compétent qui statue. En cas d'annulation du procès-verbal, le Service forestier peut, dans le mois qui suit faire dresser un nouveau procès-verbal.

**Article 37:** A l'expiration des délais fixés par l'article précédent et si le Service forestier n'a élevé aucune contestation, l'acheteur de coupes reçoit la *décharge d'exploitation*.

### Section 7 DU DROIT D'USAGE DANS LES FORÊTS DE L'ETAT

**Article 38:** Il ne peut être fait dans les forêts et boisements de l'Etat, aucune concession de droit d'usage de quelque nature et sous quelque prétexte que ce soit.

**Article 39:** Toutefois, dans toutes les forêts de l'Etat qui ne sont pas affranchies au moyen du rachat conformément à l'article 44, l'exercice des droits d'usage peut toujours être reconnu par le Service forestier suivant l'état et la possibilité des forêts, et n'a lieu que conformément au présent chapitre et aux modalités prévues par des dispositions réglementaires.

**Article 40:** Dans toutes les forêts de l'Etat, quand, pour des raisons sylvicoles, l'exercice des droits d'usage au bois est préjudiciable au maintien de l'état boisé, l'autorité compétente peut interdire l'exercice de ce droit pendant une période déterminée, période qui peut être prorogée, si nécessaire.

**Article 41:** L'exercice des droits d'usage au bois dans les forêts de l'Etat est limité à la coupe du bois de chauffage, de construction et de pirogue nécessaires aux besoins domestiques.

**Article 42:** Il est interdit aux usagers de vendre ou d'échanger les bois de construction et de pirogue provenant de l'exercice de leur droit d'usage.

**Article 43:** L'emploi des bois de construction doit être fait dans un délai de six mois lequel néanmoins, peut être prorogé par le Service forestier. Ce délai expiré, le Service peut disposer des arbres ou des produits-non employés.

**Article 44:** Les droits d'usage au pâturage dans les forêts de l'Etat peuvent être rachetés moyennant des indemnités qui sont réglées de gré à gré ou, en cas de contestation,

par les tribunaux judiciaires.

**Article 45:** Aucun droit d'usage ne peut s'exercer sur des boisements de l'Etat. Dans le cas où des droits d'usage auraient été concédés dans les boisements de l'Etat, ceux-ci seront obligatoirement rachetés moyennant des indemnités qui seront réglées de gré à gré, en cas de contestation, par les tribunaux judiciaires.

## Chapitre II

### DU DOMAINE FORESTIER DES COMMUNES ET DES ETABLISSEMENTS PUBLICS

#### Section 1

##### DES DISPOSITIONS GÉNÉRALES

**Article 46:** La soumission au présent Code des boisements et terrains à boiser appartenant aux communes et aux Etablissements publics est prononcée par l'autorité provinciale sur proposition du Service forestier, le représentant de la collectivité ou de la commune entendu. En cas de désaccord, la décision est prise par ordonnance du Ministre ayant les boisements dans ses attributions.

**Article 47:** Le Service forestier et l'autorité communale sont chargés, chacun en ce qui le concerne dans les conditions définies par la législation et la réglementation applicables au domaine forestier de l'Etat, de la gestion et de l'équipement des boisements et terrains à boiser ou à restaurer appartenant aux communes et soumis au présent Code.

Le Service forestier peut également être chargé par les Etablissements publics de gérer et d'équiper les boisements et terrains à boiser détenus par ces derniers, en accord avec les dispositions de l'article 75.

**Article 48:** Toute aliénation d'un terrain soumis aux dispositions du présent chapitre est assujettie à l'autorisation du Ministre ayant les forêts dans ses attributions. La propriété des boisements communaux ne peut jamais donner lieu à partage entre les habitants. Lorsque deux ou plusieurs communes possèdent un boisement en copropriétés, chacune conserve le droit d'en provoquer le partage.

#### Section 2

##### DE L'AMÉNAGEMENT

**Article 49:** Dans le cas où des boisements communaux atteindraient des superficies justifiant des aménagements, ceux-ci seraient réglés par des ordonnances ministérielles conformément à l'article 11. Toutefois l'aménagement

des boisements appartenant aux Etablissements publics est soumis aux dispositions de l'article 65.

**Article 50:** Tout changement dans le mode d'exploitation ou d'aménagement des terrains soumis au Code forestier appartenant aux communes fait l'objet d'une décision de l'autorité administrative après avis du représentant de la commune.

#### Section 3

##### DE LA VENTE DE COUPES ET PRODUITS DE COUPES

**Article 51:** Pour les boisements communaux susceptibles d'aménagement, la vente des coupes est faite à la diligence du Service forestier dans les mêmes formes que pour les forêts et boisements de l'Etat et en présence de l'administrateur communaux de son délégué régulièrement convoqué puisse entraîner la nullité des opérations.

Toute vente ou coupe effectuée par ordre des représentants communaux, en infraction aux dispositions de l'alinéa précédent, donne lieu contre eux à une amende de 10.000 à 50.000 Fbu sans préjudice des dommages-intérêts qui sont dus à la commune. Les ventes ainsi effectuées sont déclarées nulles.

**Article 52:** Dans les boisements communaux *non susceptibles d'aménagement* l'exploitation de ceux-ci pourra se faire par permis de coupe portant soit sur un nombre déterminé d'arbres, soit une surface déterminée. La vente de ces permis de coupe par le Service forestier peut être faite à l'amiable dans des conditions fixées par ordonnance ministérielle. Les dispositions du deuxième alinéa de l'article 51 sont applicables aux permis de coupe prévus à l'alinéa précédent.

**Article 53:** Le produit de la vente des coupes et des permis de coupe dans les boisements communaux est intégralement versé aux communes intéressées. La surveillance et la gestion des boisements communaux par le Service forestier sont sans frais.

#### Section 4

##### DES COUPES POUR AFFOUAGE

**Article 55:** Dans les boisements communaux, les coupes destinées à être partagées en nature pour l'affouage des habitants ne peuvent avoir lieu qu'après la délivrance faite au préalable par le Service forestier. S'il y a un partage sur pied de ces coupes, l'exploitation a lieu sous la responsabilité de trois habitants désignés par l'Administrateur communal.

## **Section 5 DU DROIT D'USAGE**

**Article 56:** Il ne peut être fait dans les boisements, terrains à boiser ou à restaurer appartenant aux communes, aucune concession de droit d'usage de quelque nature et sous quelque prétexte que ce soit.

**Article 57:** Les boisements, terrains à boiser et à restaurer appartenant aux communes, qui auraient fait l'objet de concessions de droits d'usage avant la parution du présent texte, seront affranchis de ces droits par voie de rachat moyennant des indemnités réglées de gré à gré ou en cas de contestation, par les tribunaux judiciaires.

## **Chapitre III DES DISPOSITIONS COMMUNES AUX FORÊTS, BOISEMENTS ET TERRAINS À BOISER**

### **Section 1 DE LA PROTECTION**

**Article 58:** Aucun four à chaux ou à plâtre, soit temporaire, soit permanent, aucune briqueterie ou tuilerie, ne peuvent être établis à l'intérieur et à moins d'un kilomètre des forêts, boisements et terrains soumis au présent Code, sans autorisation du Service forestier sous peine d'une amende contraventionnelle et de démolition des établissements.

**Article 59:** Aucune maison sur perche, loge, baraque ou hangar ne peuvent être établis, sans autorisation du Service forestier sous quelque prétexte que ce soit à l'intérieur et à moins de 200 mètres de forêts, boisements et terrains soumis au Code forestier, sous peine d'une amende contraventionnelle et de la démolition.

**Article 60:** Aucun atelier à façonner le bois, aucun chantier ou magasin pour faire le commerce du bois ne peut être établi sans autorisation du Service forestier dans les habitations situées dans un rayon de 500 mètres des forêts, boisements et terrains soumis au Code forestier, sous peine d'une amende contraventionnelle et de la confiscation des bois.

**Article 61:** Aucune usine à scier le bois ne peut être établie à l'intérieur et à moins de deux kilomètres de distance des forêts, boisements et terrains soumis au Code forestier qu'avec une autorisation du Service forestier, sous peine d'une amende contraventionnelle et de la démolition.

**Article 62:** Sont exemptées des dispositions des articles 60 et 61, les maisons et usines qui font partie des villes, villages ou groupes d'habitations formant une popula-

tion agglomérée, bien qu'elles soient situées aux distances des forêts, boisements et terrains soumis au Code forestier fixées par ces articles.

## **TITRE II**

### **Des boisements des particuliers**

#### **Chapitre I DES DISPOSITIONS GÉNÉRALES**

**Article 63:** Tout propriétaire exerce sur ses boisements et terrains à boiser tous les droits résultant de la propriété, ceci dans les limites spécifiées par le présent Code et par la loi, afin d'assurer l'équilibre biologique du pays et la satisfaction des besoins en bois et autres produits forestiers. Il doit en réaliser le boisement, l'entretien et l'exploitation en vue d'en assurer la rentabilité, conformément aux règles d'une sage gestion économique.

**Article 64:** Tout occupant individuel ou collectif d'une terre à vocation agricole ou pastorale peut être tenu de créer et d'entretenir dans l'intérêt général, un boisement, dont les superficies, les modalités et la nature selon les régions, sont fixées par ordonnance ministérielle.

#### **Chapitre II DE LA GESTION**

##### **Section 1 DU PLAN DE GESTION**

**Article 65:** Tout propriétaire d'un boisement d'une superficie supérieure à 10 ha et susceptible d'aménagement ou d'exploitation régulière est tenu de présenter à l'agrément du Service forestier un plan simple de gestion. Ce plan comprend obligatoirement un programme d'exploitation des coupes et, le cas échéant, un programme des travaux d'amélioration. Il doit être conforme aux orientations régionales de production fixées par l'autorité compétente.

**Article 66:** Le propriétaire a le droit d'avancer de trois ans ou retarder de cinq ans le programme d'exploitation prévu au plan de gestion, sans avoir à consulter au préalable le Service forestier. Le Service forestier peut, en outre, autoriser des coupes extraordinaires en deça de cette limite.

De plus, en cas d'événements fortuits, ou de force ma-



jeure, qui impliquent des mesures d'urgence, le propriétaire peut faire procéder à l'abattage. Toutefois, il doit, avant d'entreprendre la coupe, aviser le Service forestier et observer un délai fixé par des dispositions réglementaires. Pendant ce délai, le Service forestier peut faire opposition à cette coupe.

En outre, le propriétaire peut procéder, en dehors du programme d'exploitation, à l'abattage de bois pour les besoins de sa consommation personnelle et domestique.

**Article 67:** Le propriétaire qui n'aura pas, sauf cas de force majeure, fait agréer le plan de gestion de son boisement, ne pourra y procéder à une coupe sans autorisation préalable de l'administration chargée des forêts.

## Section 2

### DES OBLIGATIONS ET SANCTIONS

**Article 68:** Dans tout boisement particulier d'une étendue supérieure à un hectare que définit dans le titre préliminaire, et d'une étendue d'au moins un hectare d'un seul tenant, les propriétaires du sol sont tenus, après coupe rase, de prendre dans un délai de deux ans, les mesures nécessaires à la reconstitution de peuplements forestiers susceptibles de donner ultérieurement une production au moins équivalente à celle du peuplement exploité, sauf dérogation accordée dans des conditions définies par ordonnance ministérielle.

**Article 69:** Quiconque n'aura pas satisfait à l'obligation de boisement prévue à l'article 64 est passible d'une peine de servitude pénale de 7 à 30 jours, et d'une amende de 10.000 Fbu au maximum, ou de l'une de ces deux peines seulement.

**Article 70:** En cas de coupe abusive non conforme aux dispositions de l'article 65 et des deux premiers alinéas de l'article 66 ou en cas de coupe dans un boisement pour lequel le propriétaire n'aura pas fait agréer son plan de gestion, ce dernier est passible d'une amende de 2.000 à 50.000 Fbu. La même peine est applicable en cas d'infraction aux dispositions de l'article 68.

**Article 71:** Les infractions aux dispositions des articles 64, 65, 66, 69 et 70, sont constatées par les fonctionnaires de l'administration chargée de forêts au moyen de procès-verbaux faisant foi jusqu'à preuve du contraire.

**Article 72:** Le Ministre, ayant les forêts dans ses attributions, peut, avant jugement irrévocable, accorder, dans les conditions fixées par ordonnance ministérielle, le bénéfice d'une transaction sur la poursuite des infractions mentionnées aux articles 64, 65, 66, 69 et 70, le Ministre, sur avis du Service forestier, peut prescrire l'exécution de mesures de reconstitution forestière.

## Section 3

### DE LA SURVEILLANCE ET DE LA GESTION

**Article 73:** Les propriétaires qui veulent avoir, pour la conservation de leurs boisements, des gardes particuliers, doivent les faire agréer par le Gouverneur de la Province.

**Article 74:** Les propriétaires peuvent concéder des droits d'usage sur leurs boisements. Ils jouissent, de la même manière que l'Etat, de la faculté d'affranchir leurs boisements des droits d'usage concédés. Cet affranchissement ne peut se faire que par la voie du rachat moyennant des indemnités qui sont réglées de gré à gré ou, en cas de contestation, par les tribunaux judiciaires.

**Article 75:** Le Service forestier peut se charger, en tout ou en partie, de la conservation et de la régie des boisements des particuliers sous des conditions fixées contractuellement. Les conventions et les ventes conclues par les propriétaires ou les administrateurs de ces boisements, qui auraient procédé à des coupes de toutes natures sans l'autorisation du Service forestier ou en dehors des conditions fixées par ce Service, sont déclarées nulles.

## TITRE III

### De la conservation des forêts, boisements et terrains à boisier en général

#### Chapitre I DES DÉFRICHEMENTS

**Article 76:** Aux termes du présent chapitre, on appelle "défrichement" la suite des opérations destinées à permettre la mise en culture d'un terrain préalablement recouvert d'une végétation ligneuse et qui consiste dans l'abattage de tout ou partie de cette végétation suivi ou non d'incinération, dans le but de procéder à des plantations ou semis d'ordre agricole.

#### Section 1 DES FORÊTS ET BOISEMENTS DU DOMAINE DE L'ETAT ET DES COMMUNES

**Article 77:** Il est interdit, sauf autorisation spéciale du Ministre ayant les forêts dans ses attributions, de procéder à quelque défrichement que ce soit à l'intérieur des forêts et boisements du domaine de l'Etat.

**Article 78:** Les Communes ne peuvent procéder ou faire procéder à aucun défrichement de leurs boisements sans

une autorisation expresse et spéciale du Ministre ayant les forêts dans ses attributions. Les faits de défrichements indirects, tels qu'ils sont définis au troisième alinéa de l'article 86, sont soumis aux dispositions de l'alinéa ci-dessus.

## Section 2 DES BOISEMENTS DES PARTICULIERS

**Article 79:** Aucun particulier ne peut user du droit d'arracher ou de défricher ses boisements sans avoir préalablement obtenu une autorisation du Service forestier. Cette autorisation est délivrée après reconnaissance de l'état des boisements. En cas de refus, l'intéressé peut exercer ses droits de recours. Faute de réponse de l'administration dans un délai de deux mois à dater de la réception de la requête, le défrichement peut être effectué.

**Article 80:** Sont exceptés des dispositions de l'article précédent:

1. les jeunes boisements pendant les deux premières années après leur semis ou plantations, sauf si ceux-ci ont été réalisés en remplacement de boisements défrichés comme il est prévu au cinquième alinéa de l'article 83 ou bien exécutés en application de l'obligation de boisement prévue à l'article 64 ou des dispositions visant les forêts de protection, la conservation et restauration des terrains en montagne et réserves de reboisement;
2. les parcs et jardins clos et attenants à une habitation principale, lorsque l'étendue close est inférieure à deux hectares;
3. les boisements de moins d'un demi-hectare, sauf s'ils font partie d'un autre boisement qui complète la contenance à un demi-hectare, ou s'ils sont situés sur le sommet ou la pente d'une montagne ou bien s'ils proviennent de boisements exécutés en application de l'obligation de boisement prévue à l'article 64 ou des dispositions visant les forêts de protection, la conservation et restauration des terrains en montagne et réserves de reboisement.

**Article 81:** L'autorisation de défrichement peut être refusée lorsque la conservation du boisement, ou des massifs qu'il complète, est reconnue nécessaire:

1. au maintien des terres sur les montagnes et sur les pentes;
2. à la défense du sol contre les érosions et envahissements des fleuves, rivières ou torrents;
3. à l'existence des sources et cours d'eau;
4. à la défense nationale;

5. à la salubrité publique;
6. à la nécessité d'assurer le ravitaillement national en bois et produits dérivés en ce qui concerne les bois provenant des boisements exécutés en application de l'obligation de boisement prévue à l'article 64 ou des dispositions visant les forêts de protection, conservation et restauration des terrains en montagne et réserves de reboisement;
7. à l'équilibre biologique d'une région ou au bien-être de la population.

**Article 82:** Toutefois, dans le cas où cette interdiction aurait pour effet de diminuer le revenu normal d'un ou de plusieurs propriétaires, il pourra être proposé aux parties intéressées soit le versement d'une indemnité compensatoire soit l'achat pur et simple des terrains, objets du refus d'autorisation. Une ordonnance ministérielle fixe l'indemnité compensatrice et les modalités d'achat.

**Article 83:** L'autorité administrative peut subordonner son autorisation de défrichement à la conservation sur le terrain en cause de réserves boisées suffisamment importantes pour remplir les rôles utilitaires définis à l'article précédent ou bien à l'exécution de travaux de boisement sur d'autres terrains.

## Section 3 DES SANCTIONS

**Article 84:** Quiconque aura défriché une partie de forêt ou de boisement du domaine de l'Etat sera puni d'une servitude pénale de six mois à cinq ans et d'une amende de 2,000 à 50,000 Fbu ou de l'une de ces deux peines seulement.

**Article 85:** Ceux qui auraient ordonné ou effectué un défrichement dans un boisement appartenant à une commune en infraction aux dispositions de l'article 78 sont passibles de peines prévues par l'article précédent pour les infractions de même nature.

**Article 86:** En cas d'infraction aux dispositions de l'article 79, le propriétaire est condamné à une amende calculée à raison de 10.000 à 100.000 Fbu par hectare défriché. Le propriétaire doit, en outre, s'il en est ainsi ordonné par le Service forestier, rétablir les lieux en nature de bois dans le délai que fixe cette autorité. Ce délai ne peut excéder deux années. Les faits de défrichement indirects sont assimilés aux délits de défrichement et punis comme tels à savoir:

- la coupe à blanc-étoc ou l'exploitation abusive, suivi de placage ayant pour conséquence d'entraîner la destruction de l'état boisé:

- la destruction de l'état boisé par des prédateurs, quand le propriétaire en a favorisé le pullulement.

Les peines et amendes en matières de défrichement s'appliquent à toute destruction des reboisements exécutés ou subventionnés par l'Etat, soit du fait de coupe à blanc-étoc ou d'exploitation abusive non suivies de repeuplement dans un délai de trois ans, soit du fait de dégâts de prédateurs, soit pour toute autre cause.

Les dispositions du présent article, de même que celles des articles 79, 81 et 87 sont applicables aux semis et plantations exécutés en remplacement des bois défrichés, conformément à la décision administrative.

**Article 87:** Le défrichement des réserves boisées, dont la conservation est imposée au propriétaire en vertu des dispositions de l'article 83 donne lieu à une amende prévue à l'article 86.

En cas d'inexécution dans un délai maximum de trois ans des travaux de reboisement sur d'autres terrains, imposés en application des articles 83 et 86, les lieux défrichés doivent être rétablis en nature de bois dans un délai fixé par le Service forestier. Ce délai ne peut excéder deux années. L'autorité administrative peut, en outre, dans les conditions fixées à l'alinéa précédent, ordonner la remise en nature de bois des terrains devant être maintenus à l'état de réserves boisées. Faute, par le propriétaire, d'effectuer la plantation ou le semis, prévus par l'article 83 et 86 et par le présent article, dans le délai prescrit par la décision administrative, il y est pourvu à ses frais par l'administration qui arrête le mémoire des travaux faits et le rend exécutoire contre lui.

**Article 88:** Les peines prévues aux articles 84, 85 et 86 sont doublées et la peine de servitude pénale quand elle existe obligatoirement prononcée si le défrichement a été effectué dans une forêt de protection, une réserve forestière, une zone mise en défense ou dans un périmètre de restauration des sols.

## Chapitre II DE LA DÉFENSE ET DE LA LUTTE CONTRE LES FEUX DE VÉGÉTATION

### Section 1 GÉNÉRALITÉS

**Article 89:** Les feux de végétation comprennent:

1. Les feux "de culture" et de "nettoiements" qui ont pour but, soit d'incinérer la végétation ligneuse peu dense qui recouvre un terrain cultivé de façon permanente en

vue d'y préparer de nouvelles cultures, soit de nettoyer les abords de champs de cultures pérennes ou d'installations à but social ou économique;

2. les "feux de pâturage" qui ont pour but le renouvellement de la végétation herbacée sur des pâturages limités dont l'utilisation constante par des particuliers ou des collectivités nettement déterminées a été reconnue;

3. les "feux sauvages" qui se propagent sans contrôle, sans limite, à travers n'importe quel type de végétation et sans utilité d'ordre économique.

### Section 2

#### DE LA RÉGLEMENTATION DES FEUX DE VÉGÉTATION

**Article 90:** Il est interdit d'allumer un feu de végétation, quel qu'il soit, à l'intérieur des forêts, boisements et terrains à boiser quels qu'en soient les propriétaires.

**Article 91:** Hors des forêts, boisements et terrains à boiser, les particuliers peuvent allumer, à leurs risques et périls, des feux de "cultures" ou de "nettoiement" dans les terrains pour les quels ils ont des droits également reconnus.

**Article 92:** En dehors des périodes fixées pour chaque province, il est interdit d'allumer un "feu de pâturage" à moins d'avoir, au préalable, obtenu une autorisation. Les périodes pendant lesquelles les "feux de pâturage" doivent être exécutés et les conditions de délivrance des autorisations, ainsi que les clauses qui peuvent les accompagner sont déterminées par le Ministre ayant l'Agriculture dans ses attributions.

**Article 93:** Toutes les précautions doivent être prises pour que les feux "de culture" et de "nettoiement" ainsi que les "feux de pâturages" ne se transforment pas en "feux sauvages".

**Article 94:** Il est interdit d'allumer ou de provoquer un "feu sauvage" où que ce soit et pour quelque motif que ce soit. Le fait d'abandonner un feu non éteint susceptible de se communiquer à la végétation environnante est assimilé au même délit.

**Article 95:** La direction de la lutte contre le "feu sauvage" appartient concurremment à l'autorité administrative locale et l'agent de service forestier le plus proche.

**Article 96:** Il est interdit de faire ou de laisser paître des troupeaux ou des animaux sur les pâturages incendiés en contravention avec les dispositions des articles 92 et 94.

### Section 3 DES MESURES DE PRÉVENTIONS

**Article 97:** En vue d'assurer la protection, contre "les feux sauvages", des forêts, boisements et terrains à boiser soumis au Code forestier, les agronomes forestiers peuvent, partout où il est utile:

- procéder périodiquement à des feux préventifs soit à l'intérieur soit sur tout ou partie de ces domaines, soit à l'extérieur de ceux-ci, sur une bande périmétrique dont la largeur ne devra pas dépasser 250 mètres.
- faire réaliser sur ces mêmes zones des ouvrages opposant un obstacle à la propagation de ces feux.

**Article 98:** Pour la sauvegarde du patrimoine forestier, le Service forestier peut imposer aux propriétaires de boisements en résineux l'ouverture de pare-feux tant à l'intérieur qu'à la périphérie des boisements. En cas de défaillance du propriétaire, le Service forestier peut faire exécuter les travaux ci-dessus aux frais de celui-ci.

**Article 99:** Quand les circonstances climatiques rendent nécessaires la prévention des "feux sauvages", les feux de "culture" et de "nettoisement" prévus à l'article 91 peuvent être exceptionnellement et momentanément interdits sur tout ou partie du territoire selon des modalités fixées par ordonnance ministérielle.

**Article 100:** Il est interdit, sauf l'exception prévue à l'article 97, de porter ou d'allumer du feu en dehors des habitations et des d'exploitation, à l'intérieur et à la distance de 100 mètres des forêts, boisement terrains à boiser quels qu'en soient les propriétaires.

**Article 101:** L'installation de charbonnières, fours à charbon, fours pour l'extraction de sous-produits du bois ne peuvent être établis en forêts, dans les boisements et dans une zone de 200 mètres de largeur à la périphérie de ceux-ci par les exploitants forestiers dûment autorisés par le Service forestier qu'après nettoyage complet du sol dans un rayon de 25 mètres autour de chaque charbonnière ou four.

**Article 102:** A l'exception des cas prévus à l'article 95, il est interdit à tout agent d'un service public autre que le Service forestier, de procéder ou de donner l'ordre de procéder à la mise à feu d'une végétation, soumise à autorisation, sans être en possession de l'autorisation écrite qui en fixe les modalités, délivrée par le service compétent.

### Section 4 DES SANCTIONS

**Article 103:** Quiconque aura porté ou allumé un feu à l'intérieur d'une forêt, d'un boisement ou d'un terrain à

boiser sera puni d'une servitude pénale de six mois à cinq ans ou d'une amende de 10.000 à 20.000 Fbu ou de l'une de ces deux peines seulement. Il en sera de même si le feu a été volontairement allumé ou provoqué à proximité de ces terrains avec l'intention qu'il s'y communique ou s'il s'est propagé par suite de l'inobservation des dispositions de l'article 102.

**Article 104:** Quiconque aura allumé un "feu de culture" ou de "nettoisement" en contravention avec les dispositions de l'article 99, même si le feu ne s'est communiqué à aucune végétation environnante, sera puni d'une amende de 100 à 1.000 Fbu et d'une servitude pénale de un à trois mois ou de l'une de ces deux peines seulement.

**Article 105:** Quiconque aura allumé un feu de renouvellement de pâturage en dehors des périodes permises ou sans autorisation sera puni d'une amende de 500 à 5.000 Fbu et d'une servitude pénale de deux à six mois ou de l'une de ces deux peines seulement.

**Article 106:** Quiconque aura allumé un feu sauvage sera puni d'une amende de 1.000 à 10.000 Fbu et d'une servitude pénale de trois mois à trois ans ou de l'une de ces deux peines seulement. Il en sera de même pour les auteurs de "feux de culture" ou de "nettoisement" ou de "feux de pâturage" qui se seraient propagés en dehors des limites autorisées.

**Article 107:** Quiconque laissera sciemment des troupeaux ou des animaux paître sur des terrains incendiés en contravention avec les dispositions des articles 81 et 83 sera passible d'une amende de 100F par animal paissant en délit.

**Article 108:** Tout particulier, tout membre d'une collectivité qui n'aura pas obtempéré à une réquisition faite dans les formes réglementaires en vue d'arrêter un feu de quelque nature que ce soit, sera puni d'une amende de 500 à 5.000 Fbu et d'une servitude pénale de 2 mois à 2 ans ou de l'une de ces deux peines seulement.

### Chapitre III DES PÉNALITÉS RELATIVES À LA PROTECTION DE TOUS BOISEMENTS ET FORÊTS

**Article 109:** Tout élagage par les riverains des lisières de forêts et boisements sans en avoir prévenu les propriétaires, donne lieu à l'application des peines portées à l'article 112.

**Article 110:** La coupe ou l'enlèvement illicite d'arbres ayant plus de 30 centimètres de tour est puni d'une amende de 500 à 5.000 Fbu et d'une servitude pénale de 1 mois à 1 an ou de l'une de ces deux peines seulement. La circonférence est mesurée à 1.5 mètre de sol. S'il s'agit d'arbres issus de semis ou de plantations faites de main

d'homme, la peine de servitude pénale est toujours prononcée.

**Article 111:** Si les arbres mentionnés par l'article précédent ont été enlevés et façonnés, le tour en est mesuré par la souche. Si la souche a été également enlevée, le tour est calculé dans la proportion d'un cinquième en sus de la dimension totale des quatre faces de l'arbre équarri. Lorsque l'arbre et la souche ont disparu, l'amende est calculée suivant la grosseur de l'arbre arbitrée par le tribunal d'après les documents du procès.

**Article 112:** Ceux qui, dans les boisements et les forêts, ont éhoupé, écorcé ou mutilé des arbres, ou qui en ont coupé les principales branches sont punis comme s'ils les avaient abattus sur pied.

**Article 113:** Quiconque enlève des chablis et bois de délit est condamné aux mêmes amendes et restitutions que s'il les avait abattus sur pied.

**Article 114:** Dans le cas d'enlèvement frauduleux de bois et d'autres produits des forêts, il y a toujours lieu, outre les amendes, à la restitution des objets enlevés ou de leur valeur et, de plus, selon les circonstances, à des dommages-intérêts.

**Article 115:** Les propriétaires d'animaux trouvés en délit dans les semis ou plantations agés de moins de cinq ans, sont punis d'une amende de 100 Fbu par animal, sans préjudice s'il y a lieu, des dommages-intérêts.

## TITRE IV

### De la repression des infractions

#### Chapitre I

#### DE LA RÉPRESSION DES INFRACTIONS COMMISES DANS LES FORÊTS, BOISEMENTS ET TERRAINS À BOISER DE L'ETAT, DES COMMUNES ET DES ETABLISSEMENTS PUBLICS

#### Section 1

#### DE LA RECHERCHE ET DE LA CONSTATATION DES INFRACTIONS

#### Paragraphe 1 GÉNÉRALITÉS

Article 116: Les infractions sont recherchées et constatées

par le personnel du Service forestier ainsi que par tous les autres fonctionnaires de l'Etat, habilités à cet effet par le Ministre ayant les forêts dans ses attributions. Ils ont la qualité d'O.P.J. à compétence restreinte. Leur compétence s'étend sur tout le territoire pour lequel ils sont commissionnés.

#### Paragraphe 2 DU PROCÈS-VERBAL

**Article 117:** Le procès-verbal rédigé et signé par l'agent habilité, fait preuve jusqu'à inscription de faux, des faits matériels relatifs aux délits et contraventions qu'il constate.

**Article 118:** Le prévenu qui veut s'inscrire en faux contre le procès-verbal est tenu d'en faire, par écrit et en personne, ou par un fondé de pouvoir spécial, la déclaration au greffe du tribunal avant l'audience indiquée par la citation.

**Article 119:** Lorsque le procès-verbal est rédigé contre plusieurs prévenus et qu'un ou quelques-uns d'entre eux seulement s'inscrivent en faux, le procès-verbal continue de faire foi à l'égard des autres, à moins que le fait sur lequel porte l'inscription de faux ne soit indivisible et commun aux autres prévenus.

**Article 120:** Les procès-verbaux rédigés et signés par les agents habilités se terminent par le serment écrit "Je jure que le présent procès-verbal est sincère".

**Article 121:** Ces procès-verbaux sont clos dès leur notification aux délinquants. Cette notification se fait soit par remise d'une copie à l'intéressé soit par envoi de cette copie sous pli recommandé ou sous couvert de l'autorité administrative la plus voisine. La date de remise constitue la date de notification et de clôture.

**Article 122:** Les agents habilités à dresser des procès-verbaux peuvent arrêter et conduire devant l'officier du Ministère Public de leur ressort:

- tout individu qu'ils ont surpris en flagrant délit;
- tout individu ou délinquant qui fait volontairement obstacle d'une façon passive ou active, notamment en refusant de donner son identité, à l'accomplissement de leur devoir, ou se livre contre eux à un acte de rébellion;
- toute personne présumée avoir commis une infraction punissable d'une peine privative de liberté, qu'il y ait eu ou non flagrant délit.

Ils se font donner, à cet effet, main forte par les autorités administratives du lieu ou la Brigade de Police Judiciaire,

qui ne pourront refuser leur concours

Les agents du Service forestier remettent aux personnes susvisées une expédition du procès-verbal constatant le délit et sur lequel devra figurer, d'une manière explicite, la mention de l'arrestation. Ils leur confient également la ou les personnes arrêtées pour être conduites à l'une des autorités visées au premier alinéa du présent article.

**Article 123:** Les agents habilités à cet effet ont le droit de requérir directement la force publique pour la répression des délits et contraventions en matière forestière, ainsi que pour la recherche de la saisie des bois coupés en infraction, vendus ou achetés en fraude.

Il en est de même pour la recherche et la saisie de tous les objets ou animaux vendus ou achetés en fraude ou circulant en contravention avec les dispositions de la législation en la matière.

### Paragraphe 3

#### DU DROIT DE SUITE ET DE PERQUISITION

**Article 124:** Les agents habilités à dresser des procès-verbaux peuvent pénétrer et circuler librement dans les scieries, dépôts et chantiers, pour y exercer leur surveillance.

Ils ont dans les mêmes conditions, libre accès dans tous les lieux présentant le caractère de lieu public et notamment sur les quais lacustres ou fluviaux et dans les gares des sociétés de transport public. Ils peuvent visiter les véhicules de transport routier, navires et embarcations, les bâtiments et magasins des sociétés de transports routiers et fluviaux et doivent au préalable se faire reconnaître.

**Article 125:** Les agents habilités à dresser des procès-verbaux recherchent les objets enlevés par les auteurs d'infraction jusque dans les lieux où ils ont été transportés.

Ils ne peuvent néanmoins s'introduire dans les maisons, bâtiments, cours adjacentes et endos s'ils ne sont munis d'un mandat de perquisition.

### Paragraphe 4

#### SAISIE ET CONFISCATION SPÉCIALE

**Article 126:** Les agents du Service forestier habilités à dresser des procès-verbaux saisissent ou mettent en séquestre tous les produits, plantes ou animaux constituant l'objet ou le produit des infractions, les animaux trouvés en délit, les instruments, le matériel et

les véhicules ayant servi à commettre les infractions ou à transporter les produits ou objets.

Toutefois, les véhicules des sociétés de transport public échappent à cette règle: les produits délictueux contenus dans ces véhicules sont cependant débarqués pour être mis en séquestre.

**Article 127:** Dans tous les cas où il y a matière à confiscation spéciale, le procès-verbal qui constate l'infraction comporte la saisie des produits, objets ou animaux qui sont confiés à un gardien-séquestre.

En cas de mise en séquestre, l'agent instrumentant en dresse un procès-verbal dont il notifie un exemplaire au gardien-séquestre et à toute personne intéressée.

**Article 128:** En cas où le procès-verbal porte saisie, il en est fait une expédition qui est déposée dans les vingt-quatre heures à l'officier du Ministère Public qui saisit le Tribunal compétent suivant la valeur des objets saisis.

**Article 129:** Le juge du tribunal compétent peut donner main-levée provisoire de saisie, à la charge du paiement des frais de séquestre et moyennant une bonne et valable caution.

**Article 130:** Si les animaux saisis ne sont pas réclamés dans les huit jours qui suivent le séquestre, ou s'il n'est pas fourni une bonne et valable caution, le juge compétent en ordonne la vente aux enchères suivant avis affiché le huitième jour au siège du tribunal et au bureau de la commune du séquestre. La vente ne peut intervenir avant le dixième jour de l'affichage. Elle a lieu aux enchères publiques, au plus offrant et au comptant. Le montant de la vente, déduction faite des frais de séquestre et du montant des sommes frappées d'opposition par le Ministère Public pour exécution des condamnations pénales ou dommages-intérêts, est tenu à la disposition du propriétaire pendant un an à dater du jour de la vente. A l'expiration de ce délai, le produit de la vente est définitivement acquis au trésor.

**Article 131:** Tous bois ou produits provenant de la confiscation spéciale ou de la restitution sont vendus à la diligence du Service forestier par voie d'adjudication publique. En cas de transaction et si celle-ci le prévoit, ils sont vendus à l'auteur de l'infraction sous réserve, par celui-ci, du paiement des amendes, des frais de séquestre et frais divers.

Si un service public en fait la demande, pour ses besoins propres, les bois ou produits saisis peuvent lui être délivrés gratuitement par le Service forestier, après accomplissement des formalités ordinaires de délivrance et sous réserve du paiement par ce service des frais de séquestre et frais divers.

## Section 2 DES ACTIONS ET POURSUITES

**Article 132:** Le Service forestier exerce, dans l'intérêt de l'Etat, les poursuites en réparation de tous délits et contraventions commis dans les forêts, boisements et terrains soumis aux dispositions du titre I du présent Code. Les actions sont intentées et les poursuites exercées, au nom du Service forestier, par les agronomes forestiers de l'Etat, sans préjudice du droit qui appartient au Ministère Public.

**Article 133:** Les actions résultant des infractions en matière forestière se prescrivent de la manière suivante:

- par un an à compter du jour où elles ont été commises si les infractions ne sont punies que d'une peine d'amende ou par une servitude pénale ne dépassant pas un an. Le point de départ de la prescription est fixé au jour de la clôture du procès-verbal;
- par trois ou dix ans à compter du jour où elles ont été commises si les infractions sont punies d'une servitude pénale inférieure ou supérieure à cinq ans.

**Article 134:** Les dispositions du Code de procédure pénale, sont applicables à la poursuite des délits et contraventions spécifiés par le présent Code.

## Section 3 DES TRANSACTIONS ET DE L'EXÉCUTION DES JUGEMENTS

**Article 135:** Le Service forestier est seul autorisé à transiger avant la poursuite des délits et contraventions commis dans les forêts, boisements et terrains soumis aux dispositions du titre I du présent Code.

Dans ce cadre, le Service forestier peut accepter des transactions sous forme de prestations en nature consistant en travaux d'entretien et d'amélioration dans les forêts, boisements et terrains à boiser, ou sur les chemins communaux ou ruraux.

La prestation peut être fournie en tâche. Si les prestations ne sont pas fournies dans le délai fixé par les agronomes forestiers chargés des poursuites celles-ci suivent leur cours.

**Article 136:** Les personnes déclarées civilement responsables peuvent être également appelées à transiger, concurremment avec les délinquants. La transaction ne leur est opposable que si elles y acquiescent.

En cas de non acquiescement, ou de non acquittement du montant de la transaction, elles peuvent être astreintes au paiement après condamnation.

**Article 137:** Les jugements portant condamnation à des amendes, restitutions, dommages-intérêts et frais sont exécutoires par la voie de la contrainte par corps et l'exécution pourra en être poursuivie huit jours après un simple commandement fait aux condamnés.

**Article 138:** Les personnes contre lesquelles la contrainte par corps a été prononcée en raison des amendes et autres condamnations et réparations pécuniaires, subissent l'effet de cette contrainte jusqu'à ce qu'elles aient payé le montant desdites condamnations ou fourni une caution déclarée bonne et valable par le tribunal compétent.

## Chapitre III DE LA RÉPRESSION DES INFRACTIONS COMMISES DANS LES BOISEMENTS DES PARTICULIERS

**Article 139:** Les délits et contraventions commis dans les boisements, non soumis aux dispositions du titre I du présent Code, sont recherchés et constatés par les Officiers de Police Judiciaires à compétence générale et par les Officiers de Police compétents en matière forestière. Les procès-verbaux font foi jusqu'à l'inscription en faux.

**Article 140:** Les dispositions contenues aux articles 122, 125, 128, 129, 130 et 134, sont applicables à la poursuite des délits et contraventions commis dans les boisements particuliers.

**Article 141:** Les dispositions des articles 116, 117 à 136, relatives à la compétence en matière de constatations et de poursuites du Service forestier et aux modalités de ces poursuites s'appliquent:

- aux infractions commises dans les boisements des particuliers dont le Service forestier assure en tout ou partie la conservation et la régie à titre contractuel, en vertu des dispositions de l'article 75;
- aux infractions en matière de défrichement des boisements de particuliers;
- aux infractions commises par les propriétaires dans leurs boisements classés en "forêts de protection";
- aux infractions commises dans les terrains particuliers mis en défens;
- aux infractions commises dans les terrains particuliers situés à l'intérieur de "périmètres de restauration des sols".

**Article 142:** Les jugements contenant des condamnations en faveur des particuliers pour réparation des délits ou contraventions commis dans leurs boisements sont à leur

diligence signifiés et exécutés suivant les mêmes formes et voies de contrainte que les jugements rendus à la requête du Service forestier.

Le recouvrement des amendes prononcées par les mêmes jugements est opéré par les comptables du trésor.

**Article 143:** Les auteurs d'infractions insolubles peuvent être admis à se libérer au moyen de prestations en nature, dans les conditions fixées par le 2<sup>e</sup> alinéa de l'article 135 au profit de la personne préjudiciée.

### Chapitre III

#### DE LA RÉPRESSION DES INFRACTIONS EN MATIÈRE DE DÉFRICHEMENTS ET DE FEUX DE VÉGÉTATION

##### Section I GÉNÉRALITÉS

**Article 144:** Outre le personnel du Service forestier, sont habilités à rechercher et à constater les infractions à la législation sur les défrichements et les feux de végétation:

- les officiers de police judiciaire;
- les administrateurs communaux.

**Article 145:** Les procès-verbaux dressés en matière de défrichement doivent être transmis pour information à l'agronome forestier communal.

**Article 146:** Le Service forestier est compétent pour exercer dans les conditions prévues pour la poursuite des délits et contraventions commis dans les forêts, boisements et terrains soumis aux dispositions du titre I du présent Code, la poursuite en réparation de tous les délits et contraventions spécifiés aux chapitre I et II du titre III.

Il est également autorisé à transiger sur la poursuite de ces infractions dans les conditions fixées aux articles 135 et 136.

Il est procédé à l'exécution des jugements dans les conditions prévues aux articles 137 et 138.

##### Section 2 DES DÉFRICHEMENTS

**Article 147:** L'action ayant pour objet les défrichements effectués en infraction aux articles 77 à 83 se prescrit par trois ans à compter de l'époque où le défrichement a été consommé.

**Article 148:** Dans les forêts et boisements du domaine de l'Etat, ou dans les boisements des communes, les récoltes, plantations et leurs fruits pendants, produits sur des parcelles défrichées de façon illicite, seront confisqués ou détruits par le personnel du Service forestier ou par l'agent instrumentant mentionné à l'article 144 qui aura constaté le défrichement illicite. Il sera fait mention de ces opérations sur les procès-verbal. Le personnel du Service forestier et les agents mentionnés à l'article 144 peuvent requérir, pour leur prêter main forte, en vue de l'exécution de ces opérations, la force publique qui ne pourra refuser son concours.

##### Section 3 DES FEUX DE VÉGÉTATION

**Article 149:** L'action ayant pour objet les feux de végétation effectués en infraction aux articles 90 à 96 et 99 à 102 se prescrit:

- par un an à compter du jour où l'infraction a été commise, si celle-ci concerne des feux de culture, de nettoyage ou de pâturage;
- par trois ans à compter du jour où l'infraction a été commise, si celle-ci concerne des feux sauvages ou allumés à l'intérieur ou à proximité des forêts, boisements ou terrains à boiser.

### Chapitre IV

#### DE LA RÉPRESSION DES INFRACTIONS COMMISES DANS LES FORÊTS DE PROTECTION, LES RÉSERVES FORESTIÈRES, LES TERRAINS MIS EN DÉFENS, ET À L'INTÉRIEUR DES PÉRIMÈTRES DE RESTAURATION DES SOLS OU DE REBOISEMENT

**Article 150:** Les infractions aux dispositions spéciales prévues par le Titre V, Chapitre I, Section 2, édictées pour les forêts classées en réserves forestières ou pour les forêts et boisements classés en forêts de protection, quels qu'en soient les propriétaires, sont constatées et poursuivies comme les infractions commises dans les forêts, boisements et terrains soumis aux dispositions du Titre I du présent Code.

**Article 151:** A compter de la décision du Gouverneur de province prononçant la mise en défens de terrains et de pâturages ou instituant des périmètres de conservation des sols ou de reboisement, toutes les infractions commises sur ces terrains et pâturages ou à l'intérieur de ces périmètres sont constatées ou poursuivies comme celles qui sont commises dans les forêts, boisements et terrains soumis aux dispositions du Titre I du présent Code.



**Article 152:** A compter de la publication de la décision de l'Administrateur communal créant un périmètre communal de reboisement, toutes les infractions commises à l'intérieur de ce périmètre sont constatées et poursuivies comme celles qui ont été commises dans les forêts, boisements et terrains soumis aux dispositions du Titre I du présent Code.

**Article 153:** Les infractions aux dispositions des articles 190 à 191 concernant la diffusion, l'introduction et la vente de matériels forestiers de reproduction des essences forestières sont constatées et poursuivies comme celles commises dans les forêts, boisements et terrains soumis au Titre I du présent Code.

### Chapitre V

#### DES RÈGLES D'APPLICATION DES PEINES ET AUTRES CONDAMNATIONS

**Article 154:** Dans le cas de récidive, la peine sera toujours doublée. Les peines seront également doublées lorsque les infractions auront été commises la nuit ou que les délinquants auront utilisé des engins mécaniques ou à moteur pour la coupe et l'enlèvement des bois.

Il y a récidive lorsqu'il a été rendu contre l'auteur de l'infraction un premier jugement portant une peine égale ou supérieure à 6 mois de servitude pénale.

**Article 155:** La restitution et dommages intérêts appartiennent:

- à l'Etat quand ils résultent de condamnation pour des délits et contraventions commis dans les forêts, boisements et terrains domaniaux;
- aux communes quand ils résultent de condamnations pour des délits et contraventions commis dans les boisements particuliers.

Dans tous les cas, les amendes et confiscations appartiennent à l'Etat.

**Article 156:** Dans tous les cas où les ventes et adjudications sont déclarées nulles pour cause de fraude ou collusion, l'acquéreur ou adjudicataire, indépendamment des amendes et dommages intérêts prononcés contre lui, est condamné à restituer les bois déjà exploités ou à en payer la valeur estimée égale au prix d'adjudication ou de vente.

**Article 157:** Les pères, mères et tuteurs et, en général, tous maîtres et commettants sont civilement responsables des infractions commises par leurs enfants mineurs et pupilles demeurant avec eux, ouvriers, voituriers et autres subordonnés sauf tout recours de droit.

Cette responsabilité est réglée conformément aux dispositions du Code civil et s'étend aux restitutions, dommages-intérêts et frais, sans pouvoir toutefois donner lieu à la contrainte par corps, si ce n'est dans le cas prévu à l'article 31.

**Article 158:** Le principe du cumul des peines est applicable en ce qui concerne les infractions aux dispositions du présent Code. Il sera prononcé autant d'amendes qu'il aura été commis d'infractions différentes quel qu'en soit le montant total.

Par contre les peines de servitude pénale restent soumis aux règles prévues au chapitre II, livre I du Code pénal.

En cas de concours d'une infraction relevant du présent Code avec une infraction de droit commun, l'amende sera prononcée malgré l'application de la peine de servitude pénale ou d'amende encourue en raison de l'autre fait.

**Article 159:** Il y aura lieu à l'application des dispositions du Code pénal dans tous les cas non spécifiés par le présent Code.

## Titre V

### Des forêts de protection, réserves forestières, lutte contre l'érosion

#### Chapitre I

#### DES FORÊTS DE PROTECTION ET DES RÉSERVES FORESTIÈRES

**Article 160:** Peuvent être classés comme forêts de protection ou réserves forestières, pour cause d'utilité publique et quels qu'en soient les propriétaires, selon une procédure fixée par ordonnance ministérielle, les forêts ou boisements dont la conservation est notamment reconnue nécessaire:

- au maintien des terres sur les montagnes et sur les pentes, à la défense contre les érosions et les envahissements des eaux;
- à l'équilibre écologique de certaines parties du territoire;
- au bien être des populations à la périphérie des agglomérations;
- à la conservation d'espèces végétales ou animales reconnues en voie de disparition par la législation internationale.

**Article 161:** Les forêts et boisements classés en forêts de protection ou en réserves forestières sont soumis à un régime spécial déterminé par ordonnance ministérielle et concernant l'aménagement, l'exercice des droits d'usage, le régime des exploitations, les feuilles et extractions de matériaux.

**Article 162:** Le classement comme forêt de protection interdit tout changement d'affectation ou tout mode d'occupation du sol de nature à compromettre la conservation ou la protection de l'état boisé.

**Article 163:** Les agronomes forestiers et agents habilités sont tenus de respecter et de faire respecter le régime spécial s'appliquant aux forêts et boisements dont ils assurent la gestion et qui sont classés en forêts de protection ou en réserves forestières. En cas de manquement à ces dispositions ils s'exposent aux sanctions prévues aux articles 21 à 31.

**Article 164:** Les infractions commises dans les forêts et boisements de l'Etat ou des communes classés en forêts de protection ou en réserves forestières sont sanctionnées par les amendes prévues au présent Code, mais sont toujours doublées.

**Article 165:** Dans les boisements classés comme forêts de protection, les violations par le propriétaire particulier des règles de jouissance qui leur sont imposées, sont considérées comme des infractions forestières commises dans le boisement d'autrui et punies comme telles.

Les infractions forestières commises dans ces boisements sont sanctionnées par les amendes prévues au présent Code qui peuvent être doublées.

**Article 166:** Les indemnités qui pourraient être réclamées par les propriétaires dans le cas où le classement de leurs boisements en forêt de protection entraînent une diminution de revenu sont réglées, compte tenu des plus values éventuelles résultant des travaux et des mesures prises par l'Etat, soit par accord direct avec l'administration soit, à défaut, par décision de la juridiction civile compétente.

L'Etat peut également procéder à l'acquisition des boisements ainsi classés. Le propriétaire peut exiger cette acquisition s'il justifie que le classement de son boisement en forêt de protection le prive de la moitié du

revenu normal qu'il retire de son boisement. L'acquisition a lieu soit de gré à gré soit par voie d'expropriation.

## Chapitre II DE LA CONSERVATION ET DE LA RESTAURATION DES TERRAINS EN MONTAGNE

### Section I DE LA MISE EN DÉFENS

**Article 167:** La mise en défens des terrains et pâturages en montagne, à quelque propriétaire qu'ils appartiennent, peut être prononcée par l'autorité provinciale, toutes les fois que l'état de dégradation du sol ne paraît pas assez avancé pour nécessiter des travaux de restauration. Ces conditions et modalités de mise en défens sont déterminées par ordonnance ministérielle.

**Article 168:** La décision de l'autorité provinciale prévue à l'article précédent précise la nature, la situation, et la limite du terrain à interdire. Elle fixe, en outre, la durée de la mise en défens dans la limite de dix ans.

Dans le cas où la mise en défens aurait pour effet de diminuer de plus de moitié le revenu normal d'un ou de plusieurs propriétaires, une ordonnance ministérielle fixe l'indemnité compensatrice de privation de jouissance. En cas de contestation de la part du ou des propriétaires, l'affaire est portée devant le tribunal compétent.

Dans le cas où, à l'expiration du délai de dix ans, l'Etat voudrait maintenir la mise en défens, il sera tenu d'acquiescer les terrains à l'amiable ou par voie de justice s'il en est requis par les propriétaires.

**Article 169:** Si le propriétaire des terrains mis en défens est une commune l'indemnité prévue à l'article précédent n'est pas due.

**Article 170:** Pendant la durée de la mise en défens, l'Etat peut exécuter sur les terrains mis en défens les travaux jugés nécessaires à la consolidation rapide du sol pourvu que ces travaux n'en changent pas la nature et sans qu'une indemnité quelconque puisse être exigée du propriétaire, en raison des améliorations que ces travaux auraient procurées à sa propriété.

**Section 2**  
**DE LA PROTECTION ET DE LA**  
**RESTAURATION DES TERRAINS EN**  
**MONTAGNE**

**Article 171:** La protection des sols contre l'érosion est une obligation nationale et les *mesures prises pour atteindre cet objectif peuvent être déclarées d'utilité publique.*

**Article 172:** A cet effet, *l'autorité provinciale peut imposer à tout occupant individuel ou collectif d'une terre à vocation agricole ou pastorale de protéger celle-ci contre l'érosion, soit par des actions individuelles, soit en participant à des travaux collectifs de lutte anti érosive, sous peine d'encourir des sanctions.*

**Article 173:** Lorsque pour des raisons techniques, l'efficacité des travaux anti-érosifs à entreprendre dans une zone déterminée dépend essentiellement de la conception globale de ceux-ci et de la coordination de leur exécution, l'autorité provinciale peut, par décision, ériger la zone en *périmètre de restauration des sols.*

**Article 174:** La décision de l'autorité provinciale déclare l'utilité publique du projet, fixe les limites de celui-ci, mentionne les travaux et ouvrages qui y sont compris et en répartit l'exécution entre l'Etat d'une part, les particuliers et les collectivités, par application des dispositions de l'article 172, d'autre part.

**Article 175:** Toutes les contestations, régulièrement formulées, sur la répartition de ces travaux sont soumises à la décision d'une commission nommée par ordonnance ministérielle du Ministre ayant les forêts dans ses attributions.

**Article 176:** A l'issue de son enquête, la commission statue sur pièces et prend ses décisions à la majorité simple des membres présents. Les décisions de la commission sont exécutoires à compter de leur notification à chacun des propriétaires intéressés.

**Article 177:** Si pour l'exécution de certains travaux ou ouvrages, qui sont à sa charge, l'Etat doit procéder à l'acquisition des terrains nécessaires, celle-ci se fait soit à l'amiable, soit par voie de justice. il est procédé dans les formes prescrites pour l'expropriation pour cause d'utilité publique.

Toutefois, les propriétaires particuliers et les communes peuvent conserver la propriété de leurs terrains, moyennant accord avec l'Etat comportant l'engagement d'exécuter dans un délai déterminé, avec ou sans indemnité et dans les conditions fixées, les travaux et ouvrages sous le contrôle et la surveillance de l'administration.

**Article 178:** Pour l'exécution des charges qui leur incombent en matière de lutte contre l'érosion, les communes peuvent constituer des groupements conformément aux dispositions de l'article 4 du décret-loi 1/26 du 30 juillet 1977.

**TITRE VI**

**Des périmètres de reboisement**

**Chapitre I**  
**DES PÉRIMÈTRES DE REBOISEMENT DU**  
**DOMAINE DE L'ETAT**

**Article 179:** Pour l'établissement de boisements ayant pour objet la production de bois d'oeuvre ou de bois de chauffage, le Ministre de l'Agriculture et de l'Elevage peut, par ordonnance, instituer des "périmètres de reboisement" sur les terrains du domaine de l'Etat.

A l'intérieur de ces périmètres, toute aliénation ou location de terre, quelle qu'en soit la superficie, ne peut être effectuée qu'après autorisation par décret.

**Article 180:** L'ordonnance ministérielle détermine, à l'intérieur des périmètres définis à l'article précédent, les surfaces réservées pour la réalisation des projets de reboisement, par plantation ou par semis. Ces surfaces ne peuvent inclure les sols où sont exercés des droits privatifs ou des droits d'occupation régulièrement accordés aux intéressés par les autorités compétentes.

**Article 181:** Toutes les contestations régulièrement formulées sur les terrains réservés aux plantations ou semis seront réglées conformément au Régime foncier en vigueur.

**Article 182:** A l'achèvement des travaux de reboisement, la gestion des boisements ainsi créés est confiée au Service forestier qui est en outre, chargé de faire promouvoir les règlements d'aménagement dans les conditions prévues à l'article 11.

**Chapitre II**  
**DES PÉRIMÈTRES DE REBOISEMENT DES**  
**COMMUNES**

**Article 183:** Les communes sont tenues de créer, à leur profit, des reboisements sur la base d'un hectare, au minimum, par cinq cents hommes adultes valides. Pour l'exécution de cette obligation, les communes peuvent s'associer en groupements intercommunaux

conformément aux dispositions de l'article 4 du décret-loi 1/26 du 30 juillet 1977, portant réforme de l'organisation communale.

Les boisements faisant partie du domaine privé de l'Etat et cédés gratuitement aux communes pour constituer leur domaine en application des dispositions de l'article 56 du décret-loi 1/26 du 30 juillet 1977 ne peuvent entrer en ligne de compte pour la satisfaction de l'obligation de reboisement imposée aux communes par l'article précédent.

**Article 185:** Après consultation technique du représentant qualifié du Service forestier et délibération du Conseil communal, l'Administrateur communal fixe le ou les emplacements de ou des périmètres de reboisement. Ces périmètres ne peuvent inclure les sols où sont exercés des droits privatifs ou des droits d'occupation régulièrement accordés aux intéressés par les autorités compétentes.

**Article 186:** Toutes les contestations, régulièrement formulées, sur les terrains réservés aux plantations ou semis seront réglées conformément au régime foncier en vigueur.

**Article 187:** Lorsque des terrains finalement retenus pour constituer le périmètre de reboisement ne font pas partie du domaine communal, la commune doit engager la procédure légale pour que les terrains en cause soient inclus dans son domaine privé. Ce n'est qu'une fois cette affectation prononcée que les travaux de reboisement peuvent commencer.

**Article 188:** A l'achèvement des travaux de reboisement, la gestion technique des boisements ainsi créés est confiée au Service forestier conformément aux dispositions de l'article 47. Eventuellement, ce service fait prendre l'ordonnance ministérielle prévue à l'article 49 et réglant l'aménagement de ces boisements.

### Chapitre III DE L'AMÉLIORATION DES ESSENCES FORESTIÈRES

**Article 189:** Les matériels forestiers de reproduction des essences forestières destinés à une diffusion en vue de la production des bois à titre principal sont soumis au présent chapitre, sauf s'ils ne sont utilisés que pour des essais ou pour des buts scientifiques. La liste de ces essences forestières est déterminée par le Service forestier.

**Article 190:** Les matériels forestiers de reproduction ne peuvent être diffusés dans le territoire que s'ils proviennent de matériels de base agréés dans les conditions prévues à l'article 91 et satisfont aux normes de

qualité extérieure déterminées par le Service forestier.

**Article 191:** Le Service forestier détermine les conditions dans lesquelles l'agrément des matériels de base est prononcé, ainsi que les règles relatives à la production, au conditionnement et à la commercialisation des matériels forestiers de reproduction, propres à garantir les qualités génétiques et extérieures de ces matériels.

**Article 192:** Quiconque a diffusé du matériel forestier de reproduction d'essences forestières produites dans le territoire et non conformes aux dispositions des articles 190 et 191, vendu ou mis en vente, exposé ou détenu en vue de la vente de tels matériels ou des plants issus de ces matériels est passible d'une amende de 2.500 à 15.000 Fbu. En cas de récidive, le tribunal peut prononcer en outre une peine de quinze jours au maximum, de servitude pénale.

A la requête du Service forestier, le tribunal peut ordonner la destruction des matériels et des plants issus de ces matériels qui auront été saisis.

**Article 193:** Quiconque a introduit en fraude des matériels forestiers de reproduction des essences forestières vendus, mis en vente, exposés ou détenus en vue de la vente de tels matériels ou des plants issus de ces matériels est passible d'une amende de 5.000 à 30.000 fbu. En cas de récidive, le tribunal prononce en outre une peine de trente jours, au maximum, de servitude pénale.

a la requête du Service forestier, le tribunal ordonne la destruction des matériels et des plants issus de ces matériels qui auront été saisis.

## TITRE VII

### Dispositions finales

**Article 194:** toutes dispositions législatives et réglementaires antérieures et contraires du présent Code sont abrogées notamment:

1. **Décret du 18 décembre 1930**

coupe et vente du bois.

2. **Loi du 23 janvier 1962**

imposant l'exécution de reboisement par les communes

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- |  |  |
|--|--|
| <p>3. <b>Décret-loi 1/22 du 31 juillet 1978</b><br/>portant création de périmètres de reboisement de l'Etat</p> <p>4. <b>Décret-loi 1/22 du 24 juillet 1979</b><br/>soumettant les agriculteurs à des obligations en matière de défense et restauration des sols et de boisement</p> <p>5. <b>Ordonnance 53/5 du 9 avril 1915</b><br/>mesures de conservation et de préservation des essences forestières</p> <p>6. <b>O.R.U. 29/129 du 27 avril 1923</b><br/>interdiction de la coupe de bois de santal</p> | <p>7. <b>O.R.U. 27 du 24 octobre 1928</b><br/>interdiction de la culture d'acacia dealbata</p> <p>8. <b>O.R.U. 17 Agri du 12 mars 1931</b></p> <p>9. <b>Ordonnance 52/175 du 23 mai 1953</b><br/>réglement d'incendie des herbes et des végétaux sur pied.</p> <p>10. <b>O.R.U. 5520/48 du 7 mars 1959</b><br/>lutte contre les incendies de boisements - Assistance</p> <p>11. <b>Ordonnance 710/275 du 25 octobre 1979</b><br/>application du décret-loi du 24 juillet 1979.</p> |
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Fait à Bujumbura, le 25 mars 1985

Par le Président de la République  
Sé Jean-Baptiste Bagaza  
Colonel

Le Ministre de l'Agriculture et de l'Elevage,  
Signé: Mathias Ntibarikure

Vu et scellé du sceau de la République  
Le Ministre de la Justice  
Signé: Vincent Ndikumasabo

## Ordonnance Ministérielle No.750/201 du 18 Avril 1992 portant normes techniques d'importation et de commercialisation du sel destiné à la consommation humaine

Le Ministre du Commerce et de l'Industrie,

Vu la Constitution de la République du Burundi,

Vu le Décret-Loi No. 1/036 du 13 Décembre 1989 portant institution d'un système de normalisation et de contrôle de la qualité;

Vu le Décret-Loi No. 1/28 du 30 Septembre 1988 relative à la réglementation de la profession d'importateur tel que modifié à ce jour, spécialement en son article 5 ;

Vu le Décret No.100/58 du 20 Août 1986 relatif à l'encadrement des activités commerciales ;

Vu le Décret nE100/232 du 13 Décembre 1989 portant création et organisation d'un Conseil National de Normalisation et de Contrôle de la Qualité ;

Après avis conforme du Conseil des Ministres ;

Ordonne :

**Article 1:** Le sel importé doit être iodé au taux indiqué ci-dessous soit par le fournisseur, soit par l'importateur avant sa mise en vente.

**Article 2:** Le taux d'iodation doit être d'au moins 50 parties d'iode par millions de parties de sel, soit 50 milligrammes d'iode par un kilogramme de sel. Ce taux peut être revu sur proposition du Ministre de la Santé Publique.

**Article 3:** Le sel commercialisable doit en outre avoir les caractéristiques suivantes :

- avoir une couleur blanche ou légèrement colorée et être inodore ;
- n'avoir pas de corps étrangers comme le gravier, les objets métalliques, etc...;
- être sec ou avoir une humidité ne dépassant pas 3 %;

- être pur ou avoir des impuretés ne dépassant pas 1 % du total.

**Article 4:** Pour chaque arrivage à la douane, l'importateur doit déposer une déclaration indiquant le taux d'iodation de son sel. La déclaration doit être accompagnée d'un certificat d'iodation émanant de son fournisseur.

**Article 5:** Le sel déclaré iodé ne peut être mis en vente que si la déclaration est confirmée par un agent d'hygiène ayant préalablement vérifié le taux d'iodation dudit sel par le KIT ou solution d'amidon dans plusieurs échantillons de l'arrivage. La vérification de ce taux doit se faire dans les cinq jours ouvrables suivants le dépôt de la demande d'inspection.

**Article 6:** Seul le sel répondant au taux d'iode requis par la présente ordonnance peut être commercialisé. Il doit être cacheté "sel iodé à 50 P.P.M." avec indication de la date de son inspection par l'agent d'hygiène.

**Article 7:** Celui qui mettra sciemment en vente du sel non iodé au taux réglementaire sera puni des peines prévues à l'article 14 du Décret-Loi No.1/28 du 30 Septembre 1988 portant réglementation de la profession d'importateur.

En cas de récidive, sa marchandise sera en plus confisquée iodée et vendue aux enchères par les services du Ministère ayant le Commerce dans ses attributions. Le produit de la vente sera versé au Trésor Public, déduction faite des frais d'iodation et autres frais précédant la mise en vente.

**Article 8:** La présente ordonnance ne concerne pas le sel se trouvant déjà dans le circuit de commercialisation.

**Article 9:** Toute disposition antérieure et contraire à la présente ordonnance est abrogée.

**Article 10:** Le Directeur du Commerce Intérieur, le Directeur des Douanes et le Directeur de l'Hygiène et Prévention sont chargés, chacun en ce qui le concerne, de l'exécution de la présente ordonnance qui entre en vigueur le jour de sa signature.

Fait à Bujumbura, le 19 Avril 1992.

Le Ministre du Commerce et de l'Industrie, **Astère GIRUKWIGOMBA**

# CAMEROON

## Décret N° 95/466/PM du 20 Juillet 1995 fixant les modalités d'application du Régime de la faune.-

LE PREMIER MINISTRE CHEF DU  
GOUVERNEMENT,

VU la Constitution;

VU la loi n° 94/01 du 20 janvier 1994 portant régime des forêts, de la faune et de la pêche;

VU le décret n° 92/009 du 4 mai 1992 précisant les attributions du Premier Ministre;

VU le décret n° 92/244 du 25 novembre 1992 portant nomination du Premier Ministre, Chef du Gouvernement;

VU le décret n° 92/245 du 26 novembre 1992 portant organisation du Gouvernement, ensemble ses divers modificatifs;

**DECRETE :**

### TITRE I

#### DES DISPOSITIONS GENERALES

**ARTICLE 1er.** - Le présent décret porte application de la loi n° 94/01 du 20 Janvier 1994 portant régime des forêts, de la faune et de la pêche, ci-après désignée la "Loi", notamment en son Titre IV relatif à la faune.

**ARTICLE 2.** - Pour l'application de la Loi et du présent décret, les définitions ci-après sont admises:

1) Une aire protégée: une zone géographiquement délimitée et gérée en vue d'atteindre des objectifs spécifiques de conservation et de développement durable d'une ou de plusieurs ressources données.

Tout projet notamment industriel, minier, agro-sylvo-pastoral susceptible d'affecter l'objectif de conservation

d'une aire protégée doit être assorti d'une étude d'impact sur l'environnement.

L'Administration chargée de la faune est de droit membre de toute commission ou de tout organe chargé de cette étude d'impact.

2) Un plan d'aménagement: un document technique élaboré par l'Administration chargée de la faune ou toute personne physique ou morale commise par elle, qui fixe dans le temps et dans l'espace la nature et le programme des travaux et études à réaliser dans une aire protégée et auquel cette dernière est assujettie. Toutefois, les plans d'aménagement des aires protégées gérés par les particuliers peuvent être élaborés par eux-mêmes et approuvés par l'Administration chargée de la faune.

3) Un plan de gestion: un document technique élaboré par l'Administration chargée de la faune ou par toute personne physique ou morale commise par ladite Administration, en vue de planifier dans le temps et dans l'espace toutes les stratégies à mettre en oeuvre pour une utilisation durable d'une ou de plusieurs ressources fauniques données.

4) Un plan de chasse: un document technique élaboré par l'Administration chargée de la faune à l'effet de fixer, dans le temps et dans l'espace, les quotas de prélèvement des différentes espèces fauniques dont la chasse est autorisée.

5) Une convention de gestion: un contrat par lequel l'Administration chargée de la faune confie à une communauté un territoire de chasse du domaine national, en vue de sa conservation et de l'utilisation durable des ressources fauniques, dans l'intérêt de cette communauté.

6) Une réserve écologique intégrale: un périmètre dont les ressources de toute nature bénéficient d'une protection absolue. Toute activité humaine, quelle qu'elle soit, est strictement interdite.

Toutefois, en vue de la recherche, le Ministre chargé de la faune peut, à titre exceptionnel, en autoriser l'accès

ou le survol à basse altitude aux personnes ou institutions habilitées, à condition qu'elles soient accompagnées d'un préposé de l'Administration chargée de la faune.

7) Une réserve de faune: une aire:

- mise à part pour la conservation, l'aménagement et la propagation de la vie animale sauvage, ainsi que pour la protection et l'aménagement de son habitat;
- dans laquelle la chasse est interdite, sauf sur autorisation du Ministre chargé de la faune, dans le cadre des opérations d'aménagement dûment approuvées;
- où l'habitation et les autres activités humaines sont réglementées ou interdites.

8) Un parc national: un périmètre d'un seul tenant, dont la conservation de la faune, de la flore, du sol, du sous-sol, de l'atmosphère, des eaux, et en général, du milieu naturel présente un intérêt spécial qu'il importe de préserver contre tout effort de dégradation naturelle, et de soustraire à toute intervention susceptible d'en altérer l'aspect, la composition et l'évolution.

a) Sont prises en considération à ce titre:

- la préservation d'espèces animales ou végétales et d'habitats en voie de disparition sur tout ou partie du territoire national;
- la préservation ou la constitution d'étapes sur les grandes voies de migrations de la faune sauvage;
- les études scientifiques ou techniques indispensables au développement des connaissances humaines.

b) Y sont interdits:

- la chasse et la pêche, sauf dans le cadre d'un aménagement;
- les activités industrielles;
- l'extraction des matériaux;
- les pollutions de toute nature;
- les activités agricoles, pastorales et forestières;
- la divagation des animaux domestiques;
- le survol par des aéronefs à une altitude inférieure à 200 m;
- l'introduction d'espèces zoologiques ou botaniques indigènes ou importées, sauf dans un but scientifique

ou dans le cadre d'opération d'aménagement autorisées par le Ministre chargé de la faune.

9) Un sanctuaire: une aire de protection dans laquelle seules les espèces animales ou végétales nommément désignées bénéficient d'une protection absolue.

La liste de ces espèces est fixée par arrêté du Ministre chargé de la faune.

10) Un jardin zoologique: un site créé et aménagé autour des agglomérations pour un intérêt récréatif, esthétique, scientifique, ou culturel, et regroupant des espèces d'animaux sauvages, indigènes ou exotiques bénéficiant d'une protection absolue.

11) Un "game-ranch": une aire protégée et aménagée en vue du repeuplement des animaux et de leur exploitation éventuelle dans un but alimentaire ou autre.

12) Un "game-farming": l'élevage dans un environnement contrôlé, de spécimens d'animaux prélevés à l'état sauvage, en vue de les commercialiser.

13) Une zone tampon: une aire protégée située à la périphérie de chaque parc national, réserve naturelle ou réserve de faune, et destinée à marquer une transition entre ces aires et les zones où les activités cynégétiques, agricoles et autres sont librement pratiquées.

Toutefois, certaines activités humaines peuvent y être réglementées selon un plan d'aménagement dûment approuvé par le Ministre chargé de la faune.

L'acte portant création d'une aire protégée fixe les limites de sa zone tampon.

14) Gestion participative: toute approche de gestion des ressources fauniques qui, dans toutes les phases de son élaboration et de sa mise en oeuvre, intègre de façon optimale les populations locales et tous les autres intervenants.

15) Une battue: la chasse d'une espèce animale nommément désignée, ordonnée par l'Administration chargée de la faune, aux fins d'aménagement, ou de protection des personnes et des biens.

16) Une zone banale: un territoire du domaine national dans lequel la chasse est réglementée.

17) Une transaction: un acte par lequel l'auteur d'une infraction en matière de faune commise dans une zone banale ou une zone cynégétique manifeste sa volonté de réparer le préjudice par le paiement de certains droits.

La transaction, lorsqu'elle est acceptée par l'Administration chargée de la faune, éteint l'action publique.



18) Un territoire de chasse: une zone dans laquelle les activités de chasse sont autorisées et menées conformément à la réglementation en matière de chasse.

19) Un territoire de chasse communautaire: un territoire de chasse du domaine forestier non permanent faisant l'objet d'une convention de gestion entre une communauté riveraine et l'Administration chargée de la faune.

20) Chasse traditionnelle: celle faite au moyen d'outils confectionnés à partir de matériaux d'origine végétale.

21) Une collecte: un acte par lequel une personne physique ou morale se procure des dépouilles et trophées d'animaux sauvages, exclusivement auprès soit des détenteurs d'un titre de chasse, soit des autorités compétentes dans le cadre d'une battue administrative ou d'une vente aux enchères, ou auprès des communautés constituées pour les activités cynégétiques.

**ARTICLE 3.-** Au sens de la Loi et du présent décret, est considérée comme:

1) Zone cynégétique: toute aire protégée réservée à la chasse, gérée par l'Administration chargée de la faune, une personne physique ou morale, une collectivité publique locale, et dans laquelle tout acte de chasse est subordonné au paiement d'un droit fixé par la loi des Finances. Aucun acte de chasse ne peut y être perpétré contre les espèces intégralement protégées.

2) Guide de chasse: tout chasseur professionnel agréé par l'Administration chargée de la faune ayant pour activités principales l'organisation et la conduite des expéditions de chasse, dans le cadre d'une société dûment constituée, dont le siège social est situé dans sa zone d'activité.

3) Acte de chasse: toute action visant:

- à poursuivre, tuer, capturer un animal sauvage ou guider des expéditions à cet effet;
- à photographier et filmer des animaux sauvages à des fins commerciales.

4) Braconnage: tout acte de chasse sans permis, en période de fermeture, en des endroits réservés ou avec des engins ou des armes prohibés.

5) Arme de chasse: tout engin non prohibé destiné à la chasse.

**ARTICLE 4. -** Les termes ci-dessous désignent ce qui suit:

1) Droits d'usage: l'exploitation par les riverains des

produits forestiers, fauniques ou halieutiques, en vue d'une utilisation personnelle. Toutefois, à l'exception des réserves de faune, des sanctuaires et des zones tampons où ils peuvent être autorisés, les droits d'usage ne s'appliquent ni aux réserves écologiques intégrales, ni aux parcs nationaux, ni aux jardins zoologiques ou aux game-ranches.

2) Biodiversité: l'ensemble des organismes vivants, des écosystèmes terrestres, marins et aquatiques et les complexes écologiques dont ils font partie, y compris la diversité au sein des espèces et entre espèces, ainsi que celle des écosystèmes.

3) Ecosystème: le complexe dynamique formé de communautés de plantes, d'animaux et de micro-organismes et de leur environnement non vivant qui, par leur interaction forment une unité fonctionnelle.

4) Mutation: le changement de statut d'une aire protégée.

5) Permis de recherche: une autorisation d'accès à la ressource, dans les aires protégées appartenant à l'Etat.

## TITRE II

### DE LA PROTECTION DE LA FAUNE ET DE LA BIODIVERSITE

#### CHAPITRE I DE LA CONSERVATION DE LA FAUNE

##### SECTION I DE LA CREATION DES AIRES PROTEGEES

**ARTICLE 5. -** (1) La création, l'extension, le classement ou le déclassement d'un parc national, d'une réserve de faune, d'un sanctuaire, d'un jardin zoologique ou d'un game-ranch est sanctionné par décret du Premier Ministre, Chef du Gouvernement.

(2) La création, l'extension, d'un parc national d'une réserve écologique intégrale, d'une game-ranch ou d'une réserve de faune ne peut intervenir qu'après indemnisation des personnes concernées conformément à la législation en vigueur, lorsque leurs droits sont affectés par cette opération.

3) La création, l'extension, le classement ou le déclassement d'une aire protégée donne lieu à l'établissement d'un titre foncier sur cette aire au nom

de l'Etat conformément à la réglementation en la matière.

**ARTICLE 6.** - (1) La création, l'extension, le classement ou le déclassement d'un parc national, d'une réserve écologique intégrale, d'une réserve de faune, d'un game-ranch, d'un sanctuaire ou d'un jardin zoologique est sanctionnée au vu d'un dossier présenté par le Ministre chargé de la faune et comprenant les pièces suivantes:

- un plan de situation visé par l'Administration chargée du cadastre;
- une note technique préparée par le Ministre chargé de la faune et précisant les objectifs visés par la mesure préconisée;
- le procès-verbal de la commission prévue à l'article 7 ci-dessous.

(2) Le public est informé du projet par un avis publié au Journal officiel, par voie de presse écrite ou audiovisuelle, ou par toute autre voie utile, et affiché pendant trente (30) jours continus dans les Chefs-lieux des unités administratives et dans les Mairies et les Chefferies traditionnelles dont les territoires sont inclus dans la zone concernée.

(3) Les réclamations sont reçues par les Chefs de circonscriptions administratives ou les responsables locaux de l'Administration chargée de la faune. Passé ce délai, aucune réclamation ou opposition n'est recevable.

**ARTICLE 7.** - (1) Il est créé dans chaque département une commission, ci-après désignée la "commission; chargée:

- d'examiner et de donner un avis sur les éventuelles réclamations ou oppositions des populations ou de toute personne intéressée, à l'occasion des opérations de création, d'extension, de classement ou de déclassement d'un parc national, d'une réserve écologique intégrale, d'un game-ranch, d'une réserve de faune, d'un sanctuaire ou d'un jardin zoologique;
- d'évaluer tout bien devant faire l'objet d'expropriation et de dresser un état à cet effet, conformément aux textes en vigueur en la matière.

(2) La Commission se réunit sur convocation de son Président toutes les fois que les circonstances l'exigent.

Elle est composée de la manière suivante:

*Président:*

- le Préfet ou son représentant

*Membres:*

- le responsable local du Ministère chargé de l'agriculture;
- le responsable local du Ministère chargé des mines;
- le responsable local du Ministère chargé des domaines;
- le responsable local du Ministère chargé de l'aménagement du territoire;
- le responsable local du Ministère chargé de l'élevage;
- le responsable local du Ministère chargé du tourisme;
- le ou les député(s) du département.

(3) Le Président peut faire appel à toute personne jugée compétente sur les questions examinées.

(4) Le responsable du Ministère chargé de la faune rapporte les affaires et assure le secrétariat des travaux de la Commission.

(5) Les fonctions de Président, rapporteur ou de membre de la Commission sont gratuites.

**ARTICLE 8.** - Le déclassement total ou partiel d'une aire protégée est sanctionné par décret du Premier Ministre, Chef du Gouvernement, sur la base d'un dossier élaboré par l'Administration de la faune conformément à l'article 28 de la Loi.

**ARTICLE 9.** - (1) La mutation d'une réserve de faune en parc national est prononcée par décret du Premier Ministre, Chef du Gouvernement au vu d'un projet initié à cet effet par l'Administration chargée de la faune.

(2) La mutation d'une forêt communautaire en zone d'intérêt cynégétique obéit aux dispositions du (1) ci-dessus.

**ARTICLE 10.** - (1) Les limites des aires protégées doivent être aussi naturelles que possible en suivant notamment, les cours d'eau, les lignes de crête ou les thalwegs.

(2) Elles doivent, dans tous les cas, être matérialisées, conformément à la réglementation en vigueur.

## SECTION II

### DE L'AMENAGEMENT DES AIRES PROTEES

**ARTICLE 11.** - (1) Les plans d'aménagement, tels que

définis à l'article 2 du présent décret, sont rendus exécutoires par arrêté du Ministre chargé de la faune.

(2) Tout plan d'aménagement est élaboré sur la base des directives du Ministre chargé de la faune. Ce plan précise notamment:

- la description générale de l'aire protégée;
- les objectifs fondamentaux à atteindre tenant compte, entre autres, des intérêts des populations riveraines et de la nécessité de la conservation de la biodiversité;
- les opérations à réaliser, ainsi que le calendrier de leur exécution;
- le coût des opérations;
- les indications pour leur suivi et leur évaluation.

3) Un arrêté du Ministre chargé de la faune fixe les conditions et les modalités d'accès dans les zones protégées.

### **SECTION III DE LA PROTECTION DES PERSONNES ET DES BIENS**

**ARTICLE 12.** - (1) Toute battue doit être, au préalable, autorisée par l'Administration chargée de la faune, en cas de menace, ou dans le cadre des préventions, soit à la demande des populations concernées.

(2) Elle intervient, soit sur l'initiative de l'Administration chargée de la faune, en cas de menace, ou dans le cadre des préventions, soit à la demande des populations concernées.

(3) Toute demande de battue est adressée au responsable provincial de l'Administration chargée de la faune qui, sur la base d'une enquête préalable, autorise la poursuite, le refoulement, ou l'abattage des animaux ayant causé des dommages ou susceptibles d'en causer, à l'exclusion de ceux de la classe A dont l'abattage ne peut être autorisé que par le Ministre chargé de la faune.

(4) Les battues sont conduites par les préposés de l'Administration chargée de la faune. Celle-ci peut requérir le concours de chasseurs bénévoles détenteurs d'un permis réglementaire.

**ARTICLE 13.** - (1) conformément à l'article 83 de la loi, nul ne peut être sanctionné pour fait d'acte de chasse d'un animal protégé, commis dans la nécessité immédiate de sa défense, de celle de son cheptel domestique et/ou de celle de ses cultures.

La preuve de la légitime défense doit être fournie dans

un délai de soixante douze (72) heures au responsable de l'Administration chargée de la faune le plus proche.

(2) Toute personne ayant blessé un animal est tenue de tout mettre en oeuvre pour l'achever.

(3) Lorsque l'animal blessé n'a pas pu être achevé, déclaration doit, dans les vingt quatre (24) heures, sous peine de poursuites judiciaires, en être faite à l'autorité administrative la plus proche qui, en liaison avec le responsable local de l'Administration chargée de la faune, prend toutes les mesures pour achever cet animal.

## **TITRE III**

### **DE LA GESTION DE LA FAUNE**

#### **CHAPITRE I DE L'EXERCICE DU DROIT DE CHASSE**

##### **SECTION I DE LA CLASSIFICATION DES ESPECES ANIMALES**

**ARTICLE 14.** - La répartition des espèces animales en classes A, B et C, telles que prévues par l'article 78 de la Loi, est actualisée tous les cinq (5) ans au moins.

**ARTICLE 15.** - Les espèces animales des classes B et C dont la chasse est autorisée dans les conditions précisées à l'article 78 de la Loi sont, en fonction de leur intérêt cynégétique, réparties en trois (3) groupes par arrêté du Ministre chargé de la faune.

##### **SECTION II DES TERRITOIRES DE CHASSE**

**ARTICLE 16.** - Conformément à l'article 92 de la Loi, les zones d'intérêt cynégétique sont exploitées, selon le cas, en régie, ou en affermage, par toute personne physique ou morale.

**ARTICLE 17.** - Conformément à l'article 94 de la Loi, la chasse dans une zone cynégétique gérée en régie donne lieu à la perception d'une taxe journalière dont le taux est fixé par la loi de Finances.

**ARTICLE 18.** - (1) Conformément à l'article 92 de la Loi, les zones d'intérêt cynégétique affermées par l'Etat à une personne morale sont assujetties à un cahier de charges.

(2) Certaines zones d'intérêt cynégétique sont réservées exclusivement aux personnes physiques de nationalité camerounaise ou aux sociétés où ces personnes détiennent la totalité du capital social ou des droits de vote, en vue d'encourager et de faciliter leur accès à la profession de guide de chasse.

**ARTICLE 19.** - (1) Tout titulaire d'un permis de chasse désireux de chasser dans les forêts communales, les forêts communautaires ou celles des particuliers doit, au préalable, y être expressément autorisé par lesdits propriétaires.

(2) La gestion de la faune dans les forêts mentionnées au (1) ci-dessus est subordonnée au respect des dispositions des plans d'aménagement, des plans et des conventions de gestion, selon le cas, établis conformément à la Loi.

**ARTICLE 20.** - (1) La chasse dans les zones banales, nonobstant celle traditionnelle, est ouverte aux détenteurs réguliers d'un permis de chasse.

(2) Conformément à l'article 94 de la Loi elle donne lieu à la perception d'une taxe journalière dont le taux est fixé par la loi de Finances.

**ARTICLE 21.** - L'abattage ou la capture des animaux dans un territoire de chasse obéit aux prescriptions du plan de chasse fixé par arrêté du Ministre chargé de la faune. Ce plan précise:

- les quotas d'abattage des différentes espèces;
- les quotas de capture;
- les latitudes de prélèvement par type de permis.

**ARTICLE 22.** - (1) Tout plan de gestion, tel que défini par le présent décret, est rendu exécutoire par arrêté du Ministre chargé de la faune.

(2) Il précise:

- les études à réaliser en vue d'obtenir le maximum d'informations sur la biologie ou l'environnement écologique ou socio-économique de la ou des ressource(s) concernée(s);
- le mode de gestion;
- les dispositions envisagées pour associer les populations à toutes les phases de gestion;
- les mesures envisagées pour garantir une exploitation durable de la ou des ressource(s) concernée(s);

- les mesures visant à assurer un partage juste et équitable du produit de l'exploitation de cette ou ces ressource(s).

**ARTICLE 23.** - La convention de gestion telle que définie par le présent décret, précise:

- les limites du territoire de chasse concerné;
- les droits et les obligations de chaque partie, notamment:
  - 1) les lois et règlements applicables;
  - 2) les modalités pratiques d'une exploitation durable;
  - 3) la destination des produits et/ou des résultats découlant de l'exploitation.

### SECTION III DE LA CHASSE TRADITIONNELLE

**ARTICLE 24.** - (1) La chasse traditionnelle est libre sur toute l'étendue du territoire, sauf dans les propriétés des tiers, dans une aire protégée où elle est soumise à une réglementation particulière tenant compte du plan d'aménagement de cette aire.

(2) Elle est autorisée pour les rongeurs, les petits reptiles, les oiseaux et d'autres animaux de classe C dont la liste et le quota sont fixés par arrêté du Ministre chargé de la faune.

(3) Les produits issus de la chasse traditionnelle sont exclusivement destinés à un but alimentaire et ne peuvent, en aucun cas, être commercialisés.

### SECTION IV DES TERRITOIRES DE CHASSE COMMUNAUTAIRES

**ARTICLE 25.** - (1) Conformément à la Loi, l'Administration chargée de la faune apporte aux communautés concernées une assistance technique gratuite pour la définition et la mise en oeuvre des conventions de gestion des territoires de chasse communautaires.

(2) Les forêts pouvant faire l'objet d'une convention de gestion de territoire de chasse communautaire sont celles situées à la périphérie ou à proximité d'une ou de plusieurs communautés et dans lesquelles les populations de ces communautés exercent des activités agro-sylvo-pastorales ou de chasse, notamment.

(3) Toute forêt susceptible d'être érigée en territoire de chasse communautaire est attribuée en priorité à la communauté riveraine la plus proche.

(4) La convention de gestion est approuvée de la manière suivante:

- a) par le Préfet territorialement compétent, lorsque le territoire de chasse communautaire concerné est dans le ressort du département;
- b) par le Gouverneur territorialement compétent, lorsque le territoire de chasse communautaire concerné chevauche deux départements de la province;
- c) par le Ministre chargé de la faune, lorsque le territoire de chasse communautaire concerné chevauche deux provinces.

**ARTICLE 26.** - (1) La superficie d'un territoire de chasse communautaire est déterminée conformément à la réglementation relative aux modalités d'application du régime des forêts.

(2) Ce territoire doit être libre de tout titre d'exploitation.

**ARTICLE 27.** - (1) Toute communauté désirant gérer un territoire de chasse communautaire en désigne le responsable, après concertation avec les membres de ladite communauté au cours d'une réunion supervisée par l'autorité administrative locale et à laquelle participent les représentants des Administrations techniques concernées.

Le procès-verbal de la réunion est signé de tous les participants

(2) Les objectifs assignés au territoire de chasse communautaire sollicité, ainsi que les limites dudit territoire doivent être définis.

**ARTICLE 28.** - Toute demande d'attribution d'un territoire de chasse communautaire doit comporter les éléments suivants:

- la dénomination et les statuts de la communauté;
- un plan de situation du territoire de chasse sollicité et une indication aussi exhaustive que possible des objectifs assignés audit territoire;
- une copie certifiée conforme du procès-verbal de la réunion de concertation prévue à l'article 27 ci-dessus;
- une copie des pièces justificatives des aptitudes du responsable désigné.

## SECTION V DE LA CHASSE SPORTIVE

**ARTICLE 29.** - La chasse sportive est celle pratiquée à pied, avec une arme moderne autorisée conformément aux textes en vigueur, et conduite selon des normes définies par l'Administration chargée de la faune.

**ARTICLE 30.** - (1) Est prohibée toute chasse sportive effectuée au moyen:

- a) des armes ou munitions de guerre composant ou ayant composé l'armement réglementaire des forces militaires ou de police nationale;
- b) des armes à feu susceptibles de tirer plus d'une cartouche sous une seule pression de la détente;
- c) des projectiles contenant des détonnants;
- d) des tranchées, des fusils de traite, des fusils de fabrication artisanale.

2) Sont également interdits:

- a) la poursuite, l'approche et le tir de gibier en véhicule à moteur;
- b) la chasse nocturne, notamment la chasse au phare, à la lampe frontale et, en général, au moyen de tous les engins éclairants conçus ou non à des fins cynégétiques;
- c) la chasse à l'aide des drogues, d'appâts empoisonnés, de fusils anesthésiques et d'explosifs;
- d) la chasse au feu;
- e) l'implantation, la vente et la circulation des lampes de chasse;
- f) la chasse au filet moderne;
- g) la chasse à l'aide des produits toxiques de toute nature.

3) Toutefois, l'Administration chargée de la faune peut, en cas de nécessité, utiliser certains des moyens et modalités visés aux (1) et (2) ci-dessus.

**ARTICLE 31.** - (1) La chasse sportive est ouverte et fermée sur tout ou partie du territoire national par arrêté du Ministre chargé de la faune qui peut, tant pour l'ouverture que pour la fermeture, fixer des dates différentes, en fonction des espèces de gibiers, du mode de chasse et des zones écologiques.

(2) L'arrêté prévu au (1) ci-dessus peut interdire la chasse d'une ou de plusieurs espèces de gibiers nommément désignées.

(3) Il est publié au moins quinze (15) jours avant l'ouverture ou la fermeture de la saison de chasse.

## CHAPITRE II

### DES TITRES D'EXPLOITATION DE LA FAUNE

#### SECTION I

#### DES DISPOSITIONS COMMUNES AUX TITRES D'EXPLOITATION

**ARTICLE 32.** - (1) Toute personne physique ou morale désirant exercer une activité faunique doit être agréée dans l'un des domaines ci-après:

- inventaire faunique;
- exploitation de la faune en qualité de guide de chasse ou de captureur;
- exploitation des aires protégées en qualité de guide;
- aménagement des aires protégées en qualité de guide;

(2) Toute personne physique ou morale désirant être agréée à l'une des activités ci-dessus doit justifier de connaissances techniques et professionnelles dans le domaine concerné.

(3) L'agrément prévu par le présent article est individuel. Il ne peut être ni loué, ni cédé, ou transféré.

**ARTICLE 33.** - L'agrément à l'une des activités prévues à l'article 23 ci-dessus est accordé par arrêté du Ministre chargé de la faune, après avis d'une commission technique consultative, sur la base d'un dossier comprenant:

I/ Pour les particuliers:

- une demande timbrée au tarif en vigueur, indiquant les noms, prénoms, nationalité, profession et domicile du postulant;
- un curriculum vitae;
- un extrait de casier judiciaire datant de moins de trois (3) mois;

- une fiche de renseignements;
- deux photos d'identité de format 4 x 4.

II/ Pour les personnes morales:

- une demande timbrée au tarif en vigueur, indiquant la raison sociale et l'adresse de la société;
- une expédition des statuts de la société;
- un extrait de casier judiciaire du Directeur de la société, datant de moins de trois (3) mois;
- le curriculum vitae du Directeur de la société;
- les activités actuelles ou antérieures du Directeur de la société;
- deux (2) photos d'identité de format 4 x 4 du Directeur.

III/ Dans l'un ou l'autre cas:

- une copie de la patente;
- les justificatifs de l'expérience professionnelle et des connaissances techniques dans le domaine sollicité;
- une autorisation d'achat et de port d'arme à feu et, éventuellement, d'arme anesthésique;
- la liste des moyens à mettre en oeuvre;
- la quittance de paiement de la taxe sur les armes;
- la quittance de paiement auprès du Trésor Public des frais de dossier dont le montant est fixé conformément à la législation sur le régime financier de l'Etat.

**ARTICLE 34.** - L'exploitation de la faune ou des aires protégées, autre que celle prévue à l'article 24 ci-dessus, est subordonnée à l'obtention, selon le cas:

- d'un permis de chasse;
- d'un permis de capture;
- d'un permis de collecte;
- d'une licence de guide de chasse;
- d'un permis de détention des produits de la faune;
- d'un permis de recherche à but scientifique;
- d'une licence et d'un permis de game-ranching ou de game-farming;

- d'un permis et d'une licence de chasse cinématographique et photographique.

(2) Les titres d'exploitation mentionnés au (1) ci-dessus confèrent à leur titulaire le droit d'exercer leur activité sur tout ou partie du territoire national.

(3) Conformément à l'article 87 de la Loi, ils sont personnels et incessibles.

(4) Nul ne peut bénéficier de l'un des titres d'exploitation mentionnés au (1) ci-dessus:

- a) si une instruction pour une infraction en matière de chasse est ouverte contre lui;
- b) s'il est mineur de moins de 20 ans ou majeur sous tutelle;
- c) s'il a été condamné pour une infraction en matière de chasse commise dans un parc national, ou dans une réserve écologique intégrale;
- d) s'il est interdit, à titre temporaire ou définitif, de posséder un titre d'exploitation de la faune par une juridiction.

## SECTION II DU PERMIS DE CHASSE

**ARTICLE 35.** - (1) Le permis de chasse est délivré dans un but sportif.

(2) Il est réparti en trois (3) types de la manière suivante:

- a) permis sportif de petite chasse;
- b) permis sportif de moyenne chasse
- c) permis sportif de grande chasse.

(3) Chaque type de permis donne droit à la chasse de certains animaux désignés par arrêté du Ministre chargé de la faune.

**ARTICLE 36.** - (1) Le permis sportif de petite chasse est délivré par le responsable provincial ou départemental de l'Administration chargée de la faune aux détenteurs réguliers de fusils à canon lisse, ou de carabine de calibre inférieur à 6 mm.

(2) Le permis sportif de moyenne chasse est délivré par le Ministre chargé de la faune aux détenteurs réguliers d'une carabine d'un calibre supérieur à 6mm et inférieur à 9mm.

(3) Le permis sportif de grande chasse est délivré par le Ministre chargé de la faune aux détenteurs réguliers d'une carabine d'un calibre supérieur à 9mm.

(4) Un arrêté du Ministre chargé de la faune fixe les modalités de la chasse à l'arc.

**ARTICLE 37.** - Sans préjudice des dispositions de l'article 27 ci-dessus, le Ministre chargé de la faune peut autoriser les Délégués provinciaux de l'Administration chargée de la faune à délivrer les permis sportifs de moyenne ou de grande chasse aux touristes désireux de chasser dans les zones cynégétiques de leur ressort territorial.

**ARTICLE 38.** - Toute personne physique désirant obtenir un permis de chasse adresse, contre récépissé, au responsable compétent de l'Administration chargée de la faune, un dossier comprenant les pièces suivantes:

- une demande timbrée au tarif en vigueur;
- une fiche de renseignements timbrée comportant une déclaration sur l'honneur qu'elle a pris connaissance de la législation et de la réglementation en vigueur sur la chasse et s'engage à les respecter;
- une copie conforme du ou des permis de port d'armes;
- deux photos d'identité de format 4x4;
- une copie certifiée conforme de la carte nationale d'identité ou de la carte de séjour pour les résidents;
- un certificat médical attestant les capacités physique et mentale du postulant;
- une quittance de paiement des taxes de la saison écoulée, en cas de renouvellement;
- une quittance de paiement des droits de permis et des droits de timbre dont le montant est fixé par la loi de Finances.

**ARTICLE 39.** - (1) Toute personne titulaire d'un permis sportif de chasse est tenue de tenir un carnet de chasse selon le modèle réglementaire.

(2) Dans un délai de quinze (15) jours après l'abattage, le carnet et le permis de chasse doivent être présentés avec les quittances de paiement des taxes d'abattage au service de l'Administration chargée de la faune le plus proche de la zone concernée.

**ARTICLE 40.** - Toute personne physique désirant capturer des animaux sauvages dans un but scientifique,

commercial, d'élevage, ou de détention doit être titulaire d'un permis de capture délivré par le responsable local de l'Administration chargée de la faune, sur la base d'un dossier comprenant les pièces suivantes:

- une demande timbrée au tarif en vigueur;
- une copie de l'acte d'agrément à la profession de captureur;
- une copie certifiée du permis de chasse correspondant à la catégorie des espèces à capturer;
- la quittance de paiement des droits de permis, dont le montant est fixé par la loi de Finances;
- une patente;
- la liste des équipements appropriés qui sont vérifiés par le responsable provincial de l'Administration chargée de la faune;
- le titre de propriété ou de bail du terrain approprié, destiné à la future station zoologique.

**ARTICLE 41.** - (1) Le permis de capture à but scientifique pour l'exploration de la faune, est délivré par le Ministre chargé de la faune, sur la base d'un dossier comprenant les pièces suivantes:

- une demande timbrée au tarif en vigueur spécifiant les espèces à capturer;
- une copie certifiée du permis de recherche délivrée par le Ministre compétent;
- les termes de référence du sujet de recherche;
- les taxes relatives au permis de chasse et de capture des espèces spécifiées;
- deux photos d'identité, de format 4x4;
- un curriculum vitae;
- la liste des moyens mis en oeuvre pour la capture;
- les quittances de paiement des droits, taxes ou redevances relatifs au permis de chasse et de capture des espèces spécifiées, et dont le montant est fixé par la loi de Finances.

(2) Il est assorti d'un cahier de charges dont les clauses prescrivent à son détenteur:

- le respect ou la préservation des connaissances, des innovations ou des pratiques des communautés riveraines;

- le respect des modes de vie traditionnels présentant un intérêt pour la conservation et l'utilisation durable de la diversité biologique;

- l'engagement à partager équitablement avec la République du Cameroun tous les avantages découlant de l'utilisation des ressources exploitées, à des fins commerciales ou autres.

(3) Les retombées économiques ou financières résultant de l'utilisation des connaissances et pratiques des communautés riveraines, les résultats des recherches sur les ressources génétiques exploitées à des fins commerciales, donnent lieu au paiement à l'Etat des royalties calculés conformément aux dispositions de l'article 12 de la Loi.

(4) Le captureur qui ne se conforme pas aux clauses de son cahier de charges s'expose aux sanctions prévues par la Loi.

**ARTICLE 42.** - Les animaux de la classe A ne peuvent être capturés qu'après autorisation exceptionnelle et préalable du Ministre chargé de la faune.

**ARTICLE 43.** - (1) L'exportation des animaux sauvages, de leurs dépouilles ou de leurs trophées bruts ou travaillés est soumise à la présentation d'un certificat d'origine de modèle réglementaire, délivré par le Ministre chargé de la faune.

(2) La détention des animaux sauvages, de leurs dépouilles ou de leurs trophées est subordonnée à l'obtention d'un certificat d'origine délivré par l'Administration chargée de la faune.

(3) La cession des animaux ou de leurs dépouilles et trophées doit s'accompagner du transfert de leur certificat d'origine au cessionnaire.

(4) L'exportateur doit produire un certificat d'enregistrement en qualité d'exportateur des produits de la faune, et un certificat sanitaire délivré respectivement par les Administrations chargées du commerce et de l'élevage.

**ARTICLE 44.** - (1) La création d'un jardin zoologique par toute personne physique ou morale est subordonnée à l'obtention préalable d'une autorisation conjointe des Ministres chargés de la faune et de l'élevage.

(2) Le jardin zoologique peut être donné en gérance libre à toute personne physique ou morale.

Les droits et frais liés à l'octroi de la gérance libre sont fixés par la loi de Finances.



## SECTION IV DES PERMIS DE COLLECTS

**ARTICLE 45.** - (1) Le permis de collecte des trophées d'animaux sauvages des classes B et C ou le permis de collecte des dépouilles des animaux sauvages des classes B et C, à des fins commerciales ou non, ou le permis de détention de l'ivoire travaillé à des fins commerciales, est délivré au vu d'un dossier déposé complet, contre récépissé, auprès du Ministre chargé de la faune, et comprenant les pièces suivantes:

- une demande timbrée au tarif en vigueur;
- une déclaration sur l'honneur que le demandeur a pris connaissance de la législation et de la réglementation en vigueur sur la chasse et s'engage à les respecter;
- deux photos d'identité de format 4 x 4;
- une copie de la carte nationale d'identité ou de la carte de séjour pour les résidents;
- un extrait de casier judiciaire datant de moins de trois (3) mois.

(2) La signature du permis est subordonnée à la présentation de la quittance de paiement des droits afférents au permis sollicité, et dont le montant est fixé par la loi de Finances.

(3) Les permis de collecte visés au (1) ci-dessus sont personnels et incessibles.

(4) Nul ne peut être détenteur de plus d'un permis de collecte.

(5) Tout détenteur d'un permis de collecte dispose librement de ses produits sur toute l'étendue du territoire.

**ARTICLE 46.** - (1) Les permis de collecte sont délivrés par le Ministre chargé de la faune.

(2) Toutefois, les Délégués provinciaux de l'Administration chargée de la faune peuvent recevoir du Ministre chargé de la faune délégation expresse pour délivrer des permis de collecte, suivant un quota que ledit Ministre fixe par province.

Dans ce cas, le dossier prévu à l'article 45 ci-dessus est déposé, contre récépissé, auprès du Délégué provincial compétent qui dispose d'un délai de trente (30) jours compter de la date de dépôt du dossier pour se prononcer.

Passé le délai prévu ci-dessus, le permis est réputé accordé et le récépissé délivré lors du dépôt du dossier en tient lieu.

(3) Les permis de collecte délivrés dans les conditions précisées au (2) ci-dessus sont valables uniquement dans la province où ils ont été délivrés.

(4) La délivrance d'un permis de collecte ne dispense pas le bénéficiaire du respect des législations et/ou réglementations en matière de commerce, d'hygiène et de santé publique.

**ARTICLE 47.** - (1) Les permis de collecte sont renouvelables conformément aux dispositions du présent décret, suivant des quotas fixés par arrêté du Ministre chargé de la faune.

(2) Ils sont valables un an pour les espèces de la classe B.

**ARTICLE 48.** - Sans préjudice des dispositions de l'article 74 du présent décret, le retrait d'un permis de collecte peut être prononcé pour l'un des motifs suivants:

- 1) non respect des quotas;
- 2) cession du permis;
- 3) violation des clauses du permis.

## SECTION V DES LICENCES DE GUIDE DE CHASSE

**ARTICLE 49.** - (1) La licence de guide de chasse est accordée par le Ministre chargé de la faune.

(2) Elle est valable pour une période de cinq (5) ans renouvelable.

**ARTICLE 50.** - (1) Les guides de chasse sont classés en deux groupes de la manière suivante:

- a) les guides titulaires;
- b) les guides assistants.

(2) Les guides titulaires sont agréés conformément aux dispositions du présent décret.

Ils sont civilement responsables devant les Administrations compétentes et les tiers.

(3) Les guides assistants sont reconnus par l'Administration chargée de la faune.

Ils travaillent sous le contrôle et la responsabilité d'un guide titulaire.

**ARTICLE 51.** - (1) L'exploitation d'une zone de chasse par un guide de chasse est subordonnée au respect des

clauses d'un cahier de charges dont l'inexécution ou la violation entraîne des sanctions prévues par la Loi ou le présent décret.

(2) Le cahier des charges précise notamment:

- la contribution à la réalisation des infrastructures socio-économiques au profit des communautés riveraines, telles que convenues avec ces communautés et l'Administration chargée de la faune;
- les redevances financières, les droits et taxes dont les taux ou les montants sont fixés par la loi de Finances.

(3) Tout guide de chasse est tenu de contribuer à la protection de la faune et de l'environnement.

**ARTICLE 52.** Sans préjudice des dispositions de l'article 74 du présent décret, le retrait d'une licence de guide de chasse peut être prononcé pour l'un des motifs suivants:

- 1) non exécution des clauses du cahier de charges;
- 2) cession de la licence;
- 3) chasse dans une aire protégée;
- 4) cumul de cinq (5) infractions pendant la période de validité de la licence.

#### SECTION VI

##### DES LICENCES D'EXPLOITATION DES GAME-RANCHES OU DES GAME-FARMING

**ARTICLE 53.** - (1) L'exploitation d'un game-ranch est subordonnée à l'obtention d'une licence délivrée au postulant par le Ministre chargé de la faune, sur présentation d'un dossier comprenant les pièces suivantes:

- une demande timbrée au tarif en vigueur;
- un plan de situation;
- un curriculum vitae;
- un extrait de casier judiciaire datant de moins de trois (3) mois;
- une copie de la carte nationale d'identité ou de la carte de séjour;
- la liste des moyens de travail dont dispose le demandeur;
- deux photos d'identité de format 4 x 4;
- d'une copie du titre foncier ou du titre d'exploitation

du terrain, ou tout autre document en tenant lieu.

(2) L'exploitation d'un game-farming est subordonnée à l'obtention d'une autorisation délivrée par le responsable local de l'Administration chargée de la faune, sur présentation d'un dossier complet comprenant les pièces énumérées au (1) ci-dessus.

(3) La signature de la licence ou de l'autorisation visée aux (1) et (2) ci-dessus est subordonnée à la présentation de la quittance de paiement des droits y afférents, dont le montant est fixé par la loi de Finances.

**ARTICLE 54.** - (1) Le concessionnaire d'un game-ranch ou d'un game-farming est astreint à l'exécution d'un cahier des charges.

(2) Le cahier des charges comporte des clauses générales et des clauses particulières fixées par arrêté du Ministre chargé de la faune.

#### SECTION VII

##### DES PERMIS ET LICENCES DE CHASSE CINÉMATOGRAPHIQUE ET PHOTOGRAPHIQUE

**ARTICLE 55.** - (1) Sans préjudice des dispositions particulières sur les prises de vue cinématographique ou photographique, toute personne désirant filmer ou photographier des scènes de la vie sauvage est astreinte à l'obtention d'un permis de chasse cinématographique ou photographique délivré suivant des modalités fixées par arrêté du Ministre chargé de la faune.

(2) Dans tous les cas, la demande précise la destination des prises de vues, ainsi que les références et les types d'appareils utilisés.

(3) La délivrance d'un permis de chasse cinématographique ou photographique est subordonnée au paiement d'un droit dont le montant est fixé par la loi des Finances.

#### SECTION VIII

##### DU RENOUVELLEMENT OU DE LA PERTE DES TITRES D'EXPLOITATION DE LA FAUNE

**ARTICLE 56.** - (1) Le renouvellement d'un permis ou d'une licence prévu par le présent décret s'effectue dans les mêmes conditions que celles prévues pour son attribution.

(2) Toutefois, le demandeur doit, en plus, produire les pièces suivantes, selon le cas:

- a) Pour le permis sportif de grande chasse et le permis

sportif de moyenne chasse:

- le dernier permis de chasse; et
  - les quittances de paiement des taxes d'abattage.
- b) Pour le permis de capture:
- le dernier permis de capture;
  - les quittances de paiement des taxes y afférentes;
  - et les rapports d'activités de la saison précédente.
- c) Pour la licence de guide de chasse ou d'exploitation de game-ranch:
- un rapport d'activités;
  - une attestation de réalisation des clauses du cahier des charges délivrée par une commission dont la composition et les modalités de fonctionnement sont définis par arrêté du Ministre chargé de la faune.
- d) Pour le permis de collecte:
- un certificat de recolement délivré par le responsable de l'Administration chargée de la faune de la zone de collecte.

**ARTICLE 57.** - (1) En cas de perte d'un titre d'exploitation, déclaration doit en être faite à l'autorité compétente la plus proche qui délivre un certificat de perte.

(2) Le certificat de perte prévu au (1) ci-dessus est joint à la demande adressée à l'autorité compétente, en vue de la délivrance d'un duplicata du titre.

Cette demande doit être accompagnée des pièces suivantes:

- une quittance de paiement des droits prévus pour la délivrance du duplicata;
  - une attestation du responsable local de l'Administration chargée de la faune, indiquant le nombre d'animaux abattus ou capturés, ainsi que les quittances de paiement des taxes d'abattage ou de capture.
- (3) Nul ne peut se livrer à l'activité que lui conférerait le titre perdu avant l'obtention du duplicata sollicité.

**ARTICLE 58.** - A l'expiration d'un titre d'exploitation, le titulaire que dispose encore d'un stock de produits ou

de trophées est tenu d'en faire la déclaration à l'Administration chargée de la faune, faute de quoi, il est réputé les détenir illégalement.

## SECTION IX DE LA COMMISSION TECHNIQUE CONSULTATIVE

**ARTICLE 59.** - (1) La Commission technique consultative, ci-après désignée la "Commission", prévue à l'article 33 du présent décret, pour l'agrément aux activités mentionnées à l'article 32 ci-dessus est composée ainsi qu'il suit:

Président: le représentant du Ministre chargé de la faune.

Membres:

- le Directeur des Forêts;
- le Directeur de l'Environnement;
- le Chef de la Division des Affaires Juridiques;
- un représentant du Ministère chargé du tourisme;
- un représentant du Ministère chargé de l'administration territoriale;
- un représentant du Ministère chargé de la recherche scientifique et technique;
- un représentant du Ministère chargé des pêches.

(2) Le Président peut inviter toute personne à prendre part, avec voix consultative, aux travaux de la Commission, en raison de ses compétences sur les questions inscrites à l'ordre du jour.

(3) Le Directeur de la Faune rapporte les affaires et assure le secrétariat des travaux de la Commission.

**ARTICLE 60.** - (1) La Commission technique se réunit sur convocation de son Président en tant que de besoin et en tout cas au moins une fois l'an.

(2) Elle ne peut valablement délibérer que si les 2/3 au moins de ses membres sont présents.

(3) Ses avis sont émis à la majorité simple des voix. En cas de partage des voix, celle du Président est prépondérante.

(4) Les fonctions de membre de la Commission sont gratuites.

## CHAPITRE IV DES PRODUITS DE LA FAUNE

### SECTION I DE LA RECOLTE ET DE L'EXPLOITATION DES PRODUITS FAUNIQUE A DES FINS ARTISANALES

**ARTICLE 61.** - (1) Conformément à l'article 96 de la Loi, toute personne titulaire d'un permis de chasse dispose librement des dépouilles et des trophées des animaux régulièrement abattus par elle, sous réserve de s'acquitter des taxes et/ou droits y afférents.

(2) Dans tous les cas, elle est tenue d'enlever les dépouilles des animaux qu'elle a abattus.

**ARTICLE 62.** - (1) La viande provenant des animaux abattus par suite de battues administratives ou pour nécessité de défense revient aux populations victimes et, en partie, aux chasseurs bénévoles.

(2) Les trophées des animaux prévus au (1) ci-dessus reviennent à l'Administration chargée de la faune. Toutefois, lorsque la battue est faite par un chasseur bénévole détenteur d'un permis de chasse, il peut prétendre aux trophées, sous réserve qu'il s'acquitte des redevances y afférentes.

**ARTICLE 63.** - (1) Tout transformateur de produits fauniques est tenu de se faire enregistrer auprès de l'Administration chargée de la faune.

(2) L'enregistrement est renouvelable annuellement. Il donne lieu à la perception d'un droit dont le montant est fixé conformément à la législation sur le régime financier de l'Etat.

### SECTION II DE LA DETENTION, CIRCULATION ET COM- MERCIALISATION DES PRODUITS DE LA FAUNE

**ARTICLE 64.** - Conformément à l'article 98 de la Loi:

1) La détention et la circulation à l'intérieur du territoire national d'animaux protégés vivants, de leurs dépouilles ou de leurs trophées sont subordonnées à la détention d'un certificat d'origine délivré par l'Administration chargée de la faune.

2) L'exportation d'animaux sauvages, de leurs dépouilles ou leurs trophées bruts ou travaillés est soumise à la présentation d'un certificat d'origine de modèle réglementaire et d'une autorisation d'exportation, tous deux délivrés par l'Administration chargée de la faune,

dans le respect de la Loi et des Conventions internationales y afférentes en vigueur.

**ARTICLE 65.** - (1) La réexportation d'animaux sauvages, de leurs dépouilles ou de leurs trophées bruts ou travaillés, obéit aux conditions prévues à l'article 64-2) ci-dessus.

(2) Toute personne désirant réexporter des animaux sauvages, leurs dépouilles ou leurs trophées est tenue, en outre, de produire:

- une quittance justifiant le paiement de toute taxe à l'exportation prévue par la législation en vigueur;
- une attestation de mise en quarantaine de l'animal sauvage, de sa dépouille ou de son trophée, délivrée par l'Administration chargée de la faune.

**ARTICLE 66.** - Nul ne peut introduire un animal sauvage ou une partie de celui-ci sur le territoire national sans l'autorisation préalable du Ministre chargé de la faune.

**ARTICLE 67.** - (1) La commercialisation des produits issus des permis de collecte se fait conformément à la législation et/ou à la réglementation en vigueur.

(2) Les détenteurs des produits collectés sont tenus de justifier leur provenance à toute réquisition de l'Administration chargée de la faune ou des autorités chargées du maintien de l'ordre.

## TITRE IV

### DE LA REPRESSION DES INFRACTIONS

#### CHAPITRE I DE LA CONSTATION DES INFRACTIONS

**ARTICLE 68.** - (1) Le contrôle et le suivi des activités fauniques sont assurés par le personnel de l'Administration chargée de la faune, suivant des modalités fixées par arrêté du Ministre chargé de la faune.

(2) Le personnel de l'Administration chargée de la faune qui assure le contrôle et le suivi des activités fauniques est astreint au port d'armes et d'uniformes et à des règles de discipline, tels que fixés par des textes particuliers.

**ARTICLE 69.** - (1) Conformément aux dispositions

des articles 141 et 142 de la Loi, les agents assermentés de l'Administration chargée de la faune ont la qualité d'officier de police judiciaire à compétence spéciale.

(2) Ils prêtent serment conformément aux lois et règlements en vigueur.

**ARTICLE 70.** - (1) Tout procès-verbal d'infraction en matière de faune doit comporter les indications suivantes:

- la date du constat en toute lettre;
- l'identité complète de l'agent verbalisateur assermenté et l'indication de sa qualité, de sa fonction et du lieu de son service;
- la date, l'heure et le lieu de l'infraction;
- l'identité complète du contrevenant et la description détaillée des moyens qu'il a utilisés;
- l'identification détaillée des témoins, des complices ou des co-auteurs éventuels, leurs déclarations et leurs signatures ou, éventuellement, la mention de leur refus de signer;
- la nature de l'infraction;
- les références aux articles des lois et règlements interdisant et/ou réprimant l'acte commis;
- La mention des produits et engins saisis et le lieu de leur garde;
- toutes autres mentions utiles.

(2) Le procès-verbal clos reçoit un numéro d'ordre dans un registre spécial ouvert à cet effet dans les services de l'Administration locale concernée. Il est envoyé dans les 40 heures au responsable compétent de l'Administration chargée de la faune.

## CHAPITRE II DE LA REPRESSION DES INFRACTIONS

**ARTICLE 71.** - (1) Sans préjudice des sanctions prévues par la Loi et la législation en vigueur, l'agrément prévue à l'article 32 ci-dessus peut être suspendu ou retiré dans les conditions prévues par le présent décret.

(2) La suspension ou le retrait d'un agrément est prononcé par le Ministre chargé de la faune.

(3) La suspension ou le retrait doit être motivé et notifié au mis en cause.

**ARTICLE 72.** - (1) Sans préjudice des pénalités prévues à l'article 162 de la Loi, la suspension est prononcée en cas de récidive dans la commission d'une infraction passible d'une amende au moins égale à 3.000.000 F CFA.

(2) Il y a récidive lorsque durant les douze (12) mois précédant la commission d'une infraction à la législation et/ou à la réglementation sur la faune, la même infraction a été constatée à la charge du contrevenant.

(3) L'acte prononçant la suspension en précise la durée, sans que celle-ci puisse excéder six (6) mois.

**ARTICLE 73.** - (1) La suspension entraîne:

- le retrait de son agrément, ainsi que des documents réglementaires;
- l'arrêt des activités du mis en cause.

(2) Elle ne peut être levée qu'après la cessation de la cause qui l'a entraînée et/ou le paiement de toutes les taxes et charges dues et exigibles.

**ARTICLE 74.** - (1) Le retrait est prononcé de plein droit, en cas de non levée de la suspension pendant la période indiquée à l'article 71 (3) ci-dessus ou dans l'un des cas suivants:

- a) poursuite des activités après la notification de la suspension;
- b) constat d'une nouvelle infraction à l'encontre du mis en cause, au cours des douze (12) mois suivant la commission d'une infraction ayant entraîné sa suspension;
- c) tout autre motif précisé, selon le cas, par le présent décret.

(2) Il emporte:

- la perte de l'agrément;
- l'arrêt définitif des activités liées à l'agrément;
- et le règlement de tous les droits, taxes et redevances dûs. Ces droits, taxes et redevances pourront, le cas échéant, faire l'objet d'un recouvrement forcé.

**ARTICLE 75.** - (1) Les produits périssables sont immédiatement vendus aux enchères publiques conformément à la réglementation en vigueur.

(2) A l'exception de ceux reconnus comme rares et devant être conservés par l'Administration chargée de la

faune, les produits non périssables qui sont confisqués sont vendus de gré à gré ou aux enchères publiques conformément à la réglementation en vigueur.

**ARTICLE 76.** - (1) Sous réserve de leur confiscation par la juridiction compétente en cas de poursuite pénale, le Ministre chargé de la faune peut demander au Ministre chargé de l'administration territoriale de retirer les armes saisies à la suite d'une infraction à la Loi.

(2) La durée du retrait est fixée conformément à la réglementation sur les armes.

(3) Nonobstant les dispositions du (2) ci-dessus, cette durée peut être portée à dix (10) ans lorsque l'infraction a été commise dans une aire protégée, ou lorsqu'un animal de la classe A a été abattu.

(4) Les autorisations d'achat de cartouches ne peuvent être accordées par l'autorité compétente que sur présentation d'un permis sportif de chasse dûment délivré conformément aux dispositions du présent décret.

## CHAPITRE II DE LA TRANSACTION

**ARTICLE 77.** - (1) Conformément à l'article 146 (1) de la Loi, les infractions à la législation et/ou réglementation sur la faune peuvent donner lieu à transaction, sans préjudice du droit de poursuite du Ministère public.

(2) Le Ministre chargé de la faune, ainsi que ses représentants provinciaux sont les seuls habilités à transiger selon des modalités fixées par le Ministre chargé de la faune.

Les représentants provinciaux ne peuvent transiger pour un montant supérieur à 500 000 francs.

(3) Le montant de la transaction ne peut, en aucun cas, être inférieur au minimum de l'amende prévue, majoré éventuellement des sommes dues au titre des dommages et intérêts.

**ARTICLE 78.** - (1) Le bénéfice de la transaction est sollicité par le contrevenant.

(2) La transaction doit être signée conjointement par le responsable compétent de l'Administration chargée de la faune et le contrevenant.

Elle est enregistrée aux frais du contrevenant et précisée les modalités et le délai-limite retenus pour son règlement. Ce délai ne peut, en aucun cas, excéder trois (3) mois.

(3) Toute transaction même déjà exécutée, conclue en violation des dispositions prévues à l'article 77 ci-dessus, est de plein droit nulle et de nul effet. Le Ministre chargé de la faune peut notifier, à tout moment, cette nullité de plein droit au contrevenant.

(4) Le Ministre chargé de la faune peut proposer unilatéralement la modification des clauses de la transaction si celle-ci n'a pas encore été exécutée.

(5) Aucune transaction n'est admise:

- 1) pour une infraction commise dans les aires protégées;
- 2) en cas d'abattage d'un animal intégralement protégé;
- 3) en cas de récidive;
- 4) en cas de pollution des eaux par empoisonnement.

**ARTICLE 79.** - Les sommes versées au titre du cautionnement viennent de plein droit en déduction du montant de la transaction.

## TITRE V

### DES DISPOSITIONS DIVERSES

#### CHAPITRE 1 DES PRISES DE PARTICIPATION

**ARTICLE 80.** - (1) Les prises de participation et les cessions des parts des capitaux des sociétés d'exploitation faunique doivent obéir aux règles suivantes:

- a) Lorsqu'il s'agit d'une société constituée par des personnes de nationalité camerounaise, la part du capital et/ou des droits de vote détenue par des personnes de nationalité étrangère, soit du fait des cessions, soit à la suite des augmentations de capital, ne doit pas être supérieure à 30 % du capital social et/ou des droits de vote.
- b) Lorsqu'il s'agit d'une constituée par des personnes de nationalité camerounaise et celles de nationalité étrangère, les modifications ultérieures du capital et/ou des droits de vote de la société, soit du fait des cessions des parts ou des droits de vote, soit à la suite des augmentations du capital, ne doivent pas avoir pour effet de baisser le pourcentage des parts ou des droits de vote détenus par les personnes de nationalité

camerounaise, tel que fixé dans le capital social initial et/ou dans les droits de vote.

- c) Lorsqu'il s'agit d'une société constituée par des personnes de nationalité étrangère, les modifications ultérieures du capital et/ou des droits de vote de la société au profit des personnes de nationalité étrangère non agréées à l'exploitation d'une activité faunique, prises individuellement ou en société, soit du fait des cessions des parts et/ou des droits de vote, soit à la suite des augmentations du capital, ne doivent pas porter sur plus de 15 % du capital social initial.

**ARTICLE 81.** - (1) Toute prise de participation ou cession des parts des capitaux des sociétés d'exploitation faunique est subordonnée à l'approbation préalable du Ministre chargé de la faune, sur la base d'un dossier comprenant les pièces suivantes:

- a) une demande timbrée précisant les motifs de la prise de participation;
- b) une fiche de renseignements du cessionnaire;
- c) un rapport exhaustif des activités du cédant;
- d) deux expéditions des status actuels de la société, ainsi que la répartition actuelle et prévue du capital social et/ou des droits de vote;
- e) une copie du procès-verbal de l'assemblée générale au cours de laquelle les nouvelles prises de participation ont été agréées.

(2) Le Ministre chargé de la faune est tenu de se prononcer dans un délai de quarante cinq (45) jours à compter de la date de réception du dossier visé au (1) ci-dessus. Passé ce délai, sa décision est réputée positive.

(3) Tout rejet doit être motivé et notifié dans le délai prévu au (2) ci-dessus.

## **CHAPITRE II DE LA SOUS-TRAITANCE**

**ARTICLE 82.** - (1) Tout bénéficiaire d'un titre nominatif d'exploitation de la faune désirant sous-traiter certaines de ses activités doit obtenir l'accord préalable du Ministre chargé de la faune, sur présentation d'un dossier comprenant les pièces suivantes:

- a) une demande timbrée précisant les motifs de la prise de participation;
- b) une fiche de renseignements sur le sous-traitant;
- c) les activités à réaliser par le sous-traitant;

d) un projet du contrat de sous-traitance.

(2) En cas d'autorisation, le bénéficiaire du titre d'exploitation de la faune fait parvenir au responsable provinciale l'Administration chargée de la faune une copie du contrat de sous-traitance dûment signé par les intéressés et enregistré.

(3) Le sous-traitant ne peut commencer à exécuter son contrat s'il n'apas satisfait aux dispositions du (2) ci-dessus.

(4) Le bénéficiaire du titre d'exploitation de la faune demeure l'unique responsable vis-à-vis de l'Administration chargée de la faune de la bonne exécution de ses obligations.

## **CHAPITRE III DU FONDS SPECIAL D'AMENAGEMENT ET D'EQUIPEMENT DES AIRES DE CONSERVATION ET DE PROTECTION DE LA FAUNE**

**ARTICLE 83.** - Un décret particulier fixe les dispositions relatives au Fonds spécial d'aménagement et d'équipement des aires de conservation et de protection de la faune prévu par l'article 105 de la Loi.

## **TITRE VI**

### **DES DISPOSITIONS TRANSITOIRES ET FINALES**

**ARTICLE 84.** - Les permis et licences délivrés avant la date de publication du présent décret, en cours de validité et en règle en ce qui concerne les obligations légales, demeurant valables jusqu'à leur expiration.

**ARTICLE 85.** - (1) Les permis et licences délivrés avant la date de publication du présent décret, dont les titulaires ne sont pas en activité et/ou en règle en ce qui concerne les obligations légales liées auxdits permis et licences, sont annulés d'office.

(2) Le Ministre chargé de la faune notifie aux titulaires concernés cette annulation et met en mouvement la procédure de recouvrement des créances dues, le cas échéant.

**ARTICLE 86.** - Les procédures d'agrément ou d'attribution des titres d'exploitation de la faune en cours et non abouties à date de publication du présent décret

seront poursuivies conformément aux dispositions dudit décret.

**ARTICLE 87.** - Sont abrogées toutes les dispositions antérieures contraires, notamment celles du décret n° 83/170 du 12 avril 1983 fixant le régime de la faune.

**ARTICLE 88.** - Le Ministre de l'Environnement et des Forêts, et le Ministre de l'Economie et des Finances sont, chacun en ce qui le concerne, chargés de l'application du présent décret qui sera enregistré, publié selon la procédure d'urgence, puis inséré au Journal Officiel en anglais et en français./-

**YAOUNDE, le 20 Juillet 1995**

**LE PREMIER MINISTRE, Simon ACHIDI ACHU**



# GHANA

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## Pesticides Control and Management Act, No. 528 of 1996

### ARRANGEMENT OF SECTIONS

#### PART I - REGISTRATION OF PESTICIDES

1. Requirement for registration of pesticides
2. Exceptions to section 1
3. Application for registration of pesticides
4. Classification of pesticides
5. Pesticides for general use
6. Restricted and suspended pesticides
7. Matters to be considered in registration and classification of pesticides
8. Approval
9. Provisional clearance
10. Duration and renewal of provisional clearances
11. Refusal to register pesticide
12. Duration of registration and renewal of registration
13. Non-disclosure of information
14. Power of Agency to amend, ban or suspend pesticides
15. Register of pesticides
16. *Gazette* publication

#### PART II - LICENSING OF PESTICIDES DEALERS

17. Requirement for licence to deal in pesticides
18. Exemptions
19. Application for dealers licence

20. Issue of dealer's licence
21. Safeguards for use of pesticides
22. Suspension, cancellation of licence
23. Appeal
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25. Conformity to registered pesticides
26. Advertising of registered pesticides
27. Containers and packaging of pesticides
28. Records and reporting
29. Exercise of function by the Board
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#### PART III - ENFORCEMENT AND PENALTIES

31. Power of inspector
32. Analysis and certificate
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#### PART IV - GENERAL PROVISIONS

38. Customs officer
39. Power to make regulations
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41. Interpretation

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THE FIVE HUNDRED AND TWENTY-EIGHTH

**ACT OF THE PARLIAMENT OF THE REPUBLIC OF GHANA ENTITLED THE PESTICIDES CONTROL AND MANAGEMENT ACT, 1996**

*AN ACT to provide for the control, management and regulation of pesticides in Ghana and to provide for related matters.*

DATE OF ASSENT *23rd December, 1996*

**BE IT ENACTED by Parliament as follows-**

**PART I  
REGISTRATION OF PESTICIDES**

1. No person shall import, export, manufacture, distribute, advertise, sell or use any pesticide in Ghana unless the pesticide has been registered by the Environmental Protection Agency in accordance with this Act.

**Requirement for registration of pesticides**

2. (1) Notwithstanding section 1 of this Act, the Agency may authorise the importation of unregistered pesticide-

- (a) if the pesticide is-
  - (i) imported for experimental or research purposes and not for distribution, or
  - (ii) imported in the event of national emergency; or
  - (iii) in direct transit through Ghana and the Agency is satisfied that the pesticide is permitted to enter the country of destination; or
- (b) if the Minister by legislative instrument so prescribes.

(2) The Agency may authorise the manufacture of unregistered pesticide for export if the pesticide is-

- (a) manufactured in accordance with specifications provided by the importer; and

**Exceptions to section 1**

- (b) the specifications satisfy the requirements applicable for the purpose in the country to which it is to be exported.

3. A person seeking to register any pesticide shall submit to the Agency an application for registration which shall be in such form and be accompanied with such fee, information, samples and such other material as the Agency may determine.

**Application for registration of pesticides**

4. (1) In registering a pesticide, the Agency shall classify it as being-

- (a) for general use;
- (b) for restricted use;
- (c) suspended; or
- (d) a banned pesticide.

(2) Pesticides classified under subsection (1) as restricted, suspended or banned shall be subject to the Prior Informed Consent Procedure defined in section 41 of this Act.

**Classification of pesticides**

5. The Agency may classify a pesticide for general use if, having regard to the provisions in section 7 of this Act, it considers that the pesticide when applied for the use for which it is registered will not have an unreasonable adverse effect on the environment.

**Pesticides for general use**

6. The Agency shall classify a pesticide as restricted or suspended if it considers that its use in accordance with widespread commonly recognized practice in the absence of additional regulatory restrictions may cause unreasonable adverse effect on people, animals, crops or on the environment.

**Restricted and suspended pesticides**

7. In determining whether or not to approve the registration of a pesticide and what classification to give a registered pesticide, the Agency shall consider relevant matters including-

- (a) the characteristics of the pesticide formulation, such as the acute dermal, oral or inhalation toxicity;
- (b) the persistence, mobility and susceptibility to biological concentration of the pesticide;
- (c) the experience gained from the use of the pesticide, such as the likelihood of its misuse and any good

safety record which is contrary to available laboratory toxicological information.

- (d) the relative hazards of its patterns of use, such as granular soil applications, ultra low volume or diet aerial applications of all blast sprayer applications.

Matters to be considered in registration and classification of pesticides

- (e) the extent of the intended use; and  
(f) the supporting data and other technical information that the Agency may request from the applicant or from any public institution.

8. The Agency may approve and register a pesticide subject to such other conditions as it may determine and may only register a pesticide if it is satisfied that the pesticide is safe and effective for the use for which it is intended and that the pesticide has been tested for efficacy and safety under local conditions.

#### Approval

9. (1) Where in respect of an application for registration of a pesticide, the Agency is satisfied that:

- (a) most information required for its registration has been provided to the Agency; and  
(b) the pesticide does not present a toxicological risk to people, animals, crops or the environment,

it may clear the pesticide for use without the registration and this clearance shall be known as provisional clearance and shall be temporary pending the registration by the Agency of the pesticide.

(2) Provisional clearance shall be given subject to such other conditions as the Agency shall determine.

(3) The Agency shall cancel the provisional clearance if the application for the registration of the pesticide is refused.

#### Provisional clearance

10. (1) A provisional clearance for any pesticide shall be valid for such period as the Agency may determine but shall not exceed 1 year.

(2) The Agency may require-

- (a) the submission of such information; and  
(b) the analysis of such samples as appear to it to be necessary to determine whether and under what

conditions the provisional clearance shall be granted.

#### Duration and renewal of provisional clearance

11. Where the Agency refuses to register any pesticide it shall inform the applicant in writing of the refusal and the grounds for the refusal within 14 days of the decision.

#### Refusal to register pesticides

12. (1) A pesticide registration shall remain valid for a period not exceeding 3 years from the date of registration.

(2) The Agency may, where it is satisfied that a registered pesticide remains safe and effective for use in Ghana, renew the registration for further periods of 3 years at a time.

(3) The renewal of any pesticide registration shall be subject to-

- (a) submission of such information, analysis of samples as the Agency may require; and  
(b) such other conditions as the Agency shall determine.

13. Information furnished by an applicant in respect of registration of a pesticide or its renewal which is agreed to be the Agency and the applicant as confidential shall not be disclosed by the Agency unless authorised by law.

14. The Agency, if satisfied that a registered pesticide under the existing conditions of its registration or provisional clearance

- (a) is not effective; or  
(b) may cause hazard to people, animals, crops or the environment

may by publication in the *Gazette* amend the classification, suspend or ban the pesticide or cancel the registration or provisional clearance at any time after the registration or during the period of provisional clearance.

15. (1) There shall be kept by the Agency a register to be known as the Register of Pesticides in which the Agency shall record the names and particulars of registered and provisionally cleared pesticides.

(2) The contents of the Register of Pesticides shall be reviewed periodically by the Agency.

16. The Agency shall cause to be published in the *Gazette* annually-

- (a) registered pesticides and their classification;
- (b) provisionally cleared pesticides;
- (c) suspended or banned pesticides; and
- (d) amendments made to the classification of pesticides

**Gazette publication**

**PART II -**

17. (1) No person shall import, export, manufacture, distribute, advertise or sell any pesticide except in accordance with a licence issued under this Act.

(2) Any licence issued under this act shall be subject to such conditions as may be specified in relation to it and to any other conditions as the Agency may from time to time prescribe for the licence.

18. The Agency may by legislative instrument exempt from the requirement of a licence under section 17 such pesticides as shall be specified in the instrument.

**Exempts**

19. An application to import, export, manufacture, distribute, advertise or sell pesticides shall be made to the Agency in a form determined by the Agency and shall be accompanied with such fee and information as the Agency shall determine.

**Application for dealers licence**

20. The Agency may issue a licence authorising the applicant to import, export, manufacture, distribute, advertise or sell pesticides if it has reasonable grounds to believe that the applicant will comply with the conditions required under the licence.

**Issue of dealers licence**

21.(1) No person shall use or require an employee to use a pesticide in any manner that is inconsistent with the provisions of this act or regulations made under this Act.

(2) Any person concerned with the use of a pesticide shall inform any other person who uses a pesticide of the dangers involved in the misuse of pesticides.

(3) Where regulations under this Act require that a pesticide be applied by or under supervision of a person authorised in that behalf by the Agency, no person shall

apply that pesticide unless he is so authorised or supervised.

(4) No person shall require or permit an employee to handle or use pesticides in the course of his employment without providing and requiring the employee to use such protective facilities and clothing as will permit safe handling of the pesticide.

(5) Where protective facilities and clothing are required as a condition for a licence, every employer whose employees use or handle pesticides to which the licence relates shall provide and require the use of the facilities and clothing.

(6)including the interval between the application of pesticides and harvest as may be prescribed.

22. The Agency may suspend or cancel a licence if-

(a) it has reasonable grounds to believe that the licensee has failed or refused to comply with this Act, regulations made under it or any other conditions for the licence; or

(b) it considers that the action appears necessary to prevent or remove a hazard to people, crops, animals or the environment.

**Suspensions, cancellation of licence**

23. (1) A person aggrieved by any suspension or cancellation of his licence who desires to appeal against it, shall appeal in the first instance to the Minister.

(2) The Minister shall determine the matter within a period of thirty days after the receipt of written notification of the grievance.

(3) If the grievance is not determined within the period by the Minister or if the person is dissatisfied with the decision of the Minister he may appeal to the High Court.

**Appeal**

24. The Agency may restrict or prohibit the use of a registered pesticide in designated areas during specified periods of time.

**General regulation power**

25. (1) No person shall alter any pesticide so as to change its formulation, composition or usage or alter it in any other manner.

(2) No person shall sell a registered or provisionally cleared pesticide or an unregistered pesticide imported under section 2(1)(b) of this Act if because of-

- (a) fault in manufacture;
- (b) deterioration;
- (c) accident or any other cause;

the pesticide fails to meet the conditions of the registration or of the provisional clearance or the conditions of the authorisation.

26. No person shall advertise any registered or provisionally cleared pesticide in a manner which

- (a) is false
- (b) is misleading or inconsistent with the information supplied to the Agency at the time of the application; or
- (c) omits warnings prescribed by the Agency.

27. (1) The Agency may prescribe the containers, label and the manner for packaging of pesticides at the wholesale and retail levels.

(2) Where any container label or packaging has been described by the Agency for a registered pesticide, no person shall

- (a) manufacture, import, export, distribute, advertise or sell any registered pesticide otherwise than to a package or container prescribed for the pesticide; or
- (b) after the label of any pesticide so as to misrepresent the nature of the pesticide.

28. Every person who imports, exports, manufactures, distributes or sells a pesticide shall make a record of the quantities of pesticides imported, exported, manufactured, distributed or sold by him and the record shall be

- (a) maintained for 10 years from the time it was made; and
- (b) made available to the Agency at its request of such time and in such manner as the Agency may request.

29. (1) The powers and functions conferred on the Agency under this Act shall be exercised by the Board.

(2) The Board may delegate any of its powers and functions under this Act to a committee of the Board, a member of the Board or any other person.

#### **Exercise of function by the board**

30. (1) For the purposes of enabling the Board perform its functions under this Act, there is hereby established

as the Agency a committee to be known as the Pesticides Technical Committee which shall be a committee of the Board.

(2) The Pesticides Technical Committee shall be composed of the following members:

- (a) a Chairman appointed by the Board;

#### **Pesticides Technical Committee. Its composition and functions**

- (b) the Head of the Chemistry Department of the National Nuclear Research Institute of the Ghana Atomic Energy Commission;
- (c) a representative from the Cocoa Services Division of the Ghana Cocoa Board not below the rank of an executive director who shall have expertise in pesticides.
- (d) the Director of the Plant Protection and Regulatory Services of the Ministry of Food and Agriculture;
- (e) the Director of the Veterinary Services Department of the Ministry of Food and Agriculture;
- (f) a representative from the Ministry of Health;
- (g) a representative of the Ghana Standards Board not below the rank of a Senior Scientific Officer;
- (h) a representative from the laboratory of the Customs, Excise and Preventive Service not below the rank of Principal Collector;
- (i) a representative from the Association of Ghana Industries;
- (j) a representative of the Ghana National Association of Farmers and Fishermen;
- (k) a representative from the Ministry of lands and Forestry;
- (l) one representative from the Environmental Protection Agency not below the rank of a Senior Programme Officer who shall be the Secretary to the Committee; and
- (m) a representative of the Ministry responsible for the Environment.

(3) The Pesticides Technical Committee shall perform such functions under this act relating to the control and management of pesticides as the Board may assign to it.

(4) The quorum for a meeting of the committee shall be seven members.

(5) The Committee shall regulate its own procedure.

**PART III -  
..... AND PENALTIES**

31. (1) A member of the relevant sub-committee of a District Assembly so authorised or an inspector appointed under section 15 of the Environmental Protection Agency Act, 1994 (Act 190) may-

- (a) inspect any equipment used or to be used in applying pesticides;
- (b) inspect any storage or disposal facilities or areas used for the storage or disposal of pesticides;
- (c) inspect any land actually or reported to be exposed to pesticides;
- (d) investigate complaints of injury to human beings and animals, or damage to land and pollution of water bodies resulting from the use of pesticides;
- (e) take samples of pesticides applied or to be applied;
- (f) monitor the sale and use of pesticides;
- (g) examine and take copies of a licence or other documents required by this Act or any regulations made under this Act.

(2) An inspector or a person authorised under subsection (1) may if he has reasonable cause to believe that an offence has been committed under this Act or against any regulations made under this Act without warrant

- (a) enter and search premises, other than premises used exclusively as a place of residence, in which he believes on reasonable grounds that the offence has been committed or that a pesticide which has been illegally used is being stored;
- (b) stop and search any vehicle which he believes is being used in the commission of the offence under this Act;
- (c) seize any equipment, pesticide or appliance which he believes on reasonable grounds is being used in the commission of the offence;
- (d) arrest any person who he believes on reasonable grounds has committed the offence.

(2) A written receipt shall, where reasonable practicable, be given for an article or thing seized pursuant to subsection (1) of this section, and the reasons for the seizure shall be stated in the receipt.

(3) A person arrested under subsection(1) of this section shall be taken before a court within 48 hours.

(4) An inspector or a person authorised under subsection (1) of this section shall declare his office and produce evidence of his authority before he enters and searches any premises and in any other case produce it on request.

32. (1) Any sample of pesticide taken for the purpose of analysis shall be submitted to and analysed by an analyst appointed by the Agency.

(2) In any proceedings under this Act, the production of a certificate signed by an analyst appointed by the Agency shall be prima facie evidence of the facts stated in it.

33. Any person who

(a) wilfully obstructs an inspector or an authorised person in the exercise of any power conferred on him under this Act or regulations made under this Act.

or

(b) fails to comply with a lawful enquiry or requirement made by an inspector or an authorised person in accordance with section 31 of this Act.

commits an offence and is liable on conviction to a fine not exceeding C500,000 or to imprisonment for a term not exceeding 6 months or to both.

34. (1) Any person who-

(a) except as provided in section 2 or otherwise exempted, imports, exports, manufactures, distributes, advertises, sells or uses any pesticide which has not been registered contrary to section 1 of this Act; or

(b) imports, exports, manufactures, distributes, advertises or sells any pesticide without a licence contrary to section 17(1) of this Act; or

**Other offences and penalties**

(c) uses a pesticide or requires an employee to use a pesticide contrary to any provision in section 21 of this Act; or

(d) alters any pesticide so as to change its formulation, composition or usage in any manner contrary to section 25(1); or

(e) sells a registered or provisionally cleared pesticide which by reason of fault of manufacture, deterioration, accident or any other reason fails to meet the conditions required by this Act contrary to section 25(2); or

- (f) contravenes any requirements for the presentation of pesticides provided under section 27(2)(a) or (b)

commits an offence and is liable on conviction to a fine not exceeding C5 million or to a term of imprisonment not exceeding 2 years or to both.

(2) In the case of a continuing offence, there shall be an additional fine not exceeding C500,000 in respect of each day on which the offence continues.

(3) Any person who-

- (a) advertises a pesticide in a manner which is false, misleading or inconsistent with the information supplied to the Agency at the time of registration, or
- (b) includes on the label or accompanying instructions of any pesticide misleading or fictitious claim,

contrary to section 26 of this Act commits an offence and is liable on conviction to a fine not exceeding C2 million or to a term of imprisonment not exceeding 1 year and in the case of a continuing offence to an additional fine not exceeding C200,000 in respect of each day on which the offence continues.

(4) Any person who-

- (a) fails or refuses to maintain or submit the contents of records to be maintained; or
- (b) deliberately or negligently makes false records; or
- (c) submits false or misleading statements

commits an offence and is liable on conviction to a fine not exceeding C1 million or 6 months imprisonment; and in the case of a continuing offence, to an additional fine not exceeding C200,000 in respect of each day on which the offence continues.

(5) Any person who knowingly discloses, otherwise than as provided by this Act, any proprietary information acquired by him in the exercise of any duty under this Act commits an offence and is liable on conviction to a fine not exceeding C1 million or to a term of imprisonment not exceeding 6 months or to both.

35. It shall not be a defence for any person charged with the sale of a pesticide contrary to section 1 to plead that he had no reason to believe at the time of sale that the pesticide was not registered or differed in any way from the purported contents of the container or that the pesticide otherwise failed to meet the requirements of this Act.

### Sale of pesticides

36. (1) Where an offence is committed by a body of persons-

- (a) in the case of a body corporate other than a partnership every director or officer of the body shall also be deemed guilty of the offence;
- (b) in the case of a partnership every partner or officer of that body shall also be deemed to be guilty of that offence.

(2) No person shall be guilty of an offence by virtue of subsection (1) if

- (a) he proves that the offence was committed without his knowledge or connivance; and
- (b) that he exercised due care and diligence to prevent the commission of the offence having regard to all the circumstances.

### Offences by body of persons

37. Where a person is convicted of an offence under this Act or any regulations made under this Act, the court may in addition to any other penalty imposed, order that any equipment, pesticide or appliance used in the commission of the offence shall be forfeited to the State and that a licence issued under this Act shall be suspended for such period as the court may direct or be cancelled.

### Forfeiture

## PART IV GENERAL PROVISIONS

38. (1) Every customs officer shall-

- (a) assist in the enforcement of the provisions of this Act; and
- (b) prevent the importation into Ghana of any pesticide where the importation is contrary to this Act.

(2) The Agency shall provide the Commission of Customs with a list of licensed importers and a list of registered and banned pesticides.

(3) The Commission of Customs shall keep records of imported pesticides and, shall at such regular periods as the Agency may direct, submit copies to the Agency.

**Customs Officer**

39. (1) The Minister responsible for Environment on the recommendation of the Board and in consultation with the Minister responsible for Food and Agriculture, may by legislative instrument make such regulations as may be necessary for the purpose of giving full effect to the provisions of this Act.

**Power to make regulations**

(2) Without prejudice to subsection (1) of this section regulations may be made prescribing matters relating to

- (a) the manufacture, importation, exportation, distribution and sale of pesticides;
- (b) the reporting of significant pesticide ..... or incidents to a designated person or office and the procedure for such reporting;
- (c) procedure for the storage, transportation and disposal of any pesticide or pesticide container which is considered likely to cause injury to human beings, vegetables, crops, livestock, wildlife or beneficial insects or which is likely to pollute the environment;
- (d) the form and contents of pesticide labels;
- (e) method of packaging of registered pesticides;
- (f) pesticide containers and their disposal;
- (g) the advertising of pesticides;
- (h) the purpose for which any pesticides may be used and the manner in which it may be used;
- (i) the licensing of premises where pesticides are used or dealt in;
- (j) practices, including pre-harvest intervals, for the harvest of crops and the slaughter and milking of animals following exposure to pesticides;
- (k) the application of pesticides that are to be made under the supervision of an authorised person and the provision for such authorizations;
- (l) the analyses of pesticides;
- (m) facilities and clothing to be used or worn while handling pesticides;
- (n) the disposal of pesticides;
- (o) records to be maintained by persons importing, manu-

facturing, formulating, distributing or selling pesticides;

- (p) aerial application of pesticides;
- (q) pesticide applicators;
- (r) the exemption of the importation of certain specified categories and quantities of pesticides from the requirement of a licence.

(3) Regulations made under this section may prescribe in relation to any contravention of any provision in it, penalties not exceeding a fine of C2 million or a term of imprisonment not exceeding 1 year or both and for additional penalties not exceeding C200,000 for each day in respect of continuing offences.

40. The Agency may for the registration of pesticides and licensing of dealers, charge such fees as the Board shall determine.

**Fees**

41. In this Act unless the context otherwise requires

“advertising” means the promotion of the sale and use of pesticides by print or electronic media, signs, displays, gifts, demonstration or word of mouth;

**Interpretation**

“Agency” means the Environmental Protection Agency;

“banned pesticide” means a pesticide for which registered use has been prohibited by the Agency or for which registration has not been granted by the Agency for health and environmental reasons;

“Board” means the Environmental Protection Agency Board established under section 4 of the Environmental Protection Agency Act, 1994 (Act 490);

“Committee” means the Pesticides Technical Committee provided for under section 30;

“dealer” means any person who imports, exports, manufactures, distributes, advertises or sells pesticides;

“defoliant” means a substance or mixture of substances which when applied to a plant causes the leaves or foliage to drop from the plant with or without abscission;

“District Assembly” includes Municipal and Metropolitan Assembly;

“desiccant” means a substance or mixture of substances



which when applied to a plant, accelerates the drying of the tissue of the plant;

“distribute” means to supply commercially, to transport, store or sell;

“formulation” means the combination of various ingredients designed to render the product useful and effective for the purpose claimed, or the form of pesticide as purchased by users;

“Inspector” means Environmental Protection Inspector appointed under section 15 of the Environmental Protection Agency Act, 1994 (Act 490) or person of the relevant sub-committee of a District Assembly authorised under section 31(1) of this Act;

“label” includes any writing, printing or illustration made on, attached to, included in, belonging to or accompanying a pesticide or its container.

“manufacture” in relation to a pesticide means to do any of the following- prepare, compound, make the active or other ingredients, to add substances, mix, formulate, package or re-package, label or otherwise treat the active ingredient with a view to its sale, but does not include the carrying on of bona fide research or experiment relating to a pesticide or doing of an act or thing that forms part of or is incidental to such research or experiment;

“Minister” means the Minister responsible for the Environment;

“pest” means any insect, rodent, bird, fish, mollusc, nematode, fungus, weed micro-organism, virus or any other kind of plant or animal life that is injurious to human or animal health, crops, stored produce, processed foods, wood, cloths, fabrics or other inanimate objects;

“pesticide” means-

(a) a substance or mixture of substances intended for preventing, destroying, repelling or reducing the destructive effects of any pest; or

(b) a substance or mixture of substances intended for use as a plant regulator, defoliant, desiccant or wood preservative;

“plant regulator” means a substance or mixture of substances which, when applied to ornamental or crop plants or to their produce, causes, through physiological action, the acceleration or retardation of the rate of growth or otherwise alters the behaviour of those plants or their produce, but does not include substances

intended for use as plant nutrients, trace elements, nutritional chemicals, plant inoculants or soil amelioration;

“prescribed” means prescribed by legislative instrument;

“Prior Informed Consent Procedure” means the international operation procedure for exchanging, receiving and handling notification information by the Agency on restricted, suspended and banned pesticides for reasons of health and the environment;

“sell” includes to offer for sale and to provide pesticide as part of a service of pest control notwithstanding that the pesticide is described as free or included in the service;

“unreasonable adverse effect on the environment” means any effect which is injurious to human, animal or plant life or which renders the environment unsafe for human, animal or plant life;

42. After 6 months from the coming into force of this Act, pesticides shall be registered in compliance with this Act and licences for dealing in pesticides shall be issued in compliance with this Act.

# GUINEA-BISSAU

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## Decreto-Lei n.º 2/86, de 29 Março de 1986

### PARTE 1 CONSELHO DE ESTADO

A elaboração sobre a pesca é uma necessidade que tem sido frequentemente sublinhada, visto que os Diplomas coloniais em vigor já não estão adaptados às realidades da República da Guiné-Bissau.

Alguns textos, tais como o Decreto n.º 24/78, de 7 de Agosto, vieram solucionar alguns problemas urgentes. Contudo, estes diplomas nunca se inseriram numa perspectiva global e coerente com vista a assegurar uma gestão adequada das pescas na República da Guiné-Bissau. A falta de um quadro jurídico apropriado tem, por outro lado, comprometido uma fiscalização eficaz das actividades de navios de pesca estrangeiros.

O presente diploma sobre a pesca reflecte os parâmetros essenciais da Convenção das Nações Unidas sobre o Direito do Mar, de 12 de Dezembro de 1982, de que a Guiné-Bissau é signatária. Este documento veio consagrar novos direitos e responsabilidades dos Estados em relação aos recursos vivos das águas marítimas adjacentes às suas costas. A maior parte dos Estados tem vindo a consagrar os referidos direitos e responsabilidades.

O quadro jurídico presente visa facilitar a realização do objectivo de exploração dos recursos vivos do conjunto das águas marítimas sob a jurisdição da República da Guiné-Bissau no interesse do Povo Guineense. O texto autoriza a implementação de regimes jurídicos mais favoráveis para navios de pesca da Guiné-Bissau e, em geral, para todas as actividades de pesca artesanal. A fiscalização, o controlo e o enquadramento estritos das actividades dos navios de pesca estrangeiros ser7 possível, paralelamente ao desenvolvimento dos meios materiais de fiscalização, mediante o recurso a uma série de técnicas jurídicas, obrigações e possibilidades de acção que o texto consagra. Por outro lado, os armadores estrangeiros conhecerão concretamente o quadro jurídico que, conjuntamente com o Código dos Investimentos, vira constituir a referência legislativa em relação a qual poderão efectuar as suas opções de natureza económica.

Enfim, o presente Diploma sobre a Pesca pretende

igualmente constituir um instrumento susceptível de favorecer a cooperação internacional no sector das Pescas, nomeadamente no plano regional. Nesta mesma ordem de ideias, o Diploma facilitará a colaboração entre os diferentes Departamentos do Estado em prol do bem-estar do Povo Guineense.

Finalmente, o presente Diploma define um quadro jurídico a ser concretizado por meio de textos legais de aplicação, entre os quais, alguns deverão ser adoptados sem demora, outros mais tarde, a medida das necessidades e do desenvolvimento das capacidades administrativas do País.

Nestes termos o Conselho de Estado decreta, nos termos do artigo 62.º n.º 1 da Constituição, o seguinte.

## TITULO I

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### Disposições Preliminares

#### ARTIGO 1.º Noção da pesca

Para efeitos do disposto no presente diploma e nos regulamentos adoptados para a sua aplicação, entende-se por pesca:

A captura, embarque ou recolha de peixe;

A tentativa de captura, embarque ou recolha de peixe;

Qualquer outra actividade que possa razoavelmente resultar na captura, embarque ou recolha de peixe;

Os actividades prévias que tenham por finalidade directa a pesca, assim como as actividades posteriores se exercem directamente e imediatamente sobre as espécies extraídas, capturadas ou mortas;

As operações de navios-fábrica, de navios congeladores e as operações de apoio logístico e de transbordo de capturas.

**ARTIGO 2.º: Tipos de pesca em função da sua finalidade**

Em função da sua finalidade, a pesca pode ser de subsistência, comercial, de investigação científica e recreativa, definida nos termos seguintes:

- a) A pesca de subsistência tem por objectivo fundamental a obtenção de espécies comestíveis para a subsistência do pescador e da sua família;
- b) A pesca comercial é a pesca realizada com fins lucrativos;
- c) A pesca de investigação científica tem por objectivo o estudo e o conhecimento dos recursos;
- d) A pesca recreativa é a pesca exercida a título desportivo ou de lazer.

**ARTIGO 3.º Tipos de pesca em função das embarcações e das técnicas empregues**

Em função das embarcações e das técnicas empregues, a pesca pode ser artesanal, semi-industrial e industrial, nos termos a seguir definidos:

- (a) A pesca artesanal é a pesca praticada com canoas ou embarcações até doze metros de comprimento total e até cinco toneladas de arqueação bruta, dentro dos rios, estuários ou do Mar Territorial da República da Guiné-Bissau, por meio de redes, outros artefactos ou a pé
- (b) A pesca semi-industrial é a pesca praticada com embarcações até trinta toneladas de arqueação bruta, propulsadas por motor interior e podendo utilizar gelo ou refrigeração própria para a conservação das suas capturas;
- (c) A pesca industrial é a pesca praticada com embarcações de mais de trinta toneladas de arqueação bruta.

**ARTIGO 4.º Noção de navio de pesca**

Nos termos da presente Lei e dos regulamentos adoptados para a sua aplicação entende-se por navio de pesca qualquer embarcação dotada de instrumentos ou instalações concebidas para a pesca.

**ARTIGO 5.º Noção de navio de pesca da Guiné-Bissau quanto a Nacionalidade**

1. Os navios de pesca mencionados no artigo anterior podem ser navios de pesca da Guiné-Bissau, navios de pesca estrangeiros e navios de pesca estrangeiros baseados na Guiné-Bissau, definidos nos seguintes

termos:

- a) São navios de pesca da Guiné-Bissau os navios que sejam propriedades de pessoas singulares ou de pessoas colectivas públicas guineenses, bem como aqueles a que pertencem 51% do seu valor, pelo menos, a pessoas singulares ou a pessoas colectivas, privadas ou pública da Guiné-Bissau ou a uma sociedade tendo:

51% pelo menos, do capital social pertencente a pessoas singulares ou colectivas privadas ou públicas, guineenses;

A sua sede na Guiné-Bissau;

O órgão de administração constituído por uma maioria de elementos guineenses e presidido por um cidadão da Guiné-Bissau;

- (b) São navios de pesca estrangeiros os navios de pesca que não sejam navios de pesca da Guiné-Bissau.
- (c) São navios de pesca estrangeiros baseados na Guiné-Bissau os navios de pesca estrangeiros cujas actividades sejam baseadas na Guiné-Bissau e que desembarcam a totalidade das suas capturas na Guiné-Bissau.

2. Os navios de pesca da Guiné-Bissau deverão ter uma equipagem e um estado maior inteiramente composto de nacionais guineenses. Se não for possível recrutar no país os técnicos necessários, mediante autorização escrita do Secretário de Estado das Pescas, poderá ser derogada esta regra nos termos prescritos na dita autorização, 1,77 o.

**TITULO II****Disposições Gerais****ARTIGO 6.º Ambito de aplicação territorial**

As disposições do presente diploma são aplicadas às águas sob jurisdição da República da Guiné-Bissau, que compreende, a Zona Económica Exclusiva, o Mar Territorial e as águas interiores, tais como são definidas nos termos da Lei sobre a extensão do Mar Territorial e da Zona Económica Exclusiva.

**ARTIGO 7.º A pesca nas águas sob jurisdição da República da Guiné-Bissau**

1. A pesca dentro das águas sob jurisdição da República da Guiné-Bissau é da competência exclusiva do Estado da Guiné-Bissau.

2. Nenhuma entidade nacional ou estrangeira poderá dedicar-se ao exercício da Pesca em águas sob jurisdição da República da Guiné-Bissau sem estar ...damente autorizada nos termos do presente diploma e dos seus regulamentos de aplicação.

**ARTIGO 8.º A pesca de navios de pesca estrangeiros**

1. Os navios de pesca estrangeiros só poderão ser autorizados a operar em águas sob jurisdição da República da Guiné-Bissau mediante acordos internacionais ou outros ajustes celebrados entre a República da Guiné-Bissau e o Estado cuja bandeira os navios arvorem ou no qual estejam registados ou outras entidades competentes que os representem salvo quanto aos navios de pesca estrangeiros baseados na Guiné-Bissau.

2. Excepcionalmente, o Secretário de Estado das Pescas poderá conceder licenças de pesca a navios de pesca estrangeiros na ausência de acordos internacionais ou outros ajustes reieridos no parágrafo anterior.

3. Na hipótese contemplada no numero 2. do presente artigo, o Secretário de Estado das Pescas poderV1,27 exigir que os armadores dos navios de pesca industrial e semi-industrial estrangeiros depositem junto do Banco Nacional da Guiné-Bissau uma caução destinada a garantir o respeito e a execução pelos ditos navios das obrigações ..... unidas em virtude do presente diploma, dos regulamentos adoptados para a sua aplicação e das licenças de pesca, que sera devolvida na data da sua expiração.

4. A violação das obrigações assumidas no número anterior implica, sem prejuízo das outras cauções previstas na Lei, a perda do direito a devolução da caução.

**ARTIGO 9.º Acordo de pesca autorizando o acesso de navios de pesca estrangeiros**

1. Os acordos internacionais ou os outros ajustes celebrados nos termos do artigo 8.º deverão necessariamente:

- a) Especificar o número e a capacidade dos navios cujas operações são permitidas, assim como os tipos de pesca e de espécies cuja captura é autorizada;
- b) Dispor que cada navio deverV1,27 obter uma licença individual e especificar os procedimentos de pedido da mesma;
- c) Definir o montante dos direitos de pesca ou outros pagamentos e as compensações financeiras eventualmente previstas;
- d) Conter uma cláusula relativa à comunicação periódica e regular pelos armadores à Secretaria de Estado das

Pescas de dados sobre as capturas em formulV1,27 rios apropriados;

- e) Preceituar no sentido da marcação dos navios nos termos do presente diploma e dos seus regulamentos de aplicação;
- f) Prever a obrigação do Estado do pavilhão ou de outra entidade competente de adoptar todas as medidas necessárias a fim de garantir que os seus navios respeitem os termos e condições constantes dos acordos internacionais ou outros ajustes, bem como, as disposições pertinentes da legislação e dos regulamentos da República da Guiné-Bissau.

2. Os acordos internacionais ou outros ajustes celbrados em virtude do artigo 8.º q11 poderão ainda prever:

- a) As medidas concretas e específicas que Estados, ou outros entidades competentes, deverão adoptar em relação aos navios que arvorem a sua bendeira, ou sejam representados pelas ditas entidades, tendentes a implementar o objectivo geral da alínea f) do número 1. do presente artigo;
  - b) A obrigação das autoridades do pavilhão de garantir o fornecimento regular, em formulários apropriados, de dados sobre as capturas realizadas pelos seus navios ou pelos navios que representem;
  - c) O desembarque em portos da Guiné-Bissau de parte ou da totalidade das capturas realizadas;
  - d) A formação profissional de nacionais da República da Guiné-Bissau a bordo dos navios estrangeiros, designadamente, através da sua participação como membros das equipagens dos ditos navios ou em estabelecimentos do Estado do pavilhão;
  - e) A construção de infra-estruturas em terra e á transferência de tecnologia em materia de pesca;
  - f) A execução de programas de investigação científica sobre os recursos;
  - g) a presença a bordo dos navios de pesca estrangeiros de inspectores ou obsevadores da República da Guiné-Bissau;
  - h) O respeito de normas e práticas destinadas a proteger as actividades de pesca artesanal;
  - i) Quaisquer outras medidas e disposições negociadas pelas partes.
3. Se vierem a ser adoptados Planos de Gestão e A...veitamento das Pescarias referidos no artigo 16.º, os acordos internacionais e outros ajustes deverão, na

medida apropriada, subordinar-se às principais normas e opções previstas nos ditos planos.

**ARTIGO 10.º Proibição de actividades de navios de pesca industrial no Mar Territorial e nas águas interiores**

1. São proibidas as actividades de navios de pesca industrial dentro do Mar Territorial da República da Guiné-Bissau, por períodos não superiores a um ano, em casos especiais restritivamente definidos.

**ARTIGO 11.º Arrumação dos engenhos e arte de pesca de navios de pesca estrangeiros não autorizados a operar em águas sob jurisdição da República da Guiné-Bissau.**

1. Os engenhos e artes de Pesca de navios de pesca estrangeiros que se encontrem em Águas sob jurisdição da República da Guiné-Bissau devem estar recolhidos a bordo de tal modo que não possam ser facilmente usados para pescar.

2. O disposto no parágrafo anterior não é aplicável aos navios de pesca estrangeiros que sejam titulares de uma licença de harmonia com o preccituado no presente diploma.

**ARTIGO 12.º Proibição de uso ou transporte de explosivos ou substâncias tóxicas**

É expressamente proibido, no exercício de qualquer actividade de pesca:

- a) Fazer uso de matérias explosivas, ou substâncias tóxicas susceptíveis de enfraquecer, atordoar, excitar ou matar animais marinhos;
- b) A detenção a bordo dos navios de pesca, sem autorização, de substância de matérias referidas na alínea anterior.

**ARTIGO 13.º Declarações ao entrar ou sair das águas sob jurisdição da República da Guiné-Bissau e de posição em intervalos regulares**

Os navios de pesca industrial e semi-industrial estrangeiros autorizados a operar em águas sob jurisdição da República da Guiné-Bissau deverão efectuar junto da Secretaria de Estado das Pescas, utilizando a rádio, declarações ao entrar e ao sair das águas sob jurisdição da República da Guiné-Bissau e indicar a sua posição, em intervalos regulares, nos termos e condições prescritos por via regulamentar.

**ARTIGO 14.º Marcação dos navios**

Os navios de pesca industrial e semi-industrial

autorizados a operar nas águas sob jurisdição da República da Guiné-Bissau deverão estar marcados com os nomes letras e números que permitam a sua identificação de acordo com as regras que forem prescritas relativamente às cores, dimensões e localização.

**ARTIGO 15.º Dados e informações sobre as capturas e diários de bordo de pesca**

1. Os navios de pesca estrangeiros autorizados a operar em águas sob jurisdição da República da Guiné-Bissau deverão comunicar à Secretaria de Estado das Pescas dados e informações sobre as capturas realizadas nos formulários, dentro dos prazos que forem determinados por via regulamentar.

2. Tratando-se de embarcações de pesca artesanal, a comunicação dos dados e informações referidos no número anterior poderão ser feitas pelas organizações em que os pescadores estão filiados.

3. Os navios de pesca industrial e semi-industrial deverão manter um diário de bordo de pesca devidamente actualizado, no qual serão anotados dados relativos ao esforço de pesca, capturas efectuadas e demais informações que forem prescritas por via regulamentar.

## TITULO III

### Gestão e Aproveitamento das Pescas

#### CAPITULO I PRINCÍPIOS DE BASE

**ARTIGO 16.º Planos de Gestão e Aproveitamento das Pescarias**

1. A Secretaria de Estado das Pescas poderá promover a separação e actualização periódica de planos de Gestão e Aproveitamento das pescarias em águas sob jurisdição da República da Guiné-Bissau.

2. Para efeito do disposto no parágrafo precedente, o termo pescaria refere-se a um ou vários conjuntos de espécies biológicas ou a operações baseadas nestas populações que podem ser consideradas como uma unidade para fins de conservação e de gestão e que são identificadas a partir de características geográficas, científicas, económicas, técnicas ou recreativas.

3. O Plano de Gestão e aproveitamento das pescarias deverá conter:

- a) A identificação das principais pescarias e a avaliação do estado actual do seu aproveitamento;
- b) A Especificação dos objectivos a atingir na gestão e aproveitamento das pescarias;
- c) A Especificação das medidas de gestão e aproveitamento que deverão ser adoptadas;
- d) A Definição do programa de concessão de licenças relativas às principais pescarias, as limitações às operações de pesca locais e a importância das actividades de pesca estrangeiras que poderão ser autorizadas.

4. Durante a preparação dos Planos de Gestão e Aproveitamento das pescarias, a Secretaria de Estado das Pescas consultará os pescadores nacionais ou os seus representantes, bem como, outras pessoas e entidades afectadas pelo Plano.

**ARTIGO 17.º Acordos de cooperação e de harmonização das condições das licenças e de fiscalização**

1. Após autorização do Conselho de ministros, o Secretário de Estado das Pescas poderá celebrar acordos internacionais ou outros ajustes com Estados da região e assegurar a participação da Guiné-Bissau em estruturas de cooperação com ditos Estados com vista:

- a) À harmonização dos procedimentos e condições de atribuição de licenças a navios de pesca estrangeiros;
- b) A adopção de medidas coordenadas de fiscalização das actividades de navios de pesca estrangeiros;
- c) A realização de outras acções coordenadas em relação a navios de pesca estrangeiros, decididas em comum.

2. O Secretário de Estado das Pescas promoverá a adopção de medidas tendentes a implementar os objectivos referidos no número anterior.

**ARTIGO 18.º Registo de navios de pesca estrangeiros**

1. Por despacho do Secretário de Estado das Pescas poderá ser estabelecido um registo de navios de pesca estrangeiros e definidas as condições da sua organização e funcionamento.

2. A matrícula dos navios de pesca industrial e semi-industrial estrangeiros no registo será condição para a obtenção da licença de pesca.

3. Do registo de navios de pesca estrangeiros constarão nomeadamente as duas categorias de informações e dados seguintes:

- a) Informação sobre os navios, designadamente nome, porto e número de matrícula, especificações técnicas, tais como, comprimento, arqueação bruta, boca, capacidade dos porões, potências do motor, artes de pesca, natureza do casco, equipagem, nome do armador e do capitão, frequência da rádio;
- b) Informações sobre as actividades dos navios em águas sob jurisdição da República da Guiné-Bissau, entre as quais, menção do acordo com o Estado cuja bandeira o navio arvorar, características e especificações das licenças de que foi ou é titular, medidas de inspecção de que foi objecto, bem como, eventuais infracções constantes e sanções impostas.

**ARTIGO 19.º Fundo de desenvolvimento da pesca**

1. Por diploma aprovado em Conselho de Ministros, poderá ser criado um Fundo de Desenvolvimento da pesca.

2. O Fundo de Desenvolvimento da pesca será alimentado pelas seguintes receitas:

- a) Até 20% do produto dos direitos de pesca pagos em cotnrapartida da concessão de licenças de pesca a navios de pesca estrangeiros;
- b) 20% do produto das multas infligidas em execução do presente diploma ou do produto da venda de bens, objectos ou capturas confiscados nos termos dos artigos 46.º e 47.º.
- c) Contribuições voluntárias de qualquer outra origem, designadamente de instituições internacionais ou estrangeiras de assistência ao desenvolvimento.

3. O diploma referido no número 1. fixará as regras de organização e de funcionamento do Fundo de Desenvolvimento da pesca, bem como, os critérios e modalidades de afectação dos seus recursos.

**ARTIGO 20.º Regulamentos e aplicações**

1. Sem prejuízo das demais cláusulas de habilitações especiais, por iniciativa do Secretário de Estado das Pescas, poderão ser adoptados regulamentos com vista à execução das disposições e objectivos do presente diploma.

2. Os regulamentos referidos no número anterior poderão nomeadamente, determinar:

- a) Às medidas especiais aplicáveis ao exercício da pesca por navios estrangeiros;
- b) As condições de atribuição e de renovação das licenças de pesca, em particular, no que se refere aos

navios de pesca estrangeiros;

- c) O modo como devem ser arrumados os engenhos e artes de pesca dos navios que não sejam autorizados a pescar em águas sob jurisdição da República da Guiné-Bissau de acordo com o artigo 11.º do presente diploma;
- d) As condições de atribuição das licenças de pesca a navios de pesca da Guiné-Bissau e as medidas especiais aplicáveis às actividades destes navios;
- e) As medidas especiais aplicáveis aplicáveis à pesca de investigação científica;
- g) As medidas especiais aplicáveis ao exercício da pesca recreativa;
- h) As condições em que poderão ser autorizadas as operações de apoio logístico, de transbordo de capturas e de navios-fábrica e as medidas especiais aplicáveis às referidas operações;
- i) Medidas de conservação e de gestão, entre outras dimensões mínimas das malhas, dimensões e pesos mínimos das espécies, períodos de defeso e áreas reservadas, esquemas de limitação do acesso a certas zonas, medidas aplicáveis e a certas actividades especiais de pesca ou de colheita;
- j) As modalidades de indemnização de nacionais guineenses ou do Estado da Guiné-Bissau pelos danos causados por navios ou embarcações de pesca estrangeiros ou por navios de pesca estrangeiros baseados na Guiné-Bissau aos seus engenhos e artes de pesca, capturas, cabos e instalações do domínio público e outros interesses da Guiné-Bissau.
- l) A cor, dimensão e localização dos nomes, letras e números que deverão ser permanentemente exibidos pelos navios;
- m) Quaisquer outras disposições e medidas relativas à pesca que não sejam incompatíveis com o presente diploma.

## CAPÍTULO II REGIME DE LICENÇAS

### SECÇÃO I NORMAS GERAIS

#### ARTIGO 21.º Generalidade da licença

1. Os navios de pesca só poderão exercer actividades de pesca em águas sob jurisdição da República da Guiné-Bissau se forem titulares de uma licença passada pela Secretaria de Estado das Pescas e em conformidade com

as condições a que está sujeita a dita licença.

2. Os pedidos de licença de pesca deverão ser efectuados e instruídos nas formas prescritas pelo presente diploma e pelos seus regulamentos de aplicação.

#### ARTIGO 22.º Direitos de pesca e outros pagamentos

1. A emissão da licença de pesca para os navios de pesca da Guiné-Bissau e para os navios de pesca estrangeiros baseados na Guiné-Bissau dá lugar ao pagamento pelos armadores de um direito de pesca cujo montante será prescrito por via regulamentar.

2. O montante dos direitos de pesca para os navios de pesca estrangeiros será normalmente negociado entre os armadores ou os seus representantes e a Secretaria de Estado das Pescas mas poderá igualmente ser fixado por via regulamentar.

3. O preceituado no número anterior entende-se sem prejuízo de outros pagamentos ou compensações financeiras estabelecidos nos acordos referidos no número 1. do artigo 9.º.

4. Poderão ser prescritas por via regulamentar regras relativas às modalidades de pagamento dos direitos de pesca.

#### ARTIGO 23.º 11 Obrigação de conservar permanentemente a licença a bordo

1. Os capitães dos navios autorizados a operar em águas sob jurisdição da República da Guiné-Bissau nos termos do presente diploma, devem estar constantemente munidos a bordo da respectiva licença.

2. O número anterior não é aplicável às embarcações de pesca artesanal.

#### ARTIGO 24.º Duração das licenças

1. Sem prejuízo de disposições especiais do presente diploma ou de acordos internacionais referidos no artigo 9.º as licenças de pesca terão a validade de um ano e serão renovados por períodos sucessivos de igual duração a contar da data da emissão.

2. Se julgar conveniente, o Secretário de Estado das Pescas poderá conceder licenças de pesca por períodos inferiores de um ano.

#### ARTIGO 25.º Intransferibilidade das licenças

1. As licenças de pesca não são transferíveis de um navio para outro navio de pesca.

2. A transferência de uma licença de pesca poderá ser excepcionalmente autorizada por despacho do Secretário

de Estado das Pescas sé se verificarem cumulativamente os seguintes requisitos:

- a) Se o navio para o qual a licença foi concedida não o puder, por razões de ordem técnica ou mecânica, continuar a operar durante o restante período de validade da licença;
  - b) Os navios pertencerem ao mesmo armador e avorarem a mesma bandeira;
  - c) Os navios tiverem características técnicas similares:
3. Se as características técnicas dos dois navios diferirem, o Secretário de Estado das Pescas poderá exigir o pagamento dos direitos de pesca suplementares correspondentes e, se for caso disso, inserir condições especiais na licença transferida.

**ARTIGO 26.º Condições a que estão sujeitas as licenças de pesca**

1. As licenças de pesca deverão ser estabelecidas nas formas prescritas e estarão sujeitas:

- a) As condições gerais em incluídas no presente diploma e, na medida apropriada, as condições fixadas em virtude do artigo 20.º
- b) As condições gerais que poderão ser formuladas em virtude do número 2. do presente artigo;
- c) As condições especiais que poderá o ser definidas em virtude do número 3. do presente artigo.

2. O Secretário de Estado das Pescas poderá, definir, por despacho, as condições gerais adicionais a que estarão sujeitas as licenças de pesca ou determinadas categorias de licenças de pesca, entre outras, condições relativas aos períodos de defeso, as zonas proibidas, as dimensões mínimas das malhas, espécies, capacidade e tipos de barco.

3. O Secretário de Estado das Pescas poderá mencionar numa determinada licença de pesca condições especiais que julgar oportunas, designadamente:

- a) Ao tipo e ao método de pesca e a qualquer outra actividade referida no número 2. do artigo 1.º do presente diploma;
- b) A zona no interior da qual a dita pesca ou qualquer outra actividade poderá ser exercida;
- c) As espécies de peixes e as quantidades cuja captura é permitida, incluindo eventuais restrições quanto as capturas acessórias.

4. No interesse de uma boa gestão das pescarias, o

Secretário de Estado das Pescas poderá, se tal for oportuno, modificar ou suprimir qualquer condição especial relativa a uma licença de pesca. Esta modificação ou supressão deverá ser notificada, sem demora, ao titular da licença.

5. As condições prescritas em virtude dos números 2. e 3. do presente artigo não poderão ser incompatíveis com o presente diploma.

**ARTIGO 27.º Suspensão ou revogação de uma licença por motivos de gestão**

1. Independentemente das disposições do artigo 48.º, o Secretário de Estado das Pescas poderá suspender ou revogar uma licença, se tal for necessário, para garantir uma gestão adequada dos recursos vivos ou a fim de executar os planos de Gestão e Aproveitamento das Pescarias que poderão ser adoptados em virtude do artigo 16.º

2. Sem prejuízo de normas especiais relativas a compensações que possam ser previstas, se uma licença de pesca for suspensa ou revogada em virtude do número anterior, a parte das taxas ou direitos de pesca já paga relativa ao período de validade que ainda não tiver expirado deverá ser restituída ao seu titular.

3. Não caberá recurso hierárquico ou judicial da decisão referida no número 1. do presente artigo.

**SECÇÃO II  
NORMAS ESPECIAIS**

**ARTIGO 28.º Licenças para navios de pesca da Guiné-Bissau**

1. O Secretário de Estado das Pescas poderá, recursar a licença a um navio de pesca da Guiné-Bissau nos seguintes casos:

- a) Se tal for necessário a fim de garantir uma gestão adequada dos recursos vivos ou com vista a implementar os planos. Gestão e Aproveitamento das pescarias que poderão ser adoptados em virtude do artigo 16.º;
- b) Se o navio não obedecer aos requisitos técnicos de segurança e de navegabilidade nacionais ou internacionais ou, no que se refere às embarcações de pesca artesanal, aos requisitos de vistoria e matrícula das tripulações junto da capitania dos portos da Guiné-Bissau;
- c) Se for manifestamente evidente que a pessoa ou entidade que solicita a licença não oferece garantias de respeitar as condições que a mesma está sujeita.



d) Se a pesca ou entidade que solicita a licença tiver sido reconhecida responsável de duas ou mais infracções no decurso dos dois anos que precedem a data do pedido da licença.

2. A decisão de recusa da licença de pesca para um navio de pesca da Guiné-Bissau será sempre fundamentada.

3. Sem prejuízo das vias de recursos judiciais, qualquer pessoa ou entidade que se sentir prejudicada pela decisão de recusa poderá, num prazo de trinta dias a partir da data da sua notificação, pedir ao Secretário de Estado das Pescas que reconsidere a decisão de recusa.

4. Não caberá recurso hierárquico da decisão do Secretário de Estado das Pescas.

#### **ARTIGO 29.º Licenças para navios de pesca estrangeiros baseados na Guiné-Bissau**

1. O Secretário de Estado das Pescas poderá conceder licenças de pesca a navios de pesca estrangeiros ascados na Guiné-Bissau em consequência de operações de investimento realizados em conformidade com legislação sobre o investimento directo estrangeiro a República da Guiné-Bissau.

2. As licenças referidas no parágrafo anterior poderão ter um período de validade até cinco anos.

#### **ARTIGO 30.º Autorização de operações de pesca de investigação científica**

1. O Secretário de Estado das Pescas poderá autorizar por escrito operações de pesca de investigação científica em águas sob jurisdição da República da Guiné-Bissau mediante a apresentação, por parte das entidades interessadas, de um plano das operações a empr [...]

2. As operações referidas no número anterior poderão ser isentas do respeito das medidas de conservação prescritas em virtude do artigo 20.º que forem previstas na autorização.

3. As autorizações serão concedidas por período não superior a três meses findo o qual as entidades responsáveis pelas operações submeterão à Secretaria de Estado das Pescas um relatório escrito consignando os resultados das operações.

## **TÍTULO IV**

### **Procedimentos de fiscalização e de constatação das infracções**

#### **ARTIGO 31.º Competência em matéria de**

#### **fiscalização**

1. A fiscalização e a averiguação das infracções ao presente diploma e aos seus regulamentos de aplicação são da competência dos agentes habilitados para o efeito.

2. Relativamente as embarcações de pesca artesanal, as competências referidas no parágrafo anterior são exercidas pela Capitania dos Portos da Guiné-Bissau.

#### **ARTIGO 32.º Poderes dos agentes de fiscalização**

1. Vom vista a garantir a execução das disposições do presente diploma e dos seus regulamentos de aplicação, os agentes referidos no número 1. do artigo 31.º na ausência de mandato específico para esse fim, poderão:

- a) Dar ordem a qualquer navio de pesca que se encontre em águas sob jurisdição da República da Guiné-Bissau para parar e efectuar as manobras necessárias para facilitar a vista do navio;
- b) Visitar of navio;
- c) ordenar que sejam exibidos a licença de pesca, o diário de bordo de pesca ou qualquer outro documento relativo ao navio ou às capturas que se encontrem a bordo e efectuar cópias dos mesmos;
- d) Ordenar que lhes sejam mostradas as redes e outras artes de pesca e as capturas que se encontrem a bordo.

2. Quando os agentes referidos no parágrafo anterior tiverem razões precisas e concretas para pensar que uma infracção ao presente diploma e aos seus regulamentos de aplicação foi praticada, poderão, sem mandato específico para esse efeito:

- a) Entrar e proceder a buscas em qualquer local, salvo se for exclusivamente destinado para habitação, em que tenham razões para pensar que uma infracção foi cometida ou em que tenham razões para pensar que peixe, ilegalmente capturado, foi armazenado;
- b) Entrar e proceder a operações de fiscalização em indústrias de tratamento e de comercialização de peixe e mercados;
- c) Recolher amostras de peixe a bordo de qualquer navio, veículo ou locais, objecto de inspecção, nos termos ao presente artigo.

3. Se, no decurso de operações de fiscalização os agentes referidos no número 1. do presente artigo constataram que uma infracção ao presente diploma e aos seus regulamentos de aplicação foi praticada, poderão:

- a) Apresar, a título preventivo, qualquer navio com as

respectivas artes de pesca e capturas a bordo, veículo, material de pesca, redes ou outros instrumentos de pesca que suspeitem terem sido empregues na prática da dita infracção;

- b) Apresar, a título preventivo, quaisquer capturas que suspeitem terem sido efectuadas em consequência da prática da dita infracção ou que sejam conservadas em infracção do presente diploma;
- c) Apreender as matérias explosivas ou substâncias tóxicas que tenham sido empregues ou que sejam detidas a bordo dos navios.

4. Se tal for necessário para salvaguardar as provas de uma infracção ou garantir a execução das condenações que poderão ser pronunciadas, qualquer navio apresado, nos termos do número anterior, e a sua equipagem, poderá ser conduzido até ao porto mais próximo ou mais conveniente da Guiné-Bissau e ser detido até ao fim dos procedimentos legais previstos pelo presente diploma ou até à prestação da caução referida no artigo 54.º

5. No exercício das suas funções, em caso de necessidade absoluta e de maneira estritamente proporcionada às necessidades, os agentes da fiscalização poderão recorrer à coerção armada.

6. Poderão ser estabelecidas por via regulamentar regras pormenorizadas relativas aos procedimentos de abordagem, de visita e de inspecção dos navios de pesca.

**ARTIGO 33.º Mínimo de interferência com as actividades normais dos navios de pesca**

As operações referidas no artigo anterior serão efectuadas de modo a ocasionar um mínimo de interferências e de perturbações às actividades normais dos navios de pesca. Em particular, os agentes limitarão as suas investigações à constatação dos factos que se relacionem com a observância das normas em vigor em matéria de pesca.

**ARTIGO 34.º Direito de perseguição**

1. O apresamento de um navio de pesca estrangeiro poderá ter lugar para além da Zona Económica Exclusiva da República da Guiné-Bissau desde que a perseguição tenha sido iniciada em águas sob jurisdição da República da Guiné-Bissau.

2. O direito de perseguição exerce-se nos termos do Direito Internacional e cessa logo que o navio de pesca estrangeiro entrar no Mar Territorial do Estado cuja bandeira arvora ou de um terceiro Estado.

**ARTIGO 35.º Auto de notícia**

1. Ao constatar a prática de uma infracção, os agentes

de fiscalização levantarão um auto de notícia que conterá, tanto quanto possível, a exposição precisa dos factos e as suas circunstâncias, a identificação do autor da infracção e das eventuais testemunhas.

2. O auto de notícia deverá ser assinado pelo agente de fiscalização, pelas eventuais testemunhas e, sendo possível, pelo infractor que poderá consignar as suas observações.

3. O auto de notícia será transmitido, logo que possível, ao Secretário de Estado das Pescas o qual, sob reserva das disposições do artigo 51.º, o transmitirá por sua vez ao agente do Ministério Público competente.

**ARTIGO 36.º Comunicação do apresamento do navio**

Os agentes que procederem ao apresamento de um navio deverá o tomar imediatamente as seguintes medidas:

- a) comunicar a ocorrência à Secretaria de Estado das pescas para que esta disponha imediatamente sobre o destino das capturas nos termos do artigo 38.º;
- b) Se for caso disso, avisar da ocorrência o Ministério dos Negócios Estrangeiros que actuará por via diplomática junto da representação diplomática ou do governo do Estado cuja bandeira o navio arvora.

**ARTIGO 37.º Enunciação dos bens, objectos e capturas apreendidos**

No caso do apresamento ou da apreensão a título preventivo dos bens, objectos e capturas referidos no artigo 32.º, número 2. alíneas c) e d), os agentes de fiscalização deverão lavrar documento discriminando os ditos bens, objectos e capturas.

**ARTIGO 38.º Estimo das capturas; apreendidas**

1. Se as capturas apreendidas nos termos do artigo 32.º número 3. alíneas a) e b) provenientes de uma pesca proibida; forem susceptíveis de se deteriorar e se o seu aproveitamento for de interesse público, serão as mesmas vendidas sem demora no mercado local ou entregues às entidades designadas pelo

Secretário de Estado das Pescas.

2. O produto da venda das mesmas será depositado a ordem das autoridades referidas no Título V até a decisão final.

3. Se for constatado judicialmente que as capturas referidas no número 1. do presente artigo vendidas ou entregues às entidades designadas pelo Secretário de Estado das Pescas não foram, na realidade, efectuadas em consequência da prática de uma infracção, o valor

das ditas capturas deverá ser restituído ao respectivo proprietário.

#### **ARTIGO 39.º Irresponsabilidade dos agentes de fiscalização por actos praticados de boa fé**

Salvo os casos de negligencia grave ou de falta grave, não poderá ser movida qualquer acção contra um agente referido no artigo 31.º por motivo de qualquer acção ou omissão praticada de boa fé no exercício ou tentativa de exercício das suas obrigações em virtude do presente diploma.

## **TÍTULO V**

### **INFRACÇÕES**

#### **ARTIGO 40.º Responsabilidade penal**

Salvo o preceituado no artigo 40.º, as sanções previstas no presente diploma são aplicáveis ao capitão ou ao arrais do navio de pesca, sendo o armador solidariamente responsável pelo pagamento das multas.

#### **ARTIGO 41.º Actividades de pesca não autorizadas**

1. Qualquer navio de pesca industrial ou semi-industrial que emprender operações de pesca em águas e sob jurisdição da República da Guiné-Bissau, sem estar devidamente autorizado nos termos dos artigos 7.º e 19.º do presente diploma, será punido com multa de um montante máximo igual ao decuplo do montante anual dos direitos de pesca que deveria ter pago para a obtenção.

2. O montante das multas referidas no número anterior será graduado em função da data da construção e das características técnicas do navio infractor, do benefício que tiver retirado da prática da infracção e do prejuízo causado ao património nacional.

#### **ARTIGO 42.º Infracções de pesca graves**

1. São, nomeadamente, consideradas infracções de pesca graves:

- a) O emprego de redes cujas malhas sejam de dimensões inferiores às permitidas;
- b) A falta repetida de transmissão à Secretaria de Estado das Pescas das informações sobre as capturas efectuadas, nos termos do artigo 15.º;
- c) O impedimento intencional dos agentes da fiscalização;

d) A destruições ou danificação intencional de embarcações, redes, ou artes de pesca que pertençam a outras pessoas;

e) A inobservância do disposto no artigo 11.º sobre a arrumação dos engenhos e artes de pesca;

f) A destruição ou ocultação das provas de uma infracção em matéria de pesca;

g) A pesca em zonas proibidas ou pesca de espécies cuja captura for proibida ou cujas dimensões ou peso forem inferiores as permitidas;

h) O emprego de artes de pesca proibidas;

i) A utilização ou transporte a bordo de navios de pesca de explosivos ou substâncias referidas no artigo 12.º

2. As infracções de pesca graves serão punidas com multa até ao quadrúplo do valor da licença anual de pesca respectiva, sendo o montante da mesma graduado em função do benefício que o infractor tiver retirado da prática da infracção e do prejuízo causado ao património nacional.

#### **ARTIGO 43.º Agressão e obstrução com violência ou ameaças de violência contra um agente de fiscalização**

Quem agredir ou obstruir com violência a acção de um agente de fiscalização no exercício das funções; referidas no artigo 32.º, será passível de multa até (cinquenta por cento) 50% do valor da licença de pesca respectiva, ou da pena de prisão até seis meses ou, cumulativamente, de multa e prisão.

#### **ARTIGO 45.º Outras infracções**

As demais infracções ao presente diploma e aos seus regulamentos de aplicação serão punidas com multa até ao dobro do valor da licença anual de pesca respectiva.

#### **ARTIGO 46.º Confisco das capturas, engenhos e navios de pesca**

Pela prática, das infracções previstas nos artigos 41.º a 42.º, além das multas mencionadas nas referidas normas, o Tribunal poderá ordenar:

- a) O confisco das capturas ilegalmente efectuadas ou do produto da venda das mesmas;
- b) O confisco das artes e engenhos de pesca e outros instrumentos empregues na prática das ditas infracções;
- c) O confisco do navio.

#### **ARTIGO 47.º Reincidência**

No caso de reincidência, as multas referidas nos artigos 41.º, 42.º e 45.º serão elevadas para o dobro.

#### **ARTIGO 48.º Unidade monetária de pagamento das multas**

O pagamento das multas aplicadas em relação a navios de pesca estrangeiros por infracções ao presente diploma ou aos seus regulamentos de aplicação ou a estrangeiros por infracções previstas no artigo 44.º do presente diploma será feito em moeda convertível.

### **TÍTULO VI**

#### **COMPETÊNCIA E PROCEDIMENTO ADMINISTRATIVOS E JUDICIAIS**

#### **ARTIGO 49.º Suspensão ou revogação de uma licença a título de sanção**

O Secretário de Estado das pescas poderá suspender ou revogar uma licença se constatar que um navio de pesca foi utilizado na prática de uma infracção no presente diploma, aos seus regulamentos de aplicação ou às condições a que estão sujeitas as licenças de pesca.

#### **ARTIGO 50.º Destino dos bens, objectos e produtos confiscados**

O Secretário de Estado das Pescas decidirá do destino dos bens, objectos e produtos confiscados mencionados nos artigos 46.º e 47.º, cujo produto da venda reverterá para o Tesouro Público.

#### **ARTIGO 51.º Competência dos tribunais da República da Guiné-Bissau**

Os tribunais da República da Guiné-Bissau são competentes para conhecer das questões relativas à execução do presente diploma ou dos seus regulamentos de aplicação, ocorridos nas águas sob jurisdição da República da Guiné-Bissau.

#### **ARTIGO 52.º Presunção**

Presume-se que as capturas encontradas a bordo de um navio de pesca empregue na prática de uma infracção ao presente diploma foram efectuadas na prática da referida infracção.

#### **ARTIGO 53.º Libertação dos navios e das equipagens após prestação de uma caução**

1. Os navios apresados nos termos ou número 3., alínea a) artigo 32.º e, as suas tripulações serão prontamente libertadas a pedido do armador, do capitão ou arrais do navio ou do seu representante logo que seja prestada uma caução suficiente.

2. A decisão referida no número anterior deverá ser tomada num prazo máximo de setenta e duas horas após a submissão do pedido de libertação do navio e das suas tripulações.

O montante da caução não será inferior aos custos de apresamento e de detenção do navio, do repatriamento das equipagens, se for caso disso, e do montante da multa de que são passíveis os infractores. No caso de infracções para os quais o presente diploma autoriza ou prescreve o confisco das capturas, das artes de pesca e do navio, poderá ser acrescentado ao montante da caução o valor das ditas capturas, artes de pesca e do navio.

#### **ARTIGO 54.º Restituição da caução**

A caução prestada nos termos do artigo 54.º será prontamente restituída, nos seguintes termos:

- a) Se tiver sido efectuado o pagamento integral de todas as multas, despesas e emolumentos e, se for caso disso, das penalidades de atraso devidas;
- b) Se tiver transitado em julgado uma decisão de abstenção de acusação ou de absolvição dos arguidos.

### **TÍTULO VII**

#### **DISPOSIÇÕES FINAIS**

#### **ARTIGO 55.º Dúvidas e omissões**

As dúvidas e omissões ao presente diploma serão resolvidas por Despacho do Secretário de Estado das Pescas.

#### **ARTIGO 56.º Legislação revogada**

1. É revogada toda a legislação cujas disposições contrariem ou sejam incompatíveis com as disposições do presente diploma, nomeadamente:

- a) O Decreto n.º 24/78, de 7 de Agosto, estabelecendo sanções para a violação do disposto no artigo 4.º da Lei n.º 3/78;
- b) Os artigos 182.º a 190.º do Regulamento da Capitania dos Portos da Guiné-Bissau, aprovado pelo Decreto n.º 209, de 7 de Novembro de 1913, as disposições

deste mesmo texto prevendo a competência da Capitania dos Portos da Guiné para atribuir licenças de pesca, bem como, quaisquer outras disposições que sejam incompatíveis com o presente diploma.

- c) As disposições do Regulamento da Inscrição Marítima, Matrícula e Lotações dos Navios da Marinha

Mercante e de Pesca, aprovado pelo Decreto de 15 de Outubro de 1964, que contrariem ou sejam incompatíveis com o presente diploma.

**ARTIGO 57.º Publicação e entrada em vigor**

O presente diploma entra em vigor à data da sua publicação.

**Aprovado em 18 de março de 1986.**

**Promulgado em 18 de Março de 1986.**

**Publique-se.**

**O Presidente do Conselho de Estado, João Bernardo Vieira, General de Divisão.**

## Decreto-Lei n.º 3/86 de 29 de Março

Pelo Decreto-Lei n.º 2/84, de 17 de Julho, foi adoptada nova estrutura orgânica do governo, tendo então sido criado o Ministério da Justiça e Poder Local, integrando a Secretaria de Estado da Justiça.

Reconhecendo-se, hoje, haver necessidade de se criar a Secretaria de Estado da Administração Interna, face à dinâmica do desenvolvimento sócio-económico que se pretende imprimir às Regiões,

Sob proposta do seu Presidente,

O Conselho de Estado decreta, nos termos da alínea g), n.º 1, do artigo 64.º da Constituição, o seguinte:

Artigo único. É criada a Secretaria de Estado da Administração Interna, que fica integrada no Ministério da Justiça e Poder Local.

**Aprovado em 18 de Março de 1986.**

**Promulgado em 25 de Março de 1986.**

**Publique-se.**

**O Presidente do Conselho de Estado, General João Bernardo Vieira.**

# KENYA

## The Fertilizers and Animal Foodstuffs Act Chapter 345

*Commencement: 4th August, 1967*

**An Act of Parliament to regulate the importation, manufacture and sale of agricultural fertilizers and animal foodstuffs and substances of animal origin intended for the manufacture of such fertilizers and foodstuffs, and to provide for matters incidental to and connected with the foregoing**

### Short title.

1. This Act may be cited as the Fertilizers and Animal Foodstuffs Act.

### Interpretation

2. In this Act, except where the context otherwise requires -

“analyst” means any person appointed under section 8 of this Act to be an analyst for the purposes of this Act;

“animal” means cattle, camels, horses, sheep, pigs, goats and poultry, but does not include dogs, cats and other domestic pets, or marine animals;

“animal foodstuff” means:

(a) any:

(i) substance obtained by a process of crushing, gristing or grinding or by the addition to any substance or the removal therefrom of any ingredient; or

(ii) condimental foodstuffs or mineral substance which possesses or is alleged to possess nutritive properties; or

(iii) substance of animal origin,

which is intended or offered for the feeding of livestock, domestic animals or poultry; or

(b) any stock lick or substance which can be and is used as a stock lick, whether or not it possesses medicinal properties, but does not include straw, chaff, un-

derground hay, silage, cereal in the grain or any substance which has been crushed, gristed or ground for a farmer in accordance with his directions for his own use, unless such substance has been declared by the Minister, by notice in the Gazette, to be an animal foodstuff for the purposes of this Act;

“the Director” means the Director of Veterinary Services;

“fertilizer” means any substance or mixture of substances which is intended or offered for improving or maintaining the growth of plants or the productivity of the soil, but does not include manure, compost, wood ash, gypsum or refuse when sold in its original condition and under the same name, nor does it include organic fertilizers, other than lime;

“inspector” means any person appointed by the Minister under section 8 of this Act to be an inspector for the purposes of this Act;

“sell” includes offer, advertise, keep, expose, transmit, convey, deliver or prepare for sale or exchange, dispose of for any consideration whatsoever, or transmit, convey or deliver in pursuance of a sale, exchange or disposal as aforesaid.

### Restrictions on importation, manufacture, selling, etc.

3. (1) No person shall import, manufacture, compound, mix or sell any fertilizer or animal foodstuff other than a substance declared by rules made under section 19 of this Act to be an approved fertilizer or an approved animal foodstuff, as the case may be.

(2) No person shall import, manufacture, compound, mix or sell any fertilizer or animal foodstuff in respect of which rules have been made under paragraph (a) of subsection (1) of section 19 of this Act unless the fertilizer or animal foodstuff conforms to the standard of specification prescribed by such rules:

Provided that it shall be a sufficient defence for anyone charged with importing or selling in contravention of this subsection to show that -

- (i) he imported or purchased the fertilizer or animal foodstuff under a name or brand the subject of a declaration pursuant to subsection (1) of this section, as being the same in all respects as the article which he had ordered or, as the case may be, which he later purported

to sell; and

- (ii) he had no reason to believe at the time of importation or sale that it was in any respect different from such article; and
  - (iii) the container thereof was branded, labelled, marked or sealed in the prescribed manner; and
  - (iv) in the case of a sale, he sold it in the original container and in the state in which it was when he imported or purchased it.
- (3) Any person who contravenes any of the provisions of this section shall be guilty of an offence.
- (4) Nothing in this section shall render illegal the addition to animal foodstuffs of condiments, growth stimulants, essential food factors or pharmaceutical preparations for the control of disease.

**Sterilization of bone and animal products.**

4. (1) No person shall import -

- (a) any fertilizer or animal foodstuff which contains bone or any other substance derived from an animal carcass; or
- (b) bones or any other substance derived from an animal carcass for the purpose of manufacturing any fertilizer or animal foodstuff,

unless he has first submitted to the Director a certificate signed in the country of origin by a person designated by the Minister, certifying that such bone or substance has been effectively and completely sterilized in such manner as may be prescribed and is free from such pathogenic organisms as may be prescribed.

(2) No person shall manufacture or sell any fertilizer or animal foodstuff containing bone or any other substance derived from an animal carcass unless such bone or substance has been sterilized in the prescribed manner.

(3) Any person who contravenes any of the provisions of this section shall be guilty of an offence.

**Sterilizing plant.**

5. (1) Any person who, for the purpose of the manufac-

ture or sale of any fertilizer or animal foodstuff, uses any sterilizing plant for the sterilizing of bones or other substances derived from an animal carcass except under and in accordance with the provisions of a licence issued to him in respect of that plant shall be guilty of an offence.

(2) Any person who desires to set up a sterilizing plant as aforesaid shall make application in the form prescribed to the Director, who shall, if he is satisfied that the applicant is a suitable person to engage in the sterilizing of bones and other substances derived from an animal carcass and that such requirements as may be prescribed in relation thereto are likely to be complied with, issue the applicant with a licence, on payment of the fee prescribed therefor.

(3) A licence under this section shall be in the form prescribed, and shall, subject to renewal, be valid until the 31st December in the year of issue unless cancelled earlier under this Act or under any rules made under this Act.

(4) If the Director is satisfied that a person who has been issued with a licence to sterilize bones and other products of an animal carcass has contravened the requirements prescribed for sterilizing bones and other products of an animal carcass, he may cancel that licence.

**Appeal against refusal or cancellation of Licence.**

6. (1) Any person aggrieved by a decision of the Director refusing or cancelling a licence under section 5 of this Act may

- (a) apply to the Director for a written statement of the reasons why the licence was refused or cancelled, as the case may be, and upon receipt of such application the Director shall within fourteen days thereafter or such longer period as may be reasonable in the circumstances furnish such statement;

(b) appeal to the Minister against such decision.

(2) On appeal under this section the Minister may uphold the decision of the Director or make an order instructing the Director :

- (a) to license the applicant; or
- (b) to restore the licence under such conditions as the Minister may direct,

and the Director shall comply with such order.

7. Any person who, for the purpose of the manufacture or sale of a fertilizer or animal foodstuff, uses any bone or other substance derived from an animal carcass which has not been either :



- (a) imported on a certificate in accordance with subsection (1) of section 4; or
- (b) sterilized in accordance with subsection (1) of section 5, of this Act, shall be guilty of an offence.

**Use of unsterilized bone or other substance.**

8. The Minister may by notice in the Gazette appoint suitably qualified analysts and inspectors for the purposes of this Act:

Provided that a person shall not, while holding such appointment, engage in any business connected with the manufacture, sale or distribution of fertilizers or animal foodstuffs.

**Appointment of analysts and inspectors.**

9. (1) An inspector may at all reasonable times and on production, if required, of his authority -

- (a) enter and inspect any premises, place or vehicle in which he has reasonable grounds for believing there is any fertilizer, animal foodstuff or sterilizing plant or records pertaining to the importation, manufacture or sale of a fertilizer or animal foodstuff or to the operation of such sterilizing plant;
- (b) inspect and if he considers it necessary seize and remove any fertilizer or animal foodstuff and any books, records or documents found in or upon such premises, place or vehicle which pertain to the manufacture, importation, mixing, compounding or sale of fertilizers or animal foodstuffs or to the sterilizing of bones or other products of an animal carcass, and which he has reasonable cause to believe affords evidence of contravention of any of the provisions of this Act or of any rules made thereunder;
- (c) take such samples in the manner prescribed of any fertilizers, animal foodstuffs, bones or other products of an animal carcass as he may deem necessary for the purpose of examination or analysis and call upon the occupier of the premises in which the fertilizer, animal foodstuff, bone or other product of an animal carcass lies, to provide him with such reasonable assistance as he may need for so doing.

**Inspection and taking of samples.**

(2) An inspector shall take such steps as are reasonably practicable to afford the owner of the fertilizer, animal foodstuff, sterilizing plant or records, as the case may be, and the occupier of the premises in which they are situated, an opportunity of being present when any inspection under this section is carried out.

(3) Where it is intended to submit for analysis any sample procured under paragraph (c) of subsection (1) of this section, the inspector procuring it shall before or as soon as possible after procuring it inform the owner of the fertilizer, animal foodstuff, bones or other product of an animal carcass, as the case may be, that he intends to have the sample analysed.

(4) Where a sample has been taken by an inspector for analysis he shall divide it into three parts and cause each part to be marked, sealed and fastened up, and shall send two of the parts to the analyst together with a signed statement that the sample was taken in the prescribed manner, and the third part he shall deliver to the owner or seller as may be prescribed.

(5) In taking samples for analysis under this section the inspector shall follow the procedure prescribed.

**Analysis of samples by request.**

10. (1) Every inspector shall, on being requested in writing so to do by the purchaser of any animal foodstuff and, upon payment by the purchaser of the fee prescribed together with the cost of procuring the sample, procure a sample of any animal foodstuff and submit it for analysis by an analyst and thereafter forward to the purchaser the analyst's certificate of such analysis:

Provided that the inspector shall not be obliged to comply with such request unless the purchaser -

- (i) makes his request within thirty days after the date upon which he took delivery of the animal foodstuff from the vendor thereof; and
- (ii) first informs the inspector to whom he makes his request of his name and full postal address; and
- (ii) stores the animal foodstuff which he requires to be sampled in such manner as the minister may prescribe for the storage of animal foodstuffs until a sample has been procured by the inspector.

**Analyst's certificates.**

11. (1) Every certificate of an analyst issued under this Act shall be in the form prescribed.

(2) Where any method is prescribed for the analysis of any fertilizer or animal foodstuff the analyst shall in his certificate declare that he has followed the prescribed method.

(3) Any person who causes or permits any copy of an analyst's certificate obtained under this Act to be used in any advertisement shall be guilty of an offence.

**Deleterious ingredients.**

12. (10) Any person who sells a fertilizer or animal foodstuff containing deleterious ingredients shall be guilty of an offence and liable to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months, unless he proves -

- (a) that he did not know and could not with reasonable care have known that the fertilizer or animal foodstuff contained a deleterious ingredient; and
- (b) where he obtained the fertilizer or animal foodstuff from some other person, that on demand by or on behalf of the prosecutor he gave all the information in his power with respect to the person from whom he obtained it, and as to any statement given to him and any mark applied to the fertilizer or animal foodstuff when he obtained it:

Provided that proceedings for an offence under this section shall not be instituted unless the fertilizer or animal foodstuff has been sampled by an inspector in the prescribed manner on the premises on which it was sold and the sample has been analysed in accordance with the provisions of this Act and of any rules made thereunder.

(2) Any substance prohibited by rules made under paragraph (b) of subsection (1) of section 19 of this Act shall, if present in a fertilizer or animal foodstuff or, where a percentage limit has been prescribed by such rules, if present in excess of that limit, as the case may be, be deemed to be a deleterious ingredient unless the contrary is proved.

**Offence and penalties.**

13. Any person who:

- (a) obstructs, hinders, deceives or misleads an inspector in the exercise of his powers or the performance of his duties under this Act or any rules made thereunder; or
- (b) knowingly makes use of, issues or maintains any false or misleading records, statement, document, declaration, marking or label in connexion with the manufacture, importation, mixing, compounding or sale of any fertilizer or animal foodstuff, shall be guilty of an offence and liable, for a first offence, to a fine not exceeding two thousand shillings or to imprisonment for a term not exceeding two months or to both such fine and such imprisonment, and for a second or subsequent offence to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months or to both such fine and such imprisonment.

14. In any proceedings under this Act, unless the contrary is proved:

**Evidence.**

- (a) a sample of a fertilizer or animal foodstuff drawn by an inspector shall be deemed to be of the same composition, to have the same degree of efficacy and, except in so far as the taking of the sample causes it to be otherwise, to possess in all other respects the same properties as the whole from which it was drawn;
- (b) a certificate of analysis purporting to be signed by an analyst shall be accepted as prima facie proof of the facts stated therein.

**Criminal liability of managers, agents and employees.**

15. (1) Whenever any manager, agent or employee of a manufacturer, importer or owner of a fertilizer or animal foodstuff does or omits to do any act which it would be an offence under this Act for such manufacturer, importer or owner to do or omit to do, then unless it is proved that -

- (a) in doing or omitting to do that act the manager, agent or employee was acting without the connivance or permission of the manufacturer, importer or owner; and
- (b) all reasonable steps in addition to withholding such connivance and permission were taken by the manufacturer, importer or owner to prevent such act or omission; and
- (c) it was not under any condition or in any circumstances within the scope of the authority or in the course of the employment of the manager, agent or employee to do or omit to do such act,

the manufacturer, importer or owner, as the case may be, shall be presumed himself to have done or omitted to do that act and shall be liable to be convicted and sentenced in respect thereof.

(2) Whenever any manager, agent or employee of a manufacturer, importer or owner of a fertilizer or animal foodstuff does or omits to do any act which it would be an offence under this Act for such manufacturer, importer or owner to do or omit to do, he shall be liable to be convicted and sentenced therefor as if he were the manufacturer, importer or owner and may be so convicted and sentenced in addition to such manufacturer, importer or owner.

**General penalties.**

16. Any person who is guilty of an offence under this

Act for which no special penalty (other than those referred to in subsection (4) of section 5, and in section 17, of this Act) is prescribed shall be liable, for a first offence, to a fine not exceeding one thousand shillings or to imprisonment for a term not exceeding one month, and for a second or subsequent offence to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months, or to both such fine and such imprisonment.

#### **Supplementary order on conviction.**

17. A court convicting any person of an offence under this Act or any rules made thereunder may make such order as the court shall deem proper, as to -

- (a) the forfeiture or disposal of any fertilizer, animal foodstuff, bone or other product of an animal carcass;
- (b) the payment by the defendant of all or any fees and other expenses incidental to the analysis of a fertilizer or animal foodstuff,

in respect of which the conviction is obtained.

#### **Exclusions and exemptions.**

18. The Minister may by notice in the Gazette, subject to such terms and conditions if any as may be specified in such notice, exclude any fertilizer or animal foodstuff, or exempt any person or class of persons, from the operation of all or any of the provisions of this Act.

#### **Rules.**

19. (1) The Minister may make rules generally for the better carrying out of the purposes and provisions of this Act and particularly, but without prejudice to the foregoing generality, for prescribing -

- (a) standards of composition, efficacy, fineness and purity of fertilizers and animal foodstuffs;
- (b) the prohibition of certain substances and the limitation of percentages of certain substances in fertilizers or animal foodstuffs.
- (c) records and returns to be kept and furnished by importers, manufacturers and sellers of fertilizers and animal foodstuffs;
- (d) requirements as to the proper storage of fertilizers and animal foodstuffs;
- (e) the manner in which fertilizers and animal foodstuffs

shall be packed and the branding, labelling, marking and sealing of containers thereof, and the manner in which declarations made at the time of sale shall be made and in which fertilizers and animal foodstuffs shall be exposed for sale;

- (f) any declaration or warranty which may be required to be made or given in prescribed cases, the effect of any declaration made by the seller of a fertilizer or animal foodstuff, and the existence and effect of any implied or written warranty concerning a fertilizer or animal foodstuff;
- (g) the methods whereby bones and other substances derived from an animal carcass shall be sterilized for sale or for manufacturer as fertilizers or animal foodstuffs;
- (h) the manner in which samples shall be drawn for analysis and in which such samples shall be certified and analysed, and the manner in which their analyses shall be reported;
- (i) anything which under this Act is required to be or may be prescribed.

(2) Rules made under this section may provide penalties for their breach not exceeding a fine of three thousand shillings or imprisonment for a term of three months, or both such fine and such imprisonment.

#### **Advisory committees.**

20. The Minister may from time to time appoint such committees as he deems desirable, for the purpose of advising him on matters concerning the administration of this Act.

### **SUBSIDIARY LEGISLATION**

#### **Rules under sections 3 and 19**

#### **THE FERTILIZERS AND ANIMAL FOODSTUFFS (APPROVED FERTILIZERS) RULES**

L.N.209/1972.

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Approved Fertilizers) Rules.
2. The substances or mixture of substances specified in the first column of the Schedule hereto which have the implied definitions shown in the second column of the said Schedule are hereby prescribed to be approved fertilizers.

SCHEDULE

<i>Approved Fertilizer</i>	<i>Implied definition</i>
Sulphate of Ammonia	Ammonium sulphate for fertilizing purposes.
Nitrate of soda	Sodium nitrate for fertilizing purposes.
Calcium Ammonium Nitrate	Mixtures of ammonium nitrate and calcium carbonate for fertilizing purposes.
Ammonium Sulphate Nitrate	Mixtures of ammonium sulphate and ammonium nitrate for fertilizing purposes.
Urea	Urea for fertilizing purposes.
Diammonium Phosphate	Diammonium hydrogen orthophosphate for fertilizing purposes.
Superphosphate or supers	Phosphate rock which has been treated with sulphuric acid or phosphoric acid for fertilizing purposes.
Triple superphosphate	Phosphate rock which has been treated with phosphoric acid only.
Basic Slag	A by-product containing phosphorus for fertilizing purposes obtained in the manufacture of steel.
Soda phosphate	Phosphatic rock which has been strongly heated with sodium sesquicarbonate for fertilizing purposes.
Rock phosphate	Crude mineral calcium phosphate for fertilizing purposes.
Guano	The crude residues of past and present nesting, breeding and roosting colonies of sea fowl and bats and the phosphate enriched rocks, sands and clays associated with the site of these colonies.
Zinc oxide	Zinc oxide specially prepared for fertilizing purposes.
Copper oxide	Copper oxide when used for fertilizing purposes.
Copper oxychloride	Copper oxychloride when use for fertilizing purposes.
Bonemeal	Commercially pure bone which has been ground or crushed for fertilizing purposes.
Muriate of potash	Potassium chloride for fertilizing purposes.
Sulphate of potash	Potassium sulphate for fertilizing purposes.
Magnesium sulphate	Magnesium sulphate hepta hydrate for fertilizing purposes.
Kieserite	Magnesium sulphate monohydrate for fertilizing purposes.
Magnesia	Calcined crude mineral magnesium carbonate for fertilizing purposes.
Magnesite	Partly calcined crude mineral magnesium carbonate for fertilizing purposes.

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Copper sulphate	Copper sulphate for fertilizing purposes.
Borax	Sodium tetraborate for fertilizing purposes.
Ground limestone	Ground predominantly calcium carbonate mineral for liming agricultural land.
Burnt lime	Calcined predominantly calcium carbonate mineral for liming agricultural land.
Compound	Specially compounded mixtures or substances for fertilizing purposes which are sold by virtue of their content of more than one fertilizer nutrient element and in respect of which the vendor gives guarantees under the Fertilizer and Animal Food stuffs (Declaration and Warranty Rules

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(The term "commercially pure" mentioned in these Rules, implies that no other matter may be added).

**Rules under section 19**

**THE FERTILIZERS AND ANIMAL FOODSTUFFS (PACKING OF APPROVED FERTILIZERS) RULES**

**L.N. 210/1972.**

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Packing of Approved Fertilizers) Rules.

2. Approved fertilizers exposed for sale in quantities of 25 kg. or more shall be packed in weather-proof containers or packages which are of sufficient strength and sufficiently sealed and which are made of a sufficiently strong material which will withstand reasonable handling without tearing, bursting or falling open.

3. Each container or package as the case may be containing 25 kg. of approved fertilizers shall be branded or indelibly marked or shall bear a securely fixed label showing the following particulars -

- (a) the name of the fertilizer as specified in the first column of the Schedule to the Fertilizers and Animal Foodstuffs (Approved Fertilizers) Rules;
- (b) the weight in kilogrammes of the fertilizer which the container or package contains;
- (c) in the case of fertilizer which is superphosphate or supers the minimum percentage of water soluble phosphorous pentoxide which the vendor guarantees the fertilizer to contain in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
- (d) in the case of fertilizer which is Soda phosphate, the minimum percentage of phosphorous pentoxide which is soluble in 2 per cent citric acid which the vendor guaranteed the fertilizer to contain in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
- (e) in the case of which fertilizer is Basic Slag, the minimum percentage of phosphorus pentoxide which is soluble in 2 per cent citric acid which the vendor guarantees the fertilizers to contain in the declaration and warranty under the Fertilizers and Foodstuffs (Declaration and Warranty) Rules, and the minimum percentage of fertilizer which the vendor guarantees, will pass through a Standard Test Sieve Mesh No.100 (minimum specification B.S. 410) having apertures not greater than 0.152 mm. square in the declaration and warranty under the Fertilizers

and Animal Foodstuffs (Declaration and Warranty) Rules;

- (f) in the case of fertilizer which is Rock phosphate, Seychelles Guano or bonemeal the minimum percentage of phosphorus pentoxide which is soluble in mineral acid which the vendor guarantees the fertilizer to contain in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
- (g) in the case of fertilizer which is a compound fertilizer, the minimum percentage of nitrogen and of water soluble phosphorous pentoxide or of phosphorus pentoxide which is soluble.

**THE FERTILIZERS AND ANIMAL FOODSTUFFS (APPROVED ANIMAL FOODSTUFFS) RULES**

2. The animal foodstuffs specified in the first column of part 1 Foodstuffs (Approved Animal Foodstuffs) Rules.

**L.N. 211/1972.**

1. These Rules may be cited as the Fertilizers and Animal of the Schedule hereto and having the implied definitions shown in 2 per cent citric acid or mineral acid which the vendor guarantees the fertilizer to contain and the forms in which nitrogen is present in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;

- (h) in the case of fertilizer which is urea or urea containing compound fertilizer the minimum percentage of nitrogen and the maximum percentage of biuret which the vendor guarantees the fertilizer to contain in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
- (i) in the case of fertilizer which is Ammonium Sulphate Nitrate that it contains at least 25 per cent nitrogen;
- (j) in the case of fertilizer which is Sulphate of Ammonia, that it contains at least 20 per cent nitrogen and the maximum amount of free acid (if this is in excess of 0.03 per cent) which the vendor guarantees the fertilizer to contain under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
- (k) in the case of fertilizer which is Calcium Ammonium Nitrate that it contains at least 20 per cent nitrogen;
- (l) in the case of fertilizer which is Nitrate of soda that it contains at least 15 per cent nitrogen;

(m) in the case of fertilizer which is Diammonium Phostate, the minimum percentage of nitrogen and the minimum percentage of water soluble phosphorus pentoxide which the vendor guarantees the fertilizer to contain in the declaration and warranty under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules.

4. In the case of the sale of approved fertilizers in quantities less than 25 kg. it shall be adequate, if the fertilizer sold is taken out in the presence of and with the knowledge of the purchaser from a container which is branded or indelibly marked or has a securely fixed label showing the particulars required under rule 3 of these Rules and transferred to an empty container or package meant to hold quantities of 25 kg. or more of the sale fertilizer.

5. Any person who sells approved fertilizers in containers or packages in quantities of 25 kg. or more which do not comply with the requirements of rules 2 and 3 of these Rules shall be guilty of an offence and liable to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months or to both such fine and such imprisonment.

characteristics specified in Part II of the said Schedule, are hereby prescribed to be aproved animal foodstufs:

Provided that an animal foodstuff shall be deemed to have complied with the requirements of the analysis guaranteed by the vendor if it is not deficient in any of its ingredients within the limits of variation specified in Part II of the Schedule hereto.

SCHEDULE (r.2)

PART I

Animal Foodstuff	Implied Definition
Alfafa (lucerne) Meal I	Alfafa (lucerne), as grown, dried and ground, to which no other matter has been added.
Barley	Commercially pure barley, as grown.
Barley meal	The meal obtained by grinding barley, as grown, which shall be the whole grain together with only such other substance as may reasonably be expected to have become associated with the grain in the field and which contains not less than 96 per cent pure barley.
Barley meal, Grade II	The meal, other than barley meal as defined, contained by grinding barley, as grown, which shall be the whole grain together with only such other substances as may reasonably be expected to have become associated with the grain in the field and which contains not less than 90 per cent pure barley.
Bean meal	The meal obtained by grinding commercially pure beans of the species (1) <i>Vicia faba</i> (synonym <i>faba vulgaris</i> ) or any of its varieties, commonly known as "horse bean", "field bean", or "broad bean", or (2) <i>Phaseolus vulgaris</i> the "true haricot bean" or any of its varieties, white or coloured, or (3) <i>dolichos lablab</i> , the <i>dolichos</i> , <i>lablab</i> or <i>njahi</i> bean or (4) <i>Stizolobium</i> or <i>Mucuna</i> species the velvet beans.
Cassava	The commercially pure dried peeled root of the cassava plant.
Cassava meal	The meal obtained by grinding the commercially pure dried peeled root of cassava.
Clover meal	Whole clover, as grown, dried and ground to which no other matter has been added.
Compound cakes or meals	Cake or meals consisting of a mixture of two or more of the articles mentioned in column 1.
Cotton cakes or meals not decorticated	The residue resulting from the removal of oil from commercially pure cotton seed, not decorticated.
Cotton cakes or meals from decorticated or partly decorticated cotton seed	The residue resulting from the removal of oil from commercially pure cotton seed from which the cortex, in whole or in part, has been removed.
Dried brewery grains	The article produced by drying the residue of malted and unmalted cereals used in brewing, to which no other matter has been added.
Dried distillery grains	The article produced by drying the residue from distillery mashtuns, to which no other matter has been added.
Dried green fodder crops	Any product which is obtained by artificially drying any green crop or crops suitable for use as dried fodder for cattle, pigs or poultry and is otherwise as grown (that is to say including any growths harvested therewith but with no other substance added thereto), and
(i) High quality	Contains not less than 13 per cent protein calculated on the assumption that it contains 10 per cent moisture.



(ii) Medium quality	Contains less than 13 per cent protein but not less than 10 per cent protein calculated on the assumption that it contains 10 per cent moisture.
(iii) Maintenance quality	Contains less than 10 per cent protein calculated on the assumption that it contains 10 per cent moisture.
Dried Yeast	An article produced by drying yeast or yeast residues, to which no other matter has been added.
Extracted linseed meal	The residue resulting from the removal of oil from commercially pure linseed by means of a solvent.
Feeding bone flour	The produce obtained by grinding commercially pure steamed bone.
Feeding dried blood	Blood which has been dried, to which no other matter has been added.
Feeding meat and bone meal,	The product, containing not less than 40 per cent of protein and not more than 4 per cent of salt obtained by drying and grinding animal carcasses or portions thereof (excluding hoof and horn) and bone, to which no other matter has been added, but which may have been preliminarily treated for the removal of fat.
Feeding meat meal	The product, containing not less than 55 per cent of protein and not more than 4 per cent of salt, obtained by drying and grinding animal carcasses or portions thereof (excluding hoof and horn) which may have been preliminarily treated for the removal of fat.
Fish meal, fish residue meal	A product obtained by drying and grinding or otherwise treating fish or waste of fish, to which no other matter has been added.
Flaked maize	The product obtained by cooking and flaking commercially pure maize or Indian corn, either as grown or from which the germ, in whole or in part, has been removed.
Ground or crashed oats	The meal obtained by grinding or crushing commercially pure oats, as grown.
Linseed cakes or the meals of such cakes	The residue resulting from the removal of oil from commercially pure linseed or the meal obtained by grinding or crushing commercially pure linseed.
Liver meal	The meal obtained by drying and grinding animal livers which may have been preliminarily treated for the removal of fat or oil.
Locusts bean meal *	The meal obtained by grinding or crushing commercially pure locust beans.
Maize	Commercially pure maize, as grown.
Maize germ cake or meal	A meal or cake resulting from the grinding of maize germs or of maize germs from which the oil has been removed in whole or part.
Maize-gluten feed	A by-product resulting from the removal of starch and germ from maize, to which no matter has been added.
Maize meal	The meal obtained by grinding commercially pure maize as grown.
Malt columns	The rootlets and shoots arising from the screening of malt, to which no other matter has been added.
Mineral feeding supplements	Any minerals stocklick or substance which could be used as stocklick which is alleged to possess nutritive properties but shall not apply to supplements not containing phosphoric acid.

Nut cakes or meal including coconut, copra, palm kernel and groundnut cakes and meal.	The residue resulting from the removal of oil from commercially pure nut kernel.
Oats	Commercially pure oats as grown.
Oat feed	The by-product of oatmeal milling consisting of hulls, floury materials, mealy matter, screen dust, all finely ground and containing no more than 27 per cent of fibre.
Pea meal	The meal obtained by grinding commercially pure peas, as grown, of varieties of <i>Pisum sativum</i> or <i>Pisum arvense</i> , or the varieties of <i>Vigna catiung</i> "cow" peas, or the varieties of <i>Cajanus</i> , "pigeon" peas.
Pyrethrum marc.	The steamed, dried residue from the extraction of dried, ground pyrethrum <i>Chrysanthemum cinerariifolium</i> flowers with a light petroleum solvent.
Rape cake or meal	The residue resulting from the removal of oil from commercially pure rape seed.
Rice bran, rice meal	The by-product produced in milling shelled rice to which no other matter has been added.
Sorghum: dari: durra	Commercially pure sorghum (dari: dura) as grown.
Sorghum meal (dari or durra meal)	The meal obtained by grinding commercially pure sorghum (dari: durra) as grown.
Soya cake or meal	The residue resulting from the removal of oil from commercially pure soya beans.
Sugar-beet treacle; sugar-beet molasses	A concentrated syrup product obtained in the manufacture of sugar from sugar-beet to which no other matter has been added.
Sugar-cane treacle; sugar-cane molasses	A concentrated syrup product obtained in the manufacture of sugar from sugarcane to which no matter has been added.
Sunflower seed cakes or meal not decorticated.	The residue resulting from the removal of oil from commercially pure sunflower seed, not decorticated.
Sunflower seed cakes or meal from decorticated or partly decorticated sunflower seed.	The residue resulting from the removal of oil from commercially pure sunflower seed from which the cortex in whole or in part, has been removed.
Wheat	Commercially pure wheat, as grown.
Wheat germ	A meal or cake resulting from grinding of wheat germs.
Wheat meal	The meal obtained by grinding commercially pure wheat, as grown.
Wheat offals, millers' offals	A product of wheat separated in the process of milling and containing no more than 4 per cent of vegetable substances other than wheat, extracted from wheat in the process of cleaning by the maker of the offals in the production of flour.

White fish meal	A product (containing not more than 6 per cent of oil and not more than 4 per cent of salt) obtained by the drying and grinding or otherwise treating white fish to which no other matter has been added.
Dried beet pulp	The article produced by drying the sugar beet residue produced in manufacture of sugar from sugar-beet, with or without the addition of molasses.

(The term "commercially pure" mentioned in these Rules, implies that no other matter may be added).

## PART II

### *Particulars of composition to be contained in statutory statement*

#### LIMITATIONS OF VARIATION

(Percentages are percentages of the whole bulk)

(a) *None:*

Barley .....
Barley meal .....
Barley meal (Grade II) .....
Bean meal .....
Cassava .....
Cassava meal .....
Ground or crushed oats .....
Locust bean meal .....
Maize .....
Maize meal .....
Oats .....
Pea meal .....
Pyrethrum marc. ....
Wheat .....
Wheat meal .....

(b) *Amount of fibre:*

Dried plain beet pulp	Fibre, 1 per cent or 1/8th of the amount stated whichever is greater.
Oatmeal by-products	Fibre, 1 per cent or 1/8th of the amount stated whichever is the greater provided that the name "oatfeed" shall not be applied to any article containing more than 27 per cent of fibre.
Wheat offals or millers' offals	Fibre, 1 per cent or 1/8th of the amount stated whichever is the greater; if the actual amount is less than that stated one-half the amount stated.

(c) *Amount of oil:*

Linseed meal	Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater.
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(d) *Amount of protein:*

Dried green fodder crops high quality.

Medium quality maintenance quality.	Protein, 1/10th of the amount stated provided that the name "dried grass" shall not be applied to any article containing less than 13 per cent protein or the names "dried grass (maintenance)" or "dried green fodder crop" to any articles containing less than 10 per cent protein.
Dried yeast feeding dried blood	Protein, 1/10th of the amount stated or 4 per cent whichever is the less.
<i>(e) Amount of fibre and protein respectively:</i>	
Clovermeal	Protein, 1/10th of the amount stated fibre, 1/8th of the amount stated.
Lucerne (alfalfa) meal	Protein, 1/5th of the amount stated.
Malt culms	Fibre, 1 per cent or 1/8th of the amount stated, whichever is greater.
<i>(f) Amounts of oil and protein respectively:</i>	
Cotton or copra cake or meal	Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater.
Coconut cakes or meal not decorticated.	Protein, 1/10th of the amount stated.
Sunflower cakes or meal not decorticated.	
Oil cakes or meal not otherwise specifically mentioned in this Schedule which are the product of any one undecorticated substance of seed from which oil has been removed.	Oil, 0.75 per cent or 1/18th of the amount stated, whichever is the greater. Protein, 1/10th of the amount stated.
Liver meal, palm kernel cake or meal linseed cakes and the meal of such cakes; extracted linseed meal; maize flaked; maize germ cake or meal; maize gluten fee; rape cake or meal; soya cake or meal.	Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater protein, 1/8th of the amount stated.
Wheat germ.	
Dried brewery and distillery grains	Oil, 0.75 per cent or 1/5th of the amount stated whichever is the greater. Protein, 1/8th of the amount stated.
<i>(g) Amounts of protein and phosphoric acid respectively:</i>	
Feeding bone flour	Phosphoric acid, 1/20th of the amount stated. Protein 1/10th of the amount stated.
Feeding bone meal, ground bone or any other bone product for feeding purposes	Phosphoric acid, 1/10th of the amount stated. Protein, 1/10th of the amount stated.
<i>(h) Amount of calcium oxide; phosphoric acid and salt;</i>	
Mineral feeding supplements	Calcium oxide, 1/20th of the amount stated, Phosphoric acid, 1/20th of the amount stated. Salt, 1/20th of the amount stated.

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*(i) Amount of oil, protein and phosphoric acid respectively:*

Feeding meat, bone meal or any other product of meat and bone for feeding purposes.

Oil, 0.75 per cent or 1/10th of the amount stated whichever is the greater. Protein, 1/10th of the amount stated.

Feeding meat meal or any other product of meat for feeding purposes.

Phosphoric acid, 1/10th of the amount stated. Provided that the names "feeding meat meal" and "feeding meat and bone meal" shall not be applied to articles containing less than 55 per cent and less than 40 per cent of protein respectively.

*(j) Amounts of oil, protein and fibre respectively:*

Compound cakes or meal consisting of admixture of two or more of the articles mentioned in these Rules.

Cotton cakes or meal from decorticated or partly decorticated cotton seed.

Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater. Protein, 1/10th of the amount stated. Fibre, 1 per cent or 1/10th of the amount stated, whichever is the greater; if the actual amount is less than that stated, one-half of the amount stated.

Maize by-products not otherwise specifically mentioned in these Rules. Oil cakes or meal not otherwise specifically mentioned in this Notice which are the product of any one decorticated or partly decorticated substance or seed from which oil has been removed. Rice bran or rice meal or the by-product produced in milling shelled rice.

Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater. Protein, 1/10th of the amount stated. Fibre, 1 per cent or 1/10th of the amount stated, whichever is the greater.

Sunflower cakes or meal decorticated or partly decorticated.

*(k) Amount of oil, protein, phosphoric acid and salt respectively:*

Fish meal, white fish meal or other product obtained by grinding or otherwise treating fish or fish waste.

Oil, 0.75 per cent or 1/10th of the amount stated, whichever is the greater. Protein, 1/10th of the amount stated. Phosphoric acid 1/6th of the amount stated. Salt, 0.75 per cent: Provided that the names "white fish meal" shall not be applied to any article containing more than 6 per cent oil or 4 per cent salt.

*(l) Sugar*

Molasses  
Sugar 1/10th of the amount stated.

Molasses feeds containing not less than 10 per cent sugar. The amount, in each case, shall be stated as a definite percentage of the weight of the articles.

Phosphoric acid shall be stated in terms of phosphoric anhydride ( $P_2O_5$ ).

The amount of protein stated shall be the amount of nitrogen, other than ammonia or nitric nitrogen multiplied by 6.25 or, in the case of pure wheat products, by 5.70.

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**THE FERTILIZERS AND ANIMAL FOODSTUFFS (PACKING OF APPROVED ANIMAL FOODSTUFFS) RULES**

L.N. 212/1972.

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Packing of Approved Animal Foodstuffs) Rules.
2. Approved animal foodstuffs exposed for sale in quantities of 25 kg. or more shall be packed in containers which are of sufficient strength and sufficiently sealed so as to withstand reasonable handling without tearing, bursting or falling open.
3. Each container containing approved animal foodstuffs, shall be clean and free from visible indications of contamination, infection and insect infestation.
4. Each container containing 25 kg. or more of an approved animal foodstuff shall be clearly, conspicuously and indelibly marked with or the particulars shown hereunder shall bear a securely attached label showing the following particulars -
  - (a) the name and full postal and business address of the manufacturer or seller;
  - (b) the name and weight in kilogrammes of the animal foodstuff contained therein;
  - (c) the guaranteed analysis expressed as a percentage to the first decimal place of each of the constituents for which guarantees are required under the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules;
  - (d) the date of manufacturer or other code or reference figures or letter by which the animal foodstuff may be identified as required under the Fertilizers and Animal Foodstuffs (Records and Returns) Rules.
5. In the case of the sale of approved animal foodstuffs in quantities of less than 25 kg, its hall be adequate, if the animal foodstuff sold is taken out in the presence of and with the knowledge of the purchaser from a container in which the vendor himself bought the animal foodstuff and on which are clearly, conspicuously and indelibly marked the particulars required under rule 4 of these Rules.

6. Any person who sells approved animal foodstuffs in containers in quantity of 25 kg. or more which do not comply with the requirements of rules 2, 3 and 4 of these Rules, shall be guilty of an offence and liable to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months or both such fine and such imprisonment.

**THE FERTILIZERS AND ANIMAL FOODSTUFFS (STERILIZATION OF BONES) RULES**

L.N. 213/1972

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Sterilization of Bones) Rules.
  2. (1) For the purposes of sections 4 and 5 of the Act any bone, bones or other substances of animal origin imported into Kenya or used for the purpose of manufacturing any fertilizer or animal foodstuff shall have been sterilized by -
    - (a) subjection to a dry heat of 140°C, for not less than three hours; or
    - (b) subjection to a moist heat under steam pressure of not less than 1.4 kilogrammes per sq. centimetre; 1.3 atmospheres for fifteen minutes; or
    - (c) treatment of the bones after they are broken with the vapour of benzene (benzol) boiling between 95°C. and 115°C. for not less than four hours; live steam to be thereafter admitted for one hour,
 and shall be free of *Bacillus anthracis* and organisms of the gas gangrene type.
  - (2) After sterilization every precaution shall be taken to prevent reinfection of the sterilization product and it shall be packed at the factory in new bags.
  - (3) No vehicle, vessel or barge which has been used for the conveyance of unsterilized bones or other substances derived from animal carcasses shall be used for the transport of sterilized animal products unless it has been first disinfected with a disinfectant solution equal in disinfective value to a 5 per cent solution of standard phenol.
3. Every application for a licence to use a sterilizing plant shall be submitted in triplicate in the form in the Schedule to these Rules.

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**SCHEDULE (r.3)**

**APPLICATION FOR LICENSING OF A STERILIZING PLANT**

*(For the year ending 31st December, 19....)*

**PART I**

1. Name of Applicant .....
2. Address and locality where plant is situated .....
3. What substances derived from animal carcasses are being sterilized .....
4. Name and Trade Mark (if any) of Plant .....
5. Whether Dry Steam Sterilization Process is applied .....
6. Number of Wet Steam Digestors and Dry Steam Digestors comprising the plant .....
7. Capacity of each Digestor separately .....
8. Maximum Steam Pressure per sq. cm. each Digestor can be subjected to: .....
9. Whether sterilized substance is to be dried in open air or by special installation .....
10. If a Special Drying Installation is used, state whether a Rotating Pot is used, and whether heat is applied by steam or open fire .....

Date .....

Signature of Applicant .....

**PART II**

*(For Official Use Only)*

No. ....

I certify that the Sterilizing Plant referred to in Part I has been licensed.

The licence expires on 31st December, 19 .....

Date

Licensing Officer

**THE FERTILIZERS AND ANIMAL FOODSTUFFS (SAMPLING) RULES**

**L.N. 214/1972**

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Sampling) Rules.

2. Where a sample is drawn under section 9 (1) (c) or section 10 of this Act, it shall be drawn in the manner prescribed under these Rules.

3. The sample shall be taken in as equal portions as possible each of not less than 280 gm. weight from evenly distributed parts of the whole. It shall be drawn only from sound containers or packages whose seals are intact, which are marked in accordance with the requirements of rule 3 of the Fertilizers and Animal Foodstuffs (Packing of Approved Fertilizers) Rules, or rule 4 of the Fertilizers and Animal Foodstuffs (Packing of Approved Animal Foodstuffs) Rules, or from open containers or packages from which fertilizers or animal foodstuffs are being sold in quantities of less than 25 kg., in accordance with rule 4 of the Fertilizers and Animal Foodstuffs (Packing of Approved Fertilizers) Rules, or rules 5 and 8 of the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules.

4. Where the fertilizer or animal foodstuff being sampled is in a single container or package and weights 25 kilos or less the entire package shall be taken as the sample.

5. Where a single container or package contains more than 25 kilos or where the number of containers or packages is more than one but not more than ten, portions of the sample shall be drawn from each container or package and a minimum of five portions shall be taken.

6. Where the number of containers or packages is more than ten but not more than forty, portions of the sample shall be drawn at the rate of at least one portion per two containers or packages and a minimum of ten portions shall be taken.

7. Where the number of containers or packages is in excess of forty, it shall be adequate to collect twenty well distributed portions.

8. The number of portions taken shall be the number appropriate to the number of containers or packages of the fertilizer or animal foodstuff being sampled which is present at the time of sampling.

9. Appropriate tools if available may be used to assist in the drawing of the samples except that where valid objection is raised to the use of any particular tool on account of its unsuitability for sampling the material concerned, that tool shall not be used in the taking of this sample.

10. When the material to be sampled is in cakes, single cakes may be taken as individual portions of the sample.

11. Where the material is in large lumps single lumps may be taken as individual portions of the sample.

12. Where the product to be sampled is in a fluid or semifluid condition, it shall first be well mixed by stirring or shaking.

13. Where a spile is used for sampling, it shall have a blade which shall be long enough to penetrate the full length of the container or package and shall be of at least 190 cm. internal diameter. It shall be inserted closed or mouth downwards and driven fully into the container or package being sampled. It shall then be opened or turned mouth upwards and so manipulated as to become filled with the material being sampled. It shall be then withdrawn smoothly for emptying.

14. The portions of a solid sample when drawn shall be spread in a place where they are adequately protected against contamination. They shall then be broken up and any matted material present shall be pulled apart and chopped up in such a manner that the whole will pass through a sieve with meshes 3.20 cm. across. The sieved material shall then be thoroughly mixed and shall be taken as the main sample. The main sample shall be reduced by sub-sampling, if necessary for preparing the Official Sample.

15. In sub-sampling, the material to be sub-sampled shall be thoroughly worked up and mixed and shall then be spread evenly on a smooth clean surface. It shall then be divided into four approximately equal quarters by two straight lines intersecting one another approximately at right angles near the middle of the sample. The quarters shall then be separated one from the other and two diagonally opposing quarters shall be rejected and the other two retained. The operations shall be repeated as necessary for reducing the sample to the size required.



16. The sample obtained as the result of the operation prescribed under rules 14 and 15 of these Rules shall again be mixed and shall be spread evenly and shall be divided into three similar parts and these shall be known as the official Samples. Each of the three Official Samples shall be placed in a clean dry bottle, jar or other container with a close fitting lid, stopper, cover or seal and this in the case of a fertilizer or animal foodstuff which is likely to undergo change on exposure shall be air tight. The weight of each Official Sample shall be between 0.5 and 1 kg.

17. Where the main sample readily separates into a number of distinct fractions that do not readily mix together, the fractions shall be sub-sampled separately and the official samples shall be prepared by adding the sub-samples of each fraction to the sub-samples of the other fractions in amount which is proportional to its amount in the main sample.

18. Liquid main samples shall be mixed thoroughly by stirring in a clean open container and after mixing the three Official Samples each shall be drawn directly from several well spaced points.

19. Where the fertilizer or animal foodstuff being sampled contains material which changes rapidly on exposure to air, sampling, sub-sampling and the preparation and packing of the Official Sample shall be undertaken in a dry place and as quickly as possible.

20. The container in which an Official Sample has been packed shall be so secured or placed in a sealed package that its contents cannot be reached without breaking the seal, the container or the package.

21. (1) The Inspector drawing an official sample shall affix to each container or package containing such official sample a certificate signed by himself and stating -

- (a) his own name and full postal address and the authority under which he acts;
- (b) that the sample therein was collected according to the procedure prescribed in these Rules.
- (c) the particulars marked on the containers or packages from which the sample was drawn or on the labels attached to those packages in accordance with the requirements of rule 3 of the Fertilizers and Animal Foodstuffs (Packing of Approved Fertilizers) Rules, or rule 4 of the Fertilizers and Animal Foodstuffs (Packing of Approved Animal Foodstuffs) Rules;
- (d) the date and place where the sample was taken;
- (e) the name and full postal and business addresses of the manufacturer where known and the seller or the

person in possession of the fertilizer or animal foodstuff at the time the sample was taken;

- (f) the name and full postal and business addresses of the person if any under whose instructions the sample was taken;
- (g) his observations on the conditions under which the fertilizer or animal foodstuff was being stored at the time of taking the sample.

(2) He shall then despatch one Official Sample, with the Certificate attached, to an Analyst appointed under section 8 of this Act and one under registered cover to the person holding the fertilizer or animal foodstuffs for sale or who last sold the fertilizer or animal foodstuff and shall forward the third sample to the Government Chemist.

22. Where the fertilizer or animal foodstuff clearly is adulterated with stones, pieces of iron or other objects, no sample shall be taken but the Inspector shall seize and hold in safe custody such quantity of the material as he thinks fit.

#### **THE FERTILIZERS AND ANIMAL FOODSTUFFS (ANALYSIS) RULES**

L.N. 215/1972, L.N. 292/1974.

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Analysis) Rules.

2. (1) Samples for analysis shall be taken from Official Samples which have been taken and packed in the manner prescribed in the Fertilizers and Animal Foodstuffs (Sampling) Rules.

(2) The following apparatus shall be used in the preparation of a sample for analysis -

- (a) sieves with apertures of 1 mm. square and of between 2 and 3 mm. square respectively.
- (b) a laboratory mill fitted with a screen with 1 mm. aperture;
- (c) a porcelain pestle and mortar;
- (d) an oven set to operate at 100°C; and
- (e) stoppered or screw-capped storage bottles 250 ml. and 500 ml.

3. (1) If the Official Sample is in a fine condition and passes through a sieve having apertures about 1 mm. square it shall be thoroughly mixed and a portion not less than 250 gm. in weight shall be placed in a storage

bottle. From this portion the quantities for analysis shall be taken.

(2) if the Official Sample does not wholly pass through the sieve having apertures about 1 mm. square, and wholly passes through the sieve having apertures between 2 and 3 mm. square or if a change in a moisture content is likely to occur during the preparation of the Official Sample for analysis, the Official Sample shall be thoroughly mixed and a portion for the determination of moisture shall be taken at once.

(3) If the Official Sample is in a coarse conditions (but can be pulverized) as, for example, pieces of broken cake, it shall be carefully pulverized until the whole passes through the sieve having apertures between 2 and 3 mm. square. it shall then be thoroughly mixed and a portion for the determination of moisture shall be taken at once.

(4) Material which does not admit of being pulverized in its natural condition so that it will pass through the sieve having apertures between 2 and 3 mm. square shall be mixed as thoroughly as its conditions will allow. A portion of the coarse material shall then be taken for the determination of moisture and if the dry material can be pulverized, sufficient of the coarse material to produce at least 250 g. of dried material shall similarly be dried and then pulverized, so that it will pass through the aforesaid sieve. It shall then be thoroughly mixed. A portion of the material which has been prepared in the manner prescribed in rules 3 (1), 3 (2), 3 (3) and 3 (4) of this rule weighing not less than 250 g. shall then be taken if necessary further pulverized until it passes through the sieve having apertures about 1 mm. square. The portion of the sample so prepared shall be placed in a storage bottle and from it the quantities for analysis shall be taken.

(5) If the Official Sample is a liquid, it shall be placed in a storage bottle and shall be well stirred immediately before each sample is taken for analysis.

(6) For a grading analysis, the sample shall be taken direct from the Official Sample.

(7) Fertilizers or animal foodstuffs which separate readily into separate fractions which are not susceptible to mixing together during preparation for analysis shall be separated into their component fractions, each fraction shall be analysed as if it was a separate fertilizer or animal foodstuff and the proportion of the separate fractions shall be allowed for in reporting the analysis.

(8) The moisture content of material which gains or loses moisture during its preparation for analysis shall be determined on a sample of the material which has been prepared for analysis each time a sample is taken for analysis.

(9) Any change in moisture content during preparation of the sample shall be allowed for in presenting the results of analysis.

(10) The samples taken for analysis and for moisture determination shall be drawn in as equal portion as possible from several well scattered points in the material which has been prepared for analysis or whose moisture content is being determined.

4. (1) The following apparatus shall be used for the determination of moisture in a fertilizer or in an animal foodstuff where the sample tested is deemed by the analyst to be suitable for drying at 100°C.

- (a) a laboratory spoon or such other sampling tool as the analyst shall consider suitable for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mg. or less, and its weights;
- (d) a laboratory oven set to operate at 100°C.;
- (e) a desiccator suitably charged with active desiccant.

(2) About 5 grams of the sample (or the minimum larger amount that, with regard to its coarseness, the analyst shall consider to be representative of the sample), weighed to the nearest milligram shall be heated in the oven for 2 to 3 hours. The sample shall then be placed in the desiccator to cool and shall then be re-weighed, again to the nearest milligram. The heating, cooling and weighing process shall be repeated until the difference in weight before and after heating is less than 5 mg. The percentage moisture shall be taken as the total loss in weight as a result of the heating process, in milligrams, multiplied by 100 and divided by the weight also in milligrams of sample taken for the moisture determination.

(3) Where the sample is deemed by the analyst to be of a nature unsuitable for drying at 100°C., he may undertake the drying at a reduced pressure and at much lower temperature as is compatible with the stability of the product and he may utilize phosphorus pentoxide or some other desiccating agent to assist the process, or he may employ any other method which is suited to the determination of the moisture content of the sample and he may use such specialized apparatus as the method may require. In these circumstances the moisture content reported shall be qualified by an indication of the method employed.

5. (1) The following apparatus and reagents shall be used for the determination of oil in an animal foodstuff -

- (a) a laboratory spoon for drawing the sample;

- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mg. or less and its weights;
- (d) a laboratory oven set to operate at 100°C.;
- (e) an extraction apparatus 60 ml. capacity fitted with a water cooled reflux condenser;
- (f) a fat free extraction thimble to fit the aforesaid extraction apparatus;
- (g) a receiving flask 150 ml. capacity whose weight is known to within 1 mg. and which will fit the aforesaid extraction apparatus;
- (h) a second receiving flask 150 ml. capacity whose weight is known to within 1 mg., which also will fit the aforesaid extraction apparatus;
- (i) a radiant heat heater unit with energy regulated heat control to accommodate the aforesaid receiving flasks;
- (j) a water cooled distillation condenser to fit the aforesaid receiving flasks and distillate receiver;
- (k) a 9 to 11.5 cm. outside diameter porcelain mortar and pestle;
- (l) a dry 10 cm. diameter glass filter funnel, 15 cm. diameter general purpose filter papers;
- (m) a desiccator suitably charged with active desiccant, glass rods;
- (n) wash bottles;
- (o) petroleum spirit boiling between 40° to 60° C.

(2) Between 3 and 5 mg. weighed to the nearest milligram, of the analysis sample shall be placed in the extraction thimble and this shall then be placed in the extraction apparatus. The extraction apparatus shall then be fitted with a receiving flask into which has been placed about 100 ml. of the petroleum spirit. The apparatus so assembled shall be heated for a total of 16 hours in the heater unit the heat control being kept so adjusted that condensate falls from the reflux condenser into the extraction apparatus throughout that time at the rate of 5 or 6 drops per second. The bulk of the petroleum spirit in the receiving flask shall then be distilled through the distillation condenser into the distillate receiver and the flask shall then be heated in the oven for 30 minutes, placed in the desiccator to cool and weighed to the nearest milligram. The heating, cooling and weighing process shall be repeated until the difference in weight of the receiving

flask and its contents before and after heating is less than 3 mg. The percentage oil found shall be taken as the weight of the residue in the receiving flask in milligrams, multiplied by 100 and divided by the weight also in milligrams of sample taken for the analysis. Where an allowance for change in moisture content under rule 2 (c) of these Rules must be made, the percentage oil reported shall be the

percentage found divided by (100 - the percentage moisture content of the sample determined as prescribed in rule 2 (a) of these Rules) and multiplied by (100 - the percentage moisture content of the Official Sample). Otherwise the percentage found shall be the percentage reported.

6. (1) The following apparatus and reagents shall be used for the determination of fibre in an animal foodstuff -

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mg. or less, and its weights;
- (d) a laboratory oven set to operate at 100°C.;
- (e) a laboratory furnace;
- (f) a 400 ml. beaker on which has been marked the level to which it would be filled by 200 ml. of liquid measured at room temperature;
- (g) a hot plate with an energy regulator heat control;
- (h) a porcelain Buchner funnel about 10.5 cm. diameter, 8 and 15 cm. diameter glass filter funnels, muslin cloth whose weight shall be known to the nearest milligram;
- (i) 4 cm. diameter porcelain or silica dishes;
- (j) a suction pump;
- (k) a heat resistant suction flask;
- (l) washing bottles, some with necks and mouthpieces insulated for handling hot liquids;
- (m) beakers;
- (n) a desiccator suitably charged with active desiccant;
- (o) glass rods;
- (p) a time piece and optionally, the extraction apparatus, energy regulated heating unit and a receiving flask as prescribed under rule 5 of these Rules;

- (q) petroleum spirit boiling between 60° to 80° C.,
- (r) 0.225N sulphuric acid;
- (s) 0.313N sodium hydroxide which is free or nearly free of sodium carbonate;
- (t) a 1 per cent hydrochloric acid solution prepared by diluting 10 ml. of concentrated hydrochloric acid with water to 1 litre;
- (u) 95 per cent alcohol; and
- (v) Diethylether.

(2) A small weighed portion of the sample which has been prepared for analysis in the manner prescribed in rule 2 of these Rules, shall be heated with an excess of the 1 per cent hydrochloric acid.

(3) If no effervescence is observed, between 2.7 and 3.0 gm., of the sample which has been prepared for analysis in the manner prescribed in rule 2 of these Rules shall be taken and weighed to the nearest milligram.

(4) The weighed sample shall be extracted with the petroleum spirit in the manner prescribed in rule of 6 of these Rules or by stirring, settling and decanting three times with the petroleum spirit in a small beaker. The sample shall in no manner be ground in the extraction process. The extracted sample shall be air-dried and transferred to 400 ml. beaker. Sufficient of the 0.255N sulphuric acid to fill the flask to its 200 ml. mark shall then be heated to its boiling point. 30 to 40 ml. of this solution shall then immediately be added to the extracted sample.

(5) The beaker shall be gently swirled to disperse the sample. Sufficient of the heated sulphuric acid solution shall then immediately be added to fill the beaker to the 200 ml. mark. The beaker and its contents shall be heated on the hot plate so that they come to the boil within 1 minute. The boiling shall then be continued gently for exactly 30 minutes in order to mix the contents and remove particles from the sides. Meanwhile the Buchner funnels shall be prepared by placing a muslin cloth over the holes of the plate. The Buchner funnel shall then be fitted in the suction flask and boiling water shall be poured into the funnel and this shall be allowed to remain in the funnel until the funnel is hot. The hot water shall then be drawn away by the application of suction. At the end of the 30 minutes of boiling the beaker shall be removed from the hot plate and the acid mixture poured at once into a shallow layer of hot water which is under gently suction in the prepared funnel. The suction shall then be so adjusted that the filtration of the bulk of the 200ml. of acid mixture is completed within 10 minutes. If the filtration takes longer than 10 minutes, the determination shall be discarded and a new determination shall be undertaken. The

residues from the sulphuric acid extraction shall then be washed with boiling water until the washing are free from acid. Sufficient of the 0.313N solution of sodiumhydroxide to fill the beaker to the 200 ml. mark shall be brought to boiling point in an insulated wash bottle and some of its shall be used to wash the residue on the muslin hot sodium hydroxide solution shall then immediately be added to fill the beaker to its 200 ml. mark. The beaker shall then be put on the hot plate and again heated so that its contents come to the boil within 1 minute. Boiling shall then be continued gently and continuously for exactly 30 minutes. During boiling the beaker against shall be swirled every few minutes in order to mix its contents and remove particles from the sides. At the end of this 30-minute boiling period, the beaker shall be removed from the hot plate and its contents shall be transferred to a muslin cloth in a 15 cm. filter funnel. Any insoluble material remaining in the beaker shall be transferred to the muslin cloth by washing with boiling water and the residue shall then be well washed on the muslin cloth with boiling water. The residue shall then be washed with the 1 per cent hydrochloric acid solution: The residue shall then be rewashed with boiling water until it is free from acid. The residue shall then be washed twice with the 9 per cent alcohol and three times with the diethylether. The residue on the muslin cloth shall be transferred with diethylether to a weighed dried silica dish whose weight shall have been determined to the nearest milligram. The silica dish and its contents shall then be heated in the oven for 30 minutes, placed in the desiccator to cool and weighed to the nearest milligram. The heating, cooling and weighing process shall be repeated until the difference on weight before and after heating is less than 3 mgm. The silica dish and its contents shall then be placed in the silica capsule and the capsule and its contents shall be placed in the furnace, the furnace then being cool. The furnace and its contents shall then be heated until the contents of the silica capsule are incinerated, but the temperature inside the furnace during that time shall not be allowed to exceed 600°C. The capsule and its incinerated content shall be placed in the desiccator to cool and shall then be reweighed to the nearest milligram. The amount whereby the weight of the silica dish and its contents after the incineration exceeds the known weight of the said silica dish, empty, shall be taken as the weight of ash in the residue. The apparent fibre content of the sample shall be taken as the amount whereby the weight of dry residue collected on the muslin cloth exceeds the weight of ash in the residue. The actual fibre content multiplied by the factor  $(0.0102t - 0.02)$  where "t" is the observed boiling of water in °C. in the laboratory at which the determination was carried out. The percentage fibre found shall be taken as the actual fibre content so found in milligrams, multiplied by 100 and divided by the weight also in milligrams, of sample taken for analysis. Where an allowance for change in moisture content under rule 2 of these Rules must be made, the percentage fibre reported shall be the percentage found, divided  $(100 - \text{the percentage moisture content of the sam-}$

ple determined as prescribed in rule 2 (b) of these Rules) and multiplied by (100 - the percentage moisture content of the Official Sample). Otherwise, the percentage found shall be the percentage reported.

(6) If an effervescence is observed in application of the test prescribed in section (a) of this rule, the suspension shall be stirred well and allowed to settle. The supernatant liquid shall be decanted through a 12.5 cm. general purpose filter paper of known weight in an 8 cm. filter funnel and the residue shall be washed twice and then transferred to the filter paper. The residue and the filter paper shall then be dried in the oven and reweighed.

(7) The quantity of the sample taken for the test in accordance with these Rules which would be sufficient to give 2.7 gm. and 3.0 gm. respectively of residue after treatment in the manner prescribed in rule 6 (b) of this rule shall then be calculated.

(8) A quantity of the sample which has been prepared for analysis in the manner prescribed in rule 2 of these Rules which shall be between the weights calculated in rule 6 (7) of this rule shall then be taken and weighed to the nearest milligram. The weighed sample shall then be extracted with the petroleum spirit in the manner prescribed in rule 6 (4) of this rule and transferred to the 400 ml. beaker. The extract sample shall then be treated into the beaker with an excess of the 1 per cent hydrochloric acid and the suspension shall be agitated well and allowed to settle. The supernatant liquid shall be decanted through a muslin cloth in an 8 cm. filter funnel. The residue shall then be washed twice with water by decantation through muslin cloth. The residue in the beaker and on the muslin cloth shall then be allowed to drain thoroughly. Sufficient of the 0.255N sulphuric acid to fill the 400 ml. beaker to its 200 ml. mark shall then be heated to its boiling point and 30 to 40 ml. of the hot acid shall be used to wash any particles on the muslin cloth back into the beaker. The fibre determination shall then proceed in the manner in rule 6 (5) of this rule.

7.(1) The following apparatus and reagents shall be used for the determination of nitrogen in a fertilizer or in an animal foodstuff -

- (a) a laboratory spoon for drawing the sample;
  - (b) a weighing bottle or boat;
  - (c) a laboratory balance which is sensitive to 1 mg. or less, and its weights;
  - (d) pipettes 25, 50 and 100 ml. minimum specification B.S. 1583, Class B;
  - (e) burettes 50 ml. minimum specification B.S. 846, Class B;
  - (f) measuring cylinders 25 ml.;
  - (g) flat bottom flasks 50 and 100 ml.;
  - (h) glass rods;
  - (i) a time piece;
  - (j) 50 per cent sodium hydroxide solution, prepared by dissolving 500 gm. of sodium hydroxide in water and diluting to 1 litre;
  - (k) 0.1N, 0.2N or 0.5N standard hydrochloric acid or sulphuric acid, the concentration used shall be as prescribed under this rule as the case may be. The standard acid shall be adjusted to exact normal against a corresponding standard sodium carbonate solution.
  - (l) 0.1N, 0.2N or 0.5N standard sodium hydroxide, the concentration used shall be as prescribed under this rule as the case may be. The standard sodium hydroxide shall be adjusted to exact normality against the corresponding standard acid;
  - (m) methyl red solution, prepared by adding 0.5 ml. of 0.1N sodium hydroxide to 5 ml. of 90 per cent industrial methylated spirits, dissolving in this solution 25 mgm. of methyl red and diluting the resultant solution to 250 ml. with 50 per cent industrial methylated spirits.
- (2) The following apparatus and reagents in addition to those specified in paragraph (1) of this rule shall be used for determination of nitrogen in a fertilizer in which nitrogen is declared to be present only in organic and ammonium forms or protein in an animal foodstuff -
- (a) Kjeldahl flasks 500 to 600 ml.;
  - (b) ammonia distillation apparatus to fit the aforesaid Kjeldahl flasks, each comprising a Liebig condenser mounted vertically and connectable to its flask through a splash-head and vertical delivery still head connecting tube;
  - (c) radiant heat heater units with energy regulator heat controls to accommodate the aforesaid Kjeldahl flasks;
  - (d) concentrated sulphuric acid;
  - (e) paraffin wax;
  - (f) potassium sulphate or anhydrous sodium sulphate;
  - (g) crystalline copper sulphate or elemental selenium;
  - (h) litmus indicator papers; and

(i) pure sucrose.

(3) About 2 gm., weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed in rule 2 (a) of these Rules shall be placed in a Kjeldahl flask and to it shall be added 25 ml., measured by measuring cylinder, of the concentrated sulphuric acid. The flask then shall be gently heated until frothing ceases. if frothing is excessive 0.5 gm. of the paraffin wax shall also be added.

(4) 10 gm. of potassium sulphate or anhydrous sodium sulphate and 0.5 gm. of the copper sulphate or elemental selenium shall then be added and the flask strongly heated until the colour of the clear liquid ultimately obtained ceases to diminish. Heating shall then continue for a further one and a half hours. The contents of the Kjeldahl flask shall then be allowed to cool and water shall be added, at first in small quantities with further intervals of cooling of the flask as necessary, until a total

volume of about 250 ml. is obtained. A piece of litmus paper shall then be placed in the diluted solution and, with swirling of the flask to ensure mixing, the 50 per cent solution of sodium hydroxide shall be added slowly until the litmus paper turns blue. A further 10 ml. measured by measuring cylinder of the sodium hydroxide solution shall then be poured carefully down the side of the flask so that it does not mix at once with the other constituents of the flask. The flask shall then at once be mounted in a heater unit and connected to the ammonia distillation apparatus, the outlet of which shall dip into a measured volume of standard sulphuric or hydrochloric acid, in a 500 ml. flat bottom flask. The amount and normality of standard acid into which the ammonia distillation apparatus outlet shall dip shall be determined by the amount of nitrogen which the fertilizer or the amount of crude protein which the animal foodstuff is believed to contain and shall be in accordance with the following table -

**TABLE 1 - VOLUME AND NORMALITY OF STANDARD ACID IN THE DETERMINATION OF NITROGEN**

Where the N Content is believed to be	or where the crude protein is believed to be:		the No. of ml. of standard shall be:	and its normality shall be:
	(a) in pure wheat products:	(b) in all other Animal Foodstuffs:		
less than 3%	less than 16%	less than 17.5%	50	0.1N
at least 3% but less than 4%	at least 16% but less than 23%	at least 17.5% but less than 25.0%	75	0.1N
at least 4% but less than 6%	at least 23%	at least 25.5% but less than 37.5%	100	0.1N
at least 6% but less than 8%		at least 37.5% but less than 50.0%	125	0.1N
at least 8% but less than 12%		at least 50.0%	100	0.2N
at least 12% but less than 16%			125	0.2N
at least 16% but less than 20%			150	0.2N
at least 20% but less than 30%			100	0.5N
at least 30% but less than 40%			125	0.5N
at least 40%			150	0.5N

The volume of standard acid taken shall be measured using suitable combinations of the pipettes.

Where less than 100 ml. of standard acid is taken it shall be made up to about 100 ml. with distilled water.

The contents of the boiling flask shall then be mixed and the heat control on its heater until shall be so adjusted that not less than 150 ml. of distillate shall be collected in the standard acid in 30 minutes.

The excess of standard acid remaining after the distillate has been collected in it shall be titrated from a burette with standard sodium hydroxide of the same normality as that of the acid used to take up the distillate, a few drops of the methyl red solution being used as indicator.

The volume of standard acid taken shall be measured using suitable combinations of the pipettes.

Where less than 100 ml. of standard acid is taken it shall be made up to about 100 ml. with distilled water.

The contents of the boiling flask shall then be mixed and the heat control on its heater until shall be so adjusted that not less than 150 ml. of distillate shall be collected in the standard acid in 30 minutes.

The excess of standard acid remaining after the distillate has been collected in it shall be titrated from a burette with standard sodium hydroxide of the same normality as that of the acid used to take up the distillate, a few drops of the methyl red solution being used as indicator.

(5) A blank determination shall be undertaken alongside the actual determination using the same amounts of the same reagents for the digestion and distillation, and for taking up the distillate and the same standard alkali for titrating the excess acid as were used in the actual determination, but with 2 gm. of pure sucrose in place of the sample. In the blank determination the bulk of the standard alkali used to neutralize the excess of standard acid may be measured by a 50 or 100 ml. pipette as the case may be. The titrations shall be made to the nearest 0.05 ml. If the number of millilitres and parts of a millilitre of standard sodium hydroxide required to neutralize the standard acid in the blank determination is expressed as  $x$  and the number of millilitres and parts of a millilitre similarly required in the actual determination is expressed by  $y$ , the percentage nitrogen found shall be taken as  $(x - y)$  multiplied by 1.4 times the normality of the standard acid used to take up the distillate and divided by the weight in grams and parts of a gram of sample taken for the analysis.

(6) Where the animal foodstuff is a pure wheat product, the percentage crude protein found shall be taken as percentage nitrogen found multiplied by 5.70. In all other animal foodstuffs, the percentage crude protein found shall be taken as the percentage nitrogen found multiplied by 6.25.

(7) Where an allowance for change in moisture content under rule 2(c) of these Rules must be made the percentage nitrogen or crude protein reported shall be the percentage found, divided by  $(100 - \text{the percentage moisture content of the sample determined as prescribed by rule 2 (b) of these Rules})$  and multiplied by  $(100 - \text{the percentage moisture content of the Official Sample})$ . Otherwise the percentage found should be the percentage reported.

(8) The following apparatus and reagents in addition to those specified in this rule shall be used for the determination of nitrogen in Sulphate of ammonia, Diammonium phosphate

or in a compound fertilizer in which the nitrogen is declared to be present only as ammonium nitrogen -

- (a) a Markham ammonia distillation apparatus which embodies a sample chamber, a funnel, a splash-head welded onto a Liebig Condenser and a steam inlet;
- (b) volumetric flasks 250 ml. minimum specification B.S. 846 Class B;
- (c) flat bottom flasks 1,000 ml;
- (d) 8-15 cm. diameter glass filter funnel; and
- (e) 15-24 cm. diameter general purpose filter papers.

(9) About 2 gm., weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed in rule 2 (a) of these Rules, shall be transferred to a 250 ml. volumetric flask. here it shall be dissolved in about 200 ml. of water with vigorous shaking to ensure complete solution if necessary. The contents of the flask shall then be diluted to volume and the solution shall be filtered if cloudy or if it contains visible insoluble matter through a dry filter paper in the filter funnel into a dry 500 ml. flat bottom flask.

(10) 10 ml. measured by pipette of the clear solution shall be transferred into the sample chamber of the markham still through the funnel, and 10 ml. measured by measuring cylinder of 50 per cent sodium hydroxide solution shall be introduced slowly into the sample chamber and the provided plug shall be replaced into the funnel. Stems shall be slowly introduced into the mixture by closing the washing outlet. The distillate outlet shall dip into a measured volume of 2 per cent boric acid solution containing a mixed indicator of methyl red and bromocresol green. The distillate is collected in 3 minutes. The amount of ammonia in the distillate shall then be titrated from a burette with standard hydrochloric or sulphuric acid. A blank determination shall be undertaken alongside the actual determination, using the same amount of the same 50 per cent sodium hydroxide solution as was used in distillation, the same amount of 2 per cent boric acid solution as was used to take up the distillate and the same standard acid as was used to titrate the ammonia in the actual determination. The titrations shall be made to the nearest 0.05 ml. Express results in terms of nitrogen. 1 ml. 0.0 acid = 0.00014 gm. nitrogen. Where an allowance for change in moisture content under these Rules must be made, the percentage nitrogen reported shall be the percentage found divided by  $(100 - \text{the percentage moisture content of the sample determined as prescribed under these Rules})$  and multiplied by  $(100 - \text{the percentage moisture content of the Official Sample})$ . Otherwise the percentage found shall be the percentage reported.

(11) The following reagents in addition to the apparatus

and reagents specified under the rule shall be used for the determination of nitrogen in Ammonium Sulphate Nitrate, Calcium Ammonium Nitrate, Nitrate of Soda or in a compound fertilizer in which nitrogen is declared to be present entirely as nitrate nitrogen or as ammonium nitrogen and nitrate nitrogen: Devarda's alloy, finely powdered so that not less than 80 per cent will pass through a sieve having apertures about 0.25 mm. square. A solution of the fertilizer shall be prepared in the manner prescribed under this rule. 10 ml. of the clear solution shall then be transferred to a Markham distillation apparatus and to it shall be added 1 gm. of Devarda's alloy and 5 ml. of water. 10ml. measured by measuring cylinder of the 50 per cent sodium hydroxide solution shall be poured carefully down the other constituents of the flask. The distillate outlet shall dip into a measured volume of 2 per cent boric acid solution in a 100 ml. flat bottom flask. The contents of the distillation apparatus shall then be mixed and allowed to stand in the cool for 10-15 minutes. Steam shall then be introduced slowly increasing gently to a steady bubbling. The distillate is collected in the boric acid in six minutes. The nitrogen determination shall then proceed in the manner prescribed under this rule.

(12) The apparatus specified under this rule and the reagents specified under this rule shall be used for the determination of nitrogen in urea or in a urea containing compound fertilizer in which no nitrate nitrogen is declared to be present.

(13) About 2 gm. weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed under these Rules shall be placed in a Kjeldahl flask and to it shall be added, first 50 ml. of water and then slowly with frequent shaking and cooling, 25 ml. measured by measuring cylinder, of concentrated sulphuric acid. The Kjeldahl flask which shall then be gently heated until the water is expelled. The Kjeldahl flask with a contents shall then be cooled to room temperature, The digest shall then be transferred to a volumetric flask of 500 ml. capacity using small quantities of distilled water and the volume shall be adjusted to 500 ml. The nitrogen determination shall then proceed in the manner prescribed in subsection (c) (iii) of this rule.

(14) The following reagent in addition to the reagents specified in this rule and the apparatus specified in this rule shall be used for the determination of nitrogen in an organic nitrogen or urea containing compound fertilizer in which nitrate nitrogen is also declared to be present -

Crystalline Sodium Thiosulphate.

(15) About 2 gm. weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed in these Rules shall be taken and

treated with sulphuric acid in the manner prescribed in these Rules accordingly as the fertilizer is or is not believed to contain urea. It shall then be cooled, 5 gm. of the crystallized sodium thiosulphate shall be added in small amounts and the whole shall be allowed to stand for one hour with occasional shaking. The nitrogen determination shall then proceed in the manner prescribed in subsection (b) (ii) and part of subsection (b) (iii) of this rule.

8. (1) The following apparatus and reagents shall be used for the determination of phosphate in a fertilizer or in an animal foodstuff -

(a) a laboratory spoon for drawing the sample;

(b) a weighing bottle or boat;

(c) a laboratory balance which is sensitive to 1 mg. or less, and its weights;

(d) volumetric flasks 100 ml. and 250 ml. minimum specification B.S. 1792, Class B;

(e) volumetric flasks 50 and 200 ml. minimum specifications B.S. 1792, Class B, if prescribed in this rule;

(f) pipettes 10, 25 and 50 ml. minimum specification B.S. 1583, Class B;

(g) burettes 50 ml. minimum specification B.S. 846, Class B. Graduated pipettes 25 ml., minimum specification B.S. 700, Class B, Type 2;

(h) measuring cylinders 5, 10, 25, and 500 ml., minimum specification B.S. 604, Class B;

(i) wash bottles;

(j) a spectrophotometer, with a monochromator capable of being set to give a source of light with wavelength of  $4200\text{\AA}$ , or a colorimeter or absorptiometer fitted with a  $425\text{\AA}$ , violet light filter, with two cells of 1 cm. optical length.

(k) a time piece;

(l) a dry flat bottom flask 1,000 ml.;

(m) a dry 20 cm. diameter glass funnel;

(n) 32 cm. diameter medium fine filter papers;

(o) glass rods;

(p) graph paper, 1 mm. rulings;

(q) sodium sulphate solution, prepared by dissolving 54



- gm. anhydrous sodium sulphate in 500 ml. water;
- (r) vanadium molybdate reagent, prepared by dissolving separately 20 gm. of ammonium molybdate and 1 gm. of ammonium vanadate in water, mixing, acidifying with 140 ml. of concentrated nitric acid, and diluting with water to 1 litre;
- (s) phosphate stock solution, prepared by dissolving in water, 1.9173 gm. of potassium dihydrogen phosphate which had previously been dried at 150°C. for one hour and cooled in a desiccator and diluting to 1,000 ml. in a volumetric flask; and
- (t) standard phosphate solution, prepared by diluting 50 ml. measured by pipette, of phosphate stock solution to 250 ml., in a volumetric flask. This solution contains 0.2 mgm. of phosphorous pentoxide per millilitre.

(2) The following apparatus reagents in addition to those specified above shall be used for the determination of water soluble phosphate in a fertilizer -

- (a) volumetric flasks 50 and 500 ml., minimum specification B.S. 1792, Class B;
- (b) a laboratory shaking machine accommodating the aforesaid 500 ml. volumetric flask;
- (c) a safety pipette 1 ml.;
- (d) beakers 50 ml.;
- (e) a hot plate with an energy regulator heat control;
- (f) litmus paper;
- (g) concentrated nitric acid;
- (h) approximately 1.0N sodium hydroxide.

(3) Between 9.9 and 10.1 gm., weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed in rule 2 (a) of these Rules, shall be transferred to a 500 ml. volumetric flask. 400 ml. of water at 20°C. shall then be added and the flask shall be shaken continuously for 30 minutes on the shaking machine. The contents shall then be diluted to volume, mixed well and filtered through a dry 32 cm. filter paper in the dry filter funnel into the dry flat bottom flask.

(4) 25 ml. measured by pipette, of the filtrate shall be transferred to the 50 ml. beaker and to it shall be added by safety pipette, 1 ml. of the concentrated nitric acid. The solution shall then be heated to incipient boiling on the hot plate and maintained at this temperature for 10

minutes. It shall then be cooled, a piece of litmus paper shall be placed in the solution and approximately 1.0N sodium hydroxide solution shall be added slowly, with stirring, until the paper starts to turn blue. The solution shall then be transferred to a 50 ml. volumetric flask and diluted to volume.

(5) This solution shall then be further diluted with water at 20°C. to an extent which shall be determined by the percentage of phosphorous pentoxide which is believed to be present in accordance with the table 2.

The solution taken for dilutions shall be measured by graduated pipette.

(6) 25 ml. measured by pipette, of the solution obtained as a result of the dilution prescribed in subsection (b) (iv) of this rules shall then be placed in a 100 ml. volumetric flask.

(7) Into a series of seven 100 ml. volumetric flasks shall be measured by a burette, 25.0, 26.0, 27.0, 28.0, 29.0, 30.0 and 31.0 ml. of the Standard Phosphate solution (containing respectively 5.0, 5.2, 5.4, 5.6, 5.8, 6.0 and 6.2 mgm.  $P_2O_5$ ).

(8) To each of these samples of the Standard Phosphate solution and to the 25 ml. aliquot of diluted sample solution shall be added by pipette, 10 ml. of the sodium sulphate solution and 25 ml. of the vanadium molybdate reagent at a temperature of 20°C. The solution in each flask shall then be diluted to volume with water at 20°C, shall be mixed and shall be allowed to stand for ten minutes while its colour develops.

(9) While these solutions are so standing, the spectrophotometer shall be set to operate at 4200A° (or the colorimeter or absorptiometer shall be brought into operation as the case may be). Then the ten minutes standing period having been completed and following procedures which are appropriate to the operation of the instrument used, the optical densities of its cells shall be compared, using the coloured standard solution containing 5.0 mgm.  $P_2O_5$  per 100 ml. if the comparison reveals that there is a small difference between the two cells being used, the cell with the lower optical density shall be used as the standard reference cell. The apparent optical densities of the coloured standard solutions and of the coloured sample solution relative to the coloured standard solution containing 5.0 mgm.  $P_2O_5$ , per 100 ml. shall then be determined. The apparent optical densities of the coloured standard solutions shall be plotted on a calibration graph against their phosphorous pentoxide content values. The number of milligrams and parts of a milligram of phosphorous pentoxide per 100 ml. of coloured standard solution having the same optical density as the coloured sample solution shall then be determined by interpolation on the calibration graph. The determination shall

**TABLE 2 - PHOSPHATE DILUTION IN RELATION TO PHOSPHATE LEVELS IN FERTILIZERS**

<i>Where the P<sub>2</sub>O<sub>5</sub> content being measured is believed to be:</i>		<i>the Nos. of ml. of solution which shall be taken for dilution shall be:</i>	<i>and it shall be diluted in a volumetric flask to:</i>
	less than 5%	24	50 ml.
At least 5% but	less than 5.5%	22	50 ml.
At least 5.5% but	less than 6%	20	50 ml.
At least 6% but	less than 6.5%	19	50 ml.
At least 6.5% but	less than 7%	17	50 ml.
At least 7% but	less than 7.5%	16	50 ml.
At least 7.5% but	less than 8%	15	50 ml.
At least 8% but	less than 8.5%	14	50 ml.
At least 8.5% but	less than 9.5%	13	50 ml.
At least 9.5% but	less than 10%	12	50 ml.
At least 10% but	less than 11%	22	100 ml.
At least 11% but	less than 12%	20	100 ml.
At least 12% but	less than 13%	19	100 ml.
At least 13% but	less than 14%	17	100 ml.
At least 14% but	less than 15%	16	100 ml.
At least 15% but	less than 16%	15	100 ml.
At least 16% but	less than 17%	14	100 ml.
At least 17% but	less than 19%	13	100 ml.
At least 19% but	less than 20%	12	100 ml.
At least 20% but	less than 22%	22	200 ml.
At least 22% but	less than 24.5%	20	200 ml.
At least 24.5% but	less than 27.5%	18	200 ml.
At least 27.5% but	less than 30.5%	16	200 ml.
At least 30.5% but	less than 33%	15	200 ml.
At least 33% but	less than 35%	14	200 ml.
At least 35% but	less than 38%		200 ml.
At least 38% but	less than 41%	13	200 ml.
At least 41% but	less than 45%	12	200 ml.
At least 45% but	less than 49.5%	11	200 ml.
At least 49.5%		10	200 ml.
		9	

be made to the nearest 0.01 mgm. A new standard Phosphate solution, a new set of coloured standards prepared as prescribed in this rule and a new calibration graph shall be prepared for each phosphate determination.

(10) If the number of milligrams and parts of a milligram of phosphorous pentoxide so found in the 100 ml. of coloured sample solution is expressed as x, if the number of millilitres of solution taken in making the dilution prescribed in this rule, is expressed as y, and if the sample is believed to contain less than 10 per cent water soluble phosphorous pentoxide, then the percentage water soluble phosphorous pentoxide found in the sample shall be taken  $X/Y$  multiplied by 200 and divided by the weight in grams and parts of a gram of sample taken for the analysis. If the sample is believed to contain at least 10 per cent but less than 20 per cent water soluble phosphorous pentoxide, then the percentage found in the sample shall be taken as  $x/y$  multiplied by 400 divided by the weight in grams and parts of a gram of sample taken for the analysis. If the sample is believed to contain at least 20 per cent water soluble phosphorous pentoxide, then the percentage found shall be taken as  $x/y$  multiplied by 800 and divided by the weight in grams and

parts of a gram of sample taken for the analysis. Where an allowance for change in moisture content under these Rules must be made, the percentage water soluble phosphorous pentoxide reported shall be the percentage found, divided by (100 - the percentage moisture content of the sample determined as prescribed under these Rules) and multiplied by (100 - the percentage moisture content of the Official Sample). Otherwise, the percentage found shall be the percentage reported.

(11) The following apparatus and reagents in addition to those specified in this rule shall be used for the determination of citric soluble phosphorous pentoxide in a fertilizer -

- (a) a stoppered shaking bottle, 1 litre;
- (b) a laboratory shaking machine to accommodate the aforesaid shaking bottle;
- (c) a volumetric flask, 1,000 ml. minimum specification B.S. 1792, Class B;
- (d) a measuring cylinder 500 ml;

- (e) graduated pipettes 5 and 10 ml. minimum specification B.S. 700, Class B, Type 2;
- (f) as required for the 2 per cent citric acid solution additions prescribed in this rule;
- (g) two per cent acid, prepared by dissolving 20 gm. of pure crystallized citric acid, monohydrate in water and diluting to volume at 20°C. in a 100 ml. volumetric flask.

(12) Between 4.9 and 5.1 gm. weighed to the nearest milligram, of the sample which has been prepared for analysis in the manner prescribed in these Rules shall be placed in the stoppered shaking bottle. To it shall be added 500 ml. measured by measuring cylinder, of the 2 per cent citric acid solution, with shaking as to avoid the possibility of the fertilizer caking. The flask shall then be shaken continuously for 30 minutes on the shaking machine. After shaking, the whole of the liquid shall be poured at one into a dry filter paper in the dry filter funnel and the filtrate collected in the dry flat bottom flask. If the filtrate is not clear it shall be passed again through the same filter. The solution shall be diluted in the manner prescribed in this rule.

(13) 25 ml. measured by pipette, of the diluted solution shall then be placed in 100 ml. volumetric flask.

(14) Into a series of seven 100 ml. volumetric flask shall be measured by burette 25.0, 26.0, 27.0, 28.0, 29.0, 30.0 ml. of the standard phosphate solution containing respectively 5.0, 5.2, 5.4, 5.6, 5.8, 6.0 and 6.2 mgm.  $P_2O_5$ . If the fertilizer is believed to contain less than 10 per cent of phosphorous pentoxide which is soluble in 2 per cent citric acid, 0.5 ml. of the 2 per cent acid solution shall be added to each of these standard phosphorous solutions for every 1 ml. of sample solution used in the dilution to 50 ml. prescribed in this rule. If the fertilizer is believed to contain at least 10 per cent but less than 20 per cent of phosphorus pentoxide which is soluble in 2 per cent citric acid, 0.25 ml. of the 2 per cent citric solution shall be added to each of these standard phosphorus solutions of every 1 ml. of sample solution used in the dilution to 100 ml. prescribed in this rule. If the fertilizer is believed to contain at least 20 per cent of phosphorus pentoxide which is soluble in 2 per cent citric acid, 0.125 ml. of the 2 per cent citric acid solution shall be added to each of these standard phosphorus solutions for every 1 ml. of sample solution used in the dilution to 200 ml. prescribed in this rule. These citric acid solution additions shall be measured by graduated pipette and shall be to the nearest 0.1 ml. The phosphate determination shall then proceed in the manner prescribed in this rule.

(15) If the number of milligrams and parts of a milligram of phosphorus pentoxide so found in the 100 ml. of coloured sample solution is expressed as x; if the

number of millilitres of solution taken in the dilution in the manner prescribed in this rule is expressed as y, and if the sample is believed to contain less than 10 per cent of phosphorus pentoxide which is soluble in 2 per cent citric acid, then the percentage citric soluble phosphorus pentoxide found in the fertilizer shall be taken as  $x/y$  multiplied by 100 and divided by the weight in grams and parts of a gram of sample taken for the analysis. If the sample is believed to contain at least 10 per cent but less than 20 per cent of phosphorus pentoxide which is soluble in 2 per cent citric acid, then the percentage found shall be as  $x/y$  multiplied by 200 and divided by the weight in grams and part of a gram of sample taken for analysis. If the sample is believed to contain at least 20 per cent of phosphorus pentoxide which is soluble in 2 per cent citric acid, then the percentage found shall be taken as  $x/y$  multiplied by 400 and divided by the weight in grams and parts of a gram of sample taken for the analysis. Where an allowance for a moisture content under these Rules must be made, the percentage citric soluble phosphorus pentoxide reported shall be the percentage found, divided by 100 minus the percentage moisture content reported of the sample determined as prescribed under these Rules and multiplied by 100 minus the percentage moisture content of the Official Sample. Otherwise, the percentage found shall be the percentage reported.

9.(1) The following apparatus and reagents in addition to those specified under rule 8 (1) of these Rules shall be used for the determination of total phosphorus pentoxide in a mineral fertilizer -

- (a) a beaker 400 ml;
- (b) a hot plate with energy regulator heat control;
- (c) a volumetric flask 500 ml. minimum specification B.S. 1792, Class B;
- (d) safety pipettes 10 ml;
- (e) concentrated nitric acid;
- (f) concentrated hydrochloric acid.

10.(1) The following apparatus and reagents in addition to those specified under rule 8 (1) of these Rules shall be use for the determination of total phosphate in a fertilizer containing organic material or in an animal food-stuff -

- (a) a silica capsule or dish about 55 mm. diameter;
- (b) a hot plate with an energy regulator heat control;
- (c) a laboratory oven set to operate at 100° C.;
- (d) a laboratory furnace;

- (e) beakers 400 ml.;
- (f) a volumetric flask 500 ml., minimum specification B.S. 1792, Class B;
- (g) a graduated safety pipette 23 ml. type 2;
- (h) a safety pipette 5 ml.;
- (i) an 8 cm. diameter glass funnel;
- (j) 12.5 cm. diameter medium fine filter papers;
- (k) a watch glass 9 cm. diameter;
- (l) calcium oxide;
- (m) concentrated nitric acid; and
- (n) concentrated hydrochloric acid.

(2) Between 4.9 and 5.1 gm. weighed to the nearest milligram, of the sample which has been prepared in the manner prescribed under these Rules shall be placed in the silica capsule or dish. 1 gm. of calcium oxide shall then be added and mixed with the sample and the mixture shall be thoroughly wetted with water. The wet mixture shall then be dried in the oven. It shall then be heated gently and finally incinerated in the furnace to destroy as much organic matter as possible, but the temperature in the furnace during that time shall not be allowed to exceed 500°C.

(3) The incinerated material shall then be allowed to cool and shall be transferred to the 400 ml. beaker with 10 ml. of distilled water. 12 ml. of the concentrated hydrochloric acid shall then be added, the addition being made sufficiently slowly to avoid loss by effervescence. 5 ml. of the concentrated nitric acid shall then be added. The mixture shall then be heated to incipient boiling and kept at that temperature for 10 minutes. About 10 ml. of water shall then be added and the solution filtered through a 12.5 cm. filter paper in an 8 cm. filter funnel into a 400 ml. beaker, any insoluble material remaining being transferred to the filter with minimum amount of water and washed twice with small quantities of water. The filtrate on the beaker shall then be protected with the watch glass.

(4) The filter paper and the insoluble matter it contains shall then be transferred to the original capsule or dish and dried in the oven. It shall then be heated gently and finally incinerated in furnace, the incineration being continued until all the carbon is destroyed, but the temperature in the furnace during that time shall not be allowed to exceed 500°C.

(5) The resultant ash shall then be combined with the filtrate which had been protected with the watch glass in

a beaker and the whole shall be heated to boiling. The solution shall then be cooled to 20°C., transferred to a 500 ml. volumetric flask diluted to volume, mixed well and filtered through a dry 32 cm. filter paper in the dry 20 cm. filter funnel into the dry flat bottom flask, the first 10 to 20 ml. of filtrate being discarded.

(6) The phosphate determination shall then proceed in the manner prescribed under this rule.

11.(1) The following apparatus shall be used for the determination of the percentage material passing through a Standard Test sieve -

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance sensitive to 1 cg. or less, and its weights;
- (d) a laboratory oven set to operate at 100°C.;
- (e) a standard sieve, minimum specification B.S. 140, of the mesh prescribed for the determination, with a fitted lid and lower receiver;
- (f) a time piece;
- (g) a small weighed beaker;
- (h) a smooth clean dry hardwood surface;
- (i) a sharp edged ruler;
- (j) a camel hair dabbing brush; and
- (k) a camel hair flat brush.

(2) A large portion of the Official Sample shall be mixed thoroughly on the hardwood surface and a representative portion thereof obtained by applying the procedure prescribed under rule 15 of the Fertilizer and Animal Foodstuffs (Sampling) Rules, for obtaining a sub-sample and weighing at least 25 gm., shall be dried at 100°C. and cooled. About 200 gm. weighed to the nearest centigram, of the dried sample shall be transferred to the sieve with the lower receiver attached. The lid shall then be fitted and the sieve shall then be shaken for five minutes with frequent tapping of the sides. The powder which collects in the lower receiver during the shaking shall then be brushed with the flat brush into the small weighed beaker and weighed to the nearest centigram. The sieving shall then be reassembled and shaking and tapping shall be continued for two minutes. The powder which has collected in the lower receiver during this second shaking period shall then be added to the first portion and the weighing repeated. The shaking, tapping

and weighing processes shall be continued until no more than four centigrams of powder passes through the sieve in a two-minute shaking period.

(3) The fibres of the dabbing brush shall be applied to any lumps remaining on the sieve after each shaking period so as to cause them to disintegrate but care shall be taken that the hard parts of the brush do not make contact with the lumps during the disintegration or that the brush is not used to brush particles through the sieve.

12.(1) The following apparatus and reagents shall be used for the determination of free acid in Sulphate of ammonia -

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance sensitive to 1 centigram or less, and its weights;
- (d) burettes of capacity appropriate to the percentage of acid believed to be present in the sample, minimum specification B.S. 846, Class B;
- (e) a flat bottom flask 400 ml.;
- (f) a 10 cm. diameter glass funnel;
- (g) 15 cm. diameter general purpose filter papers;
- (h) glass rods;
- (i) 0.1N standard sodium hydroxide, standardized against 0.1N sulphuric or hydrochloric acid which had been standardized just previously against 0.1N sodium carbonate solution;
- (j) methyl red solution prepared by adding 0.5 ml. of 0.1N sodium hydroxide to 5 ml. of 90 percent industrial methylated spirits, dissolving in this solution 25 mgm. of methyl red and diluting the resultant solution to 250 ml. with 50 per cent industrial methylated spirits; and
- (k) about 20 gm. weighed to the nearest centigram, of the sample which has been prepared for analysis in the manner prescribed in rule 2 (a) of these Rules, shall be dissolved in about 50 ml. of water and filtered, the filtrate being collected in the flat bottom flask.

(2) Any insoluble matter retained in the filter shall be washed repeatedly and the combined filtrate and washing shall be made up to about 250 ml. This solution shall then be titrated from a burette of suitable capacity with the standard sodium hydroxide, using two or three drops of methyl red solution as indicator, the titration being

made to the nearest 0.05 ml. The per cent free acid found in the fertilizer shall be taken as the number of millilitres and parts of a millilitre, of the standard sodium hydroxide solution used to neutralize the fertilizer solution, multiplied by 4.0 times the normality of the aforesaid standard sodium hydroxide solution and divided by the weight in grams and parts of a gram of sample taken for the analysis.

(3) Where an allowance for change in moisture content under these Rules must be made, the percentage free acid content reported shall be the percentage found divided by 100 minus the percentage moisture content of the sample determined as prescribed under these Rules and multiplied by 100 minus the percentage moisture content of the Official Sample. Otherwise the percentage found shall be the percentage reported.

13.(1) The following apparatus and reagents shall be used for the determination of biuret in a urea containing fertilizer -

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mgm. weight or less;
- (d) a laboratory balance with a capacity of up to 500 gm. which is sensitive to 1 decigram weight or less;
- (e) balance weights;
- (f) a hot plate with energy regulator heat control;
- (g) a time piece;
- (h) a water bath regulated to maintain a water temperature between 32.9°C. and 33.1°C.;
- (i) a spectrophotometer with a monochromator capable of being set to give a source of light with wavelength of 5500A° or a colorimeter or absorptiometer capable of being fitted with a 5400 or 5500A° or a yellow/green light filter and with paired cells of the same optical length;
- (j) a measuring cylinder 25 ml;
- (k) volumetric flasks 100 and 1,000 ml., minimum specification B.S. 1972, Class B;
- (l) burettes 50 ml. minimum specification B.S. 846, Class B, Pipette 50 ml. minimum specification B.S. 1583, Class B;
- (m) a beaker 1 litre;

- (n) 25 cm. diameter general purpose filter papers;
- (o) 40 cm. diameter general purpose filter papers;
- (p) a centigrade thermometer reading to 100°C. in one degree units;
- (q) glass rods;
- (r) graph papers 1 mm. rulings;
- (s) approximately 0.1N sodium hydroxide or approximately 0.1N sulphuric acid as prescribed under this rule;
- (t) sodiumpotassium tartrate solution prepared by dissolving 50.8 gm. of sodium potassium tartrate tetrahydrate and 25.7 gm. sodium hydroxide in water and diluting to 1 litre;
- (u) a copper sulphate solution prepared by dissolving 15 gm. crystalline copper sulphate in water and diluting to 1,000 ml; and
- (v) pure biuret which has been dried and stored in a desiccator over anhydrous calcium chloride.

(2) A portion of the sample which has been prepared in the manner prescribed under these Rules and which is believed to contain between 0.4 and 1.2 gm. of biuret shall be weighed to the nearest decigram.

(3) The portion taken shall be placed in the litre beaker, together with 700 ml. of distilled water. The mixture shall be heated to 70° to 80°C. with stirring and then allowed to cool to 30°C. A piece of litmus paper shall then be added and the solution shall be neutralized with the approximately 0.1N sodium hydroxide (if the paper turns red) or the approximately 0.1N sulphuric acid (if the paper turns blue)

until the paper just starts to change colour. The solution shall then be filtered into the 1,000 ml. volumetric flask. The residue shall be washed three time with water and the combined washing and filtrate diluted to volume.

(4) 50 ml. of the samples solution so obtained shall be measured by pipette into a 100 ml. volumetric flask.

(5) About 2 gm., weighed to the nearest milligram, of the pure biuret shall be treated in the manner prescribed in this rule.

(6) Into a series of six 100 ml. volumetric flask shall be measured by burette, 10.0, 14.0, 18.0, 22.0, 26.0 and 30.0 ml. of the pure biuret solution so obtained. The total volume of each of the pure biuret solutions shall then be adjusted to 50 ml. by suitable addition of water from a

second burette.

(7) To each of these 50 ml. samples of pure biuret solution and to the 50 ml. aliquot of sample solution, 20 ml. of th sodium potassium tartrate solution and 20 ml. of the copper sulphate solution shall be added and constant swirling. The solutions shall then be diluted to volume and stood for 15 to 30 minutes in the water bath at between 32.9° and 33.1°C. while their colour develop. While the solutions are standing in the water bath the spectrophotometer shall be set to operate at 5500A° (or the colorimeter or absorptiometer shall be brought into operation as the case may be). Then, the standing period having been completed and following the procedures which are appropriate to the operation of the instrument used, the optical densities of its cells be compared, using the coloured standard solution containing 10.0 ml. of the pure biuret solution. If the comparison reveals that there is a small difference between the two cells being used, the cell with the lower optical density shall be used as the standard reference cell. The apparent optical densities of the coloured standard solutions and of the coloured sample solution relative to the coloured standard containing 10.0 ml. of pure biuret solution per 100 ml. shall then be determined.

(8) The apparent optical densities of the coloured standard solution shall be plotted on a calibration graph against the number of millilitres of pure biuret solution per 100 ml. which they contain. The number of millilitres of pure biuret solution per 100 ml. in a coloured standard solution having the same optical density as the coloured sample solution shall then be determined by interpolation on the calibration graph. The determination shall be made to the nearest millilitre.

(9) A new pure biuret solution, a new set of coloured standards prepared from it and a new calibration graph shall be prepared of reach biuret determination.

(10) If the number of millilitres of pure biuret solution per 100 ml. of a coloured standard solution having the same optical density as the coloured sample solution is expressed at x, and the number of grams and parts of a gram of pure biuret which was weighed out for preparing the pure biuret solution is expressed as y, the percentage biuret found in the fertilizer shall be taken as x times y multiplied by 2 and divided by the weight in grams and parts of a gram of sample taken for the analysis.

(11) Where an allowance for change in moisture content under these Rules must be made, the percentage biuret reported shall be the percentage found, divided by 100 minus the percentage moisture content of the sample determined as prescribed under these Rules and multiplied by 100 minus the percentage moisture content of the Official Sample. Otherwise the percentage found shall be the percentage reported.

14.(1) The following apparatus and reagents shall be used for the determination of salt in an animal foodstuff-

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mg. or less, and weights;
- (d) a laboratory oven set to operate at 100°C.;
- (e) a laboratory furnace;
- (f) a silica dish about 50 mm. diameter;
- (g) a porcelain mortar 8.9 to 11.5 cm. outside diameter and pestle;
- (h) a volumetric flask 250 ml., minimum specification B.S. 1792, Class B;
- (i) pipettes 5 and 100 ml. minimum specification B.S. 1583, Class B;
- (j) burettes 10 ml. minimum specification B.S. 846, Class B;
- (k) 10 cm. diameter filter funnels;
- (l) 15 cm. diameter general purpose 15 cm. diameter rapid double acid washed filter papers;
- (m) glass rods;
- (n) a conical flask 250 ml.;
- (o) a flat bottom flask 500 ml.;
- (p) a wash bottle with its neck and mouthpiece insulated for handling hot liquids;
- (q) calcium oxide, finely ground, free from chloride 0.1N silver nitrate standardized against 0.1N sodium chloride (which contains 5.846 grams pure sodium chloride per litre);
- (r) 0.1N ammonium or potassium thiocyanate standardized against the 0.1N silver nitrate;
- (s) dilute nitric acid, prepared by adding 1 part of concentrated nitric acid to 4 parts of water;
- (t) clarified nitric acid solution prepared by diluting concentrated nitric acid with about of its volume of water and boiling until practically colourless; and
- (u) ferric indicator solution, prepared by adding 5 ml.

of concentrated nitric acid to 100 ml. of saturated aqueous ferric ammonium sulphate.

(2) About 5 gm. weighed to the nearest milligram, of the sample which has been prepared in the manner prescribed under these Rules shall be placed in the silica dish. 1 gm. of the calcium oxide shall then be added and shall be mixed with the sample and the mixture shall be wetted with water to a thick paste. The mixture shall be dried in the oven, allowed to cool and then ground to a fine powder and shall then be heated gently and finally incinerated in the furnace until all the organic matter has been thoroughly charred, but the temperature in the furnace during that time shall not be allowed to exceed 500°C.

(3) The residue shall then be extracted with repeated portions of hot water and filtered through a general filter paper. The filtrate shall be cooled and diluted to volume in a 250 ml. volumetric flask. 100 ml. of this solution shall be measured by pipette into the conical flask and acidified with the dilute nitric acid. A known volume of the 0.1N silver nitrate solution shall then be measured into the solution in the conical flask from a burette, the silver nitrate solution being added until no further precipitate is formed and a slight excess of silver nitrate is present. The volume of 0.1N silver nitrate added shall be measured to the nearest 0.1 ml. The precipitate shall then be stirred well, filtered through a rapid filter paper into the flat bottom flask and washed thoroughly, 5 ml. measured by pipette, of the ferric indicator solution and a few millilitres of the clarified nitric acid solution shall then be added to the combined filtrate and washing in the flat bottom flask. The excess of the silver nitrate remaining in the filtrate shall then be determined by titration with 0.1N ammonium or potassium thiocyanate from a burette until a permanent light brown colour appears. The titration shall be made to the nearest 0.1 ml.

(4) If the number of millilitres and parts of a millilitre of 0.1N silver nitrate added to the solution in the conical flask is expressed as x and if the number of millilitres and parts of a millilitre of 0.1N thiocyanate solution used in the titration to determine the excess of silver nitrate is expressed as y, the percentage salt found be taken as x-y multiplied by 1.461 and divided by the weight in grams and parts of a gram of sample taken for the analysis.

(5) Where an allowance for change in moisture content under these Rules must be made, the percentage salt reported shall be the percentage found, divided by 100 minus the percentage moisture content of the sample determined as prescribed under these Rules and multiplied by 100 minus the percentage moisture content of the Official Sample. Otherwise the percentage found shall be the percentage reported.

15.(1) The following apparatus and reagents shall be used for the determination of ash, sand, silicious material

and other insoluble mineral matter in an animal foodstuff

- (a) a laboratory spoon for drawing the sample;
- (b) a weighing bottle or boat;
- (c) a laboratory balance which is sensitive to 1 mg. or less, and weighs;
- (d) a hot plate with an energy regulator heat control;
- (e) a laboratory furnace;
- (f) silica capsules or dishes about 55 mm. diameter;
- (g) an 11 cm. diameter funnel;
- (h) 7 cm. diameter general purpose ashless filter papers; wash bottles with their necks and mouthpieces insulated for handling hot liquids;
- (i) glass rods;
- (j) concentrated hydrochloric acid; and
- k) dilute hydrochloric acid, prepared by diluting 240 ml. of concentrated hydrochloric acid with water to 1 litre.

(2) Between 2 and 5 g. weighed to the nearest milligram, of the sample which has been prepared in the manner prescribed under these Rules shall be placed in a silica capsule or dish and shall then be heated gently and finally incinerated in the furnace until all the carbon has been destroyed but the temperature in the furnace during that time shall not be allowed to exceed 500°C. The ash shall then be cooled and moistened with the concentrated hydrochloric acid. The moist ash shall then be evaporated to dryness and baked on the hot plate. The dried ash shall then be extracted repeatedly with the hot dilute hydrochloric acid. The extract each time shall be decanted through a filter paper in the filter funnel. After the extraction has been completed, the residue shall be transferred to the aforesaid filter paper in the filter funnel and shall be washed thoroughly with hot water. The filter paper and the residue it contains shall then be placed in a silica capsule or dish whose weight is known to the nearest milligram. These shall be dried in the oven and shall then be heated gently and finally incinerated in the furnace until all the carbon is destroyed, but the temperature in the furnace during that time shall not be allowed to exceed 500°C. The silica capsule and the ash it contains shall be allowed to cool and shall be reweighed, the weight being determined to the nearest milligram. The percentage of sand, silicious matter and other insoluble mineral material found shall be taken as the weight in milligrams of ash so found, multiplied by 100 and divided by the weight in milligrams of samples taken for analysis.

(3) Where an allowance for change in moisture content under these Rules must be made, the percentage of sand, silicious material and other insoluble matter reported shall be the percentage found, divided by 100 minus the percentage moisture content of the sample determined as prescribed under these Rules and multiplied by 100 minus the percentage moisture content of the Official Sample. Otherwise the percentage founds shall be the percentage reported.

15A.(10 The following reagents shall be used for the determination of sugar in an animal foodstuff -

- (a) Potassium oxalate solution - dissolve 50 g. of potassium oxalate in water and dilute to 1 litre.
- (b) Zinc acetate solution - dissolve 219 g. of crystallized zinc acetate and 30 ml. of glacial acetic acid in water and dilute to 1 litre.
- (c) Potassium ferrocyanide solution - dissolve 106 g. of crystallized potassium ferrocyanide in water and dilute to 1 litre.
- (d) N. hydrochloric acid.
- (e) Phenolphthalein indicator solution - dissolve 250 mg. of phenolphthalein in 150 ml. of industrial methylated spirit and dilute with water to 250 ml.
- (f) 10 per cent sodiumhydroxide solution - dissolve 100 g. of sodium hydroxide in water and dilute to 1 litre.
- (g) Fehling's solution - mix equal volumes of a solution of copper sulphate and a solution of sodium potassium titrate prepared as follows -

Copper sulphate solution - dissolve 69.28 g. of copper sulphate ( $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ) in water and dilute to 1 litre.

The strength of the Fehling's solution should be such that 10 ml. is equivalent to 0.0525 g. of invert sugar. It should be checked by titrating with a solution of pure sucrose inverted by, and using, the procedure described in subparagraph (f) of paragraph (2) of this rule.

- (h) Sodium potassium titrate solution - dissolve 346 g. of sodium potassium tartrate and 100 g. of sodium hydroxide in water and dilute to 1 litre.
  - (i) Methylene blue solution - dissolve 2.5 g. of methylene blue in water and dilute to 250 ml.
- (2) The following procedure and apparatus shall be used for the determination of sugar in an animal foodstuff -
- (a) When the substance is in solid form weigh to the nearest centigram about 20 g. of the sample or a suf-



- ficient quantity to contain about 2 g. of sugar. Grind in a mortar with hot water (temperature not to exceed 60°C.) and transfer with the aid of water to a 250 ml. beaker through muslin into a 250 ml. volumetric flask, allowing to drain until the liquid is substantially removed, and then squeeze the residue on the muslin. Return the residue to the beaker, add about 50 ml. of water, mix and dezent through the muslin into the volumetric flask, again squeezing the residue after draining. Repeat this treatment with a further 50 ml. of water, and finally squeeze the residue on the muslin. Add 5 ml. of potassium oxalate solution to the contents of the volumetric flask followed by 5 ml. of potassium ferrocyanide solution, dilute to 250 ml., mix well and filter. Determine the sugar in 50 ml. of the filtrate by the procedure described in subparagraph (c) of this paragraph.
- (b) When the substance is in liquid form weigh to the nearest mg. about 5 g. of the sample and wash with water into a 250 ml volumetric flask using about 200 ml. of water. To clear the solution add 5 ml. of zinc acetate solution. Mix, dilute to 250 ml. of potassium ferrocyanide solution, again mix, dilute to 250 ml. mix and filter. Determine the sugar in 25 ml. of the filtrate by the procedure described in subparagraph (c) of this paragraph.
- (c) In order to determine the sugar content transfer the measured volume of filtrate obtained as described in subparagraph (a) or (b) of this paragraph to a 300 ml. beaker, add 15 ml. of N. hydrochloric acid, dilute to 150 ml. with water, cover with a glass and heat to boiling point. Continue to boil for 2 minutes, cool, add 2 or 3 drops of phenolphalein indicator solution, just neutralize with 10 per cent sodiumhydroxide solution, transfer to a 200 ml. volumetric flask and dilute to 200 ml. Filter if necessary.
- (d) A preliminary estimation is usually necessary where the percentage of sugar is unknown, in which case transfer exactly 10 ml. of Fehling's solution to a 250 ml. conical flask and add 20 ml. of water. Add from a burette approximately 10 ml. of the filtrate obtained as described in subparagraph (c) of this paragraph, heat to boiling point, and boil briskly for 1 minute. Add 3 drops of methylene blue solution and titrate from the burette at the rate of 1 ml. per 15 seconds until the blue colour is discharged, the contents of the flask being kept boiling throughout the titration. Note the total number of ml. required and call this X ml. This titration should not be outside the range of 15-40 ml. otherwise the determination should be repeated using a more appropriate volume of the filtrate.
- (e) To achieve an exact determination proceed as follows: To 10 ml. of Fehling's solution in a 250 ml. conical flask add, from a burette, (X-1) ml. of the filtrate obtained as described in subparagraph (c) of this paragraph together with sufficient water to make a total volume of 60 ml. heat to boiling point, boil briskly for 1 1/2 minutes and add 3 drops of methylene blue solution. Titrate from the burette at the rate of approximately 0.25 ml. per 15 seconds until the blue colour is discharged, the contents of the flask being kept boiling briskly throughout the titration which must not take more than 1 1/2 minutes. Then the total number of ml. used in the determination equals the sugar equivalent of 10 ml. of Fehling's solution. 10 ml. Fehling's solution = 0.0525 g. invert sugar. Not more than 1 ml. of the filtrate should be required for the completion of the titration. If more than 1 ml. is required, then the determination should be repeated using a more closely calculated volume of filtrate for the original addition. The time taken from the initial boiling point until the end of the titration should be about 3 minutes. If this time is exceeded by more than 20 seconds, the titration should be repeated.
- (f) The Fehling's solution shall be standardized as follows: Dissolve 2.375 g. sucrose (dried at 100°C.) in about 100 ml. of water in a 300 ml. beaker, add 15 ml. of N. hydrochloric acid and sufficient water to give a volume of 150 ml. heat to boiling point, boil for 2 minutes, cool, add 2 or 3 drops of phenolphthalein solution, just neutralize with 10 per cent sodium hydroxide solution, transfer to a 500 ml. volumetric flask and dilute to 500 ml. Then follow the procedure described in subparagraph (e) of this paragraph. 1 ml. of this solution = 0.004785 g. sucrose = 0.005 g. invert sugar, i.e., 10 ml. of Fehling's solution = 10.5 ml of this standard invert sugar solution. The total copper reducing power should finally be determined in terms of sugar ( $C_{12}H_{22}O_{11}$ ).
16. The Certificate of Analysis issued under these Rules shall be in the form set out in the Schedule to these Rules.
17. The Analyst shall report in this Certificate the percentage, to the first decimal place, of each of the constituents of an Official Sample with an inspector, in pursuance of rule 21 of the Fertilizers and Animal Foodstuffs (Sampling) Rules, shall have stated (in the Certificate he affixed to the container or package containing that sample) in addition to the particulars printed or marked in accordance with the requirements of rule 3 of the Fertilizers and Animal Foodstuffs (Packing of Fertilizers) Rules, or rule 4 of the Fertilizers and Animal Foodstuffs (Packing of Animal Foodstuffs) Rules, on the containers or packages from which the Official Sample was drawn or on the labels attached to those containers. Where the Official Sample is stated to be drawn from packages of containers marked or labeled as being sulphate of ammonia, he shall also report the percentage of

free acid. Where the animal foodstuff form which the Official Sample was drawn is sold for poultry mash he shall also report the percentage of salt. Where he finds the Official Sample to contain any deleterious substance whatsoever, he shall report on its presence. Where the Official Sample is an animal foodstuff and where he suspects deleterious proportions of sand, silicious matter or other insoluble matter to be present, he shall also report the total percentage of these materials.

18. The Analyst shall send copies of the Certificate of analysis of each Official Sample which he analyses to the Inspector who drew the sample, to the person in possession of the fertilizer or animal foodstuff at the time the sample was taken, and also to the person, if nay, under whose instructions the sample was collected and to the person who last sold the fertilizer or animal foodstuff.

19. The aforesaid analysis may be undertaken under the supervision of an Analyst by any person or persons whom the said Analyst shall instruct to undertake the analysis but he Certificate of Analysis shall be signed and certified only by an Analyst appointed by the Minister under section 8 of this Act.

**SCHEDULE (r.15)**

**CERTIFICATE OF ANALYSIS**

<sup>1</sup> duly appointed by Gazette Notice No. <sup>2</sup> to be an analyst under the

Fertilizers and Animal Foodstuffs Act, hereby certify that a sample in a sealed container to which was attached a certificate on which was included the following information concerning the sample<sup>3</sup> -

The name and full postal and business addresses of the manufacture where known and of the seller or the person who was in possession of the fertilizer and animal foodstuff at the time the sample was taken:

The name of the fertilizer or animal foodstuff:

The analysis guaranteed by the manufacturer or seller:

The name and full postal address of the Inspector who took the sample:

The name and full postal and business address of the person, if any, under

whose instructions the sample was taken:

The date and place at which the sample was taken:

Other identifying marks or particulars:

has been analysed by me or under my direction and I declare the result of the analysis to be as follows -

- Moisture by <sup>4,5</sup> ..... %
- Nitrogen Total ..... %
- Phosphoric acid as -
- P<sub>2</sub>O<sub>5</sub> - water soluble ..... %
- soluble in 2 per cent citric acid ..... %
- soluble in mineral acid or total ..... %
- Material passing through Standard Test sieve
- B.S. 410, having apertures (Minimum
- Specifications)<sup>6</sup> ..... mm. square
- Oil ..... %
- Protein ..... %
- Fibre ..... %
- Biuret ..... %
- Sodium Chloride ..... %
- Sand, silicious and other insoluble mineral matter .....

Other analysis and remarks (if any) -

<sup>7</sup> ..... %

The analyses were made in accordance with the methods prescribed by the Fertilizers and Animal Foodstuffs (Analysis) Rules.

Witnessed under my hand this .....day of .....19.....

Signature .....

Address of Analyst .....

<sup>1</sup> Here insert the name of the analyst signing the Certificate and the capacity in which he acts in undertaking the analysis.

<sup>2</sup> Here insert the particulars of the Gazette Notice under which the analyst signing the Certificate was appointed an Analyst under the Fertilizers and Animal Foodstuffs Act.

<sup>3</sup> Her insert full particulars taken from the Certificate

affixed to the container containing the Official Sample whose analysis is here reported for the Fertilizer or Animal Foodstuffs whence the Official Sample was drawn to be recognized.

- 4 Here report the moisture content and those particulars in respect of which a specification is laid down or guarantee required and given under the Fertilizers and Animal Foodstuffs Act, in respect of the fertilizer or animal foodstuff whose analysis is here reported.

The result of the analysis shall be reported to the first decimal point.

- 5 Here state the drying procedure followed in the determination.
- 6 Here state the aperture size of the Standard Test Sieve that was used and that was required to be used in determining the percentage of material passing through the Standard Test Sieve.
- 7 Here report the presence of deleterious substance.

#### THE FERTILIZERS AND ANIMAL FOODSTUFFS (DECLARATION AND WARRANTY) RULES

##### L.N. 216/1972

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Declaration and Warranty) Rules.

2. Every vendor of any approved fertilizers shall provide a purchaser with a written declaration and warranty in respect of any sale involving 500 kg. or more of any one kind of an approved fertilizer, or in respect of any sale of an approved fertilizer for resale purposes.

3.(1) Every declaration and warranty required to be given by a vendor to a purchaser under rule 2 of these Rules shall be in the following form -

"I (i).....of .....hereby declare and give warranty as follows in respect of the following approved fertilizer/s which I have sold to (ii) ..... of.....".

(2) In addition to the declaration and warranty required to be given by vendor under rule 2 of these Rules, the vendor shall in respect of each kind of approved fertilizer involved in the transaction make a separate declaration in writing as follows -

"That the packages or containers marked (iii)..... contain (iv) ..... tonnes .....and ..... kilogrammes of (v) and that I guarantee that this ferti-

lizer is not adulterated."

(3) Where the vendor is selling an approved fertilizer partly or wholly by virtue of the contents of its constituents in respect of which he is required to make a declaration and warranty under rule 5 of these Rules, he shall in addition give to the purchaser the following guarantee -

"Further more I guarantee that this fertilizer contains (vi).....(vii)..... per cent of (viii).....".

4.(1) Every vendor shall complete the declaration and warranty by appending his signature at the end thereof.

(2) In the declaration and warranty, the vendor shall insert in the spaces kept blank for that purpose the following particulars -

- (a) at (i) his own name and full postal address;
- (b) at (ii) the name and full postal address of the purchaser;
- (c) at (iii) sufficient detail of the marks on the containers or packages in which the approved fertilizer is packed or particulars shown on the labels attached thereto;
- (d) at (iv) the weight of the approved fertilizer contained in the containers or packages in tonnes and kilogrammes as the case may be;
- (e) at (v) the name under which the fertilizer is prescribed to be an approved fertilizer under the Fertilizers and Animal Foodstuffs (Approved Fertilizers) Rules;
- (f) at (vi) the words "minimum" or "maximum" as the case may be of the percentage of the constituent which he is required to guarantee under rule 5 of these Rules;
- (g) at (vii) the minimum or the maximum percentage as the case may be of the aforesaid constituent which he is required to guarantee under rule 5 of these Rules;
- (h) at (viii) the name of the aforesaid constituent and if the constituents is nitrogen in a compound fertilizer he shall add the words "and that the nitrogen is present in the form of", and he shall then add the words "ammonium nitrogen", "nitrate nitrogen", "organic nitrogen", or such combination of these words as is appropriate to describe the form in which the nitrogen is present in the said compound fertilizer.

5. In making this declaration and warranty -

- (a) if the approved fertilizer is Superphosphate or supers the vendor shall declare the minimum percentage of water soluble phosphorus pentoxide which he guarantees the fertilizer to contain;
- (b) if the approved fertilizer is Soda phosphate, the vendor shall declare the minimum percentage of phosphorus pentoxide which is soluble in 2 per cent citric acid which he guarantees the fertilizer to contain;
- (c) if the approved fertilizer is Basic Slag, the vendor shall declare the minimum percentage of phosphorus pentoxide which is soluble in 2 per cent citric acid which he guarantees the fertilizer to contain and the minimum percentage of fertilizer which he guarantees will pass through a Standard Test Sieve (minimum specification B.S. 410), having apertures not greater than 0.152 mm. sq.;
- (d) if the approved fertilizer is Rock Phosphate, Guano or Bonemeal, the vendor shall declare the minimum percentage of phosphorous pentoxide which is soluble in mineral acid which he guarantees the fertilizer to contain;
- (e) if the approved fertilizer is or containing compound fertilizer the vendor shall declare the minimum percentage of nitrogen and the maximum percentage of biuret which he guarantees the fertilizer to contain;
- (f) if the approved fertilizer is Sulphate of Ammonia, the vendor shall guarantee that the fertilizer contains at least 20 per cent nitrogen and, if the free acid content is in excess of 0.03 per cent, he shall declare the maximum amount of free acid which he guarantees the fertilizer to contain;
- (g) if the approved fertilizer is Calcium Ammonium Nitrate, the vendor shall guarantee that the fertilizer contains at least 20 per cent nitrogen.
- (h) if the approved fertilizer is Ammonium Sulphate Nitrate, the vendor shall guarantee that the fertilizer contains at least 25 per cent nitrogen.
- (i) if the approved fertilizer is Nitrate of soda, the vendor shall guarantee that the fertilizer contains at least 15 per cent nitrogen.
- (j) if the approved fertilizer is Diammonium phosphate, the vendor shall declare the minimum percentage of nitrogen and the minimum percentage of water soluble phosphorus pentoxide which he guarantees the fertilizer to contain;
- (k) if the approved fertilizer is a compound fertilizer the vendor shall declare the minimum percentage of nitrogen and or water soluble phosphorus pentoxide or a phosphorus pentoxide which is soluble in 2 per cent citric acid or mineral acid which he guarantees the fertilizer to contain and shall state in the manner prescribed under paragraph (h) of rule 4 of these Rules the form or forms in which the nitrogen it contains is present.
6. The minimum or maximum percentage, as the case may be of the constituents which the vendor is required to guarantee under rule 5 of these Rules shall be as determined in the manner prescribed under the Fertilizer and Animal Foodstuffs (Analysis) Rules, on samples taken in the manner prescribed under the Fertilizers and Animal Foodstuffs (Sampling) Rules.
7. The completion of any transaction involving the sale of any quantity of any approved fertilizer shall imply that the vendor has made a declaration and warranty to the purchaser in terms laid down by these Rules.
8. Any person who sells any approved animal foodstuffs shall clearly, conspicuously and indelibly mark on or affix to the container in which the animal foodstuff is sold, the particulars required in paragraphs (a), (b), (c) and (d) of this rule or shall, provide the purchaser with a written declaration at the time of sale within a reasonable time after the animal foodstuff is delivered containing the following particulars -
- (a) the seller's name and full postal and business addresses;
- (b) the name of the animal foodstuff sold;
- (c) the guaranteed analysis expressed to the first decimal place of the animal foodstuff in respect of the constituents for which guarantees are required under the Fertilizers and Animal Foodstuffs (Approved Animal Foodstuffs) Rules;
- (d) the means for identifying the animal Foodstuff covered by the declaration.
- Provided that for the sale of quantities of 25 kg. or less of an approved animal foodstuff, it shall be sufficient if the approved animal foodstuff sold is taken out in the presence of and with the knowledge of the purchaser from a parcel bearing a label on which are marked the particulars required under this rule.
9. Any person who sells approved fertilizers without complying with the requirements of rules 2, 3, and 4 of these Rules and any person who sells approved fertilizers partly or wholly by virtue of the contents of its constituents without complying with the requirements of rule 5 of these Rules and any person who sells approved animal foodstuffs without complying with the requirements of rule 8 of these Rules, shall be guilty of an offence and liable to

a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months or both such fine and such imprisonment.

### **THE FERTILIZERS AND ANIMAL FOODSTUFFS (RECORDS AND RETURNS) RULES**

**L.N. 217/1972**

1. These Rules may be cited as the Fertilizers and Animal Foodstuffs (Records and Returns) Rules.

2. Every importer, manufacturer and vendor of fertilizers or animal foodstuffs shall keep records in English in respect of every transaction he makes in fertilizers or animal foodstuffs.

3.(1) These records shall show for each sale of fertilizers and animal foodstuff -

- (a) his own name and full postal address;
- (b) the date on which the sale was made;
- (c) the name whereby each of the fertilizer and animal foodstuff sold is described in declaring it to an approved animal foodstuff for the purpose of the Act and the amount in tonnes and kilogrammes which was sold;
- (d) sufficient detail of the marks on each container or package in which the fertilizer or animal foodstuff was sold, or from which it was taken in making the sale or on the label attached thereto for the said container or package to be identifiable, and on completion of each sale the vendor shall furnish the purchaser with a copy of the record of the sale.

(2) These records shall further show -

- (a) For each sale of 500 kilogrammes or more of a fertilizer and for each and every sale of fertilizer for resale purposes -

- (i) the name and full postal address of the person or concern to whom he sold the fertilizer;

- (ii) a true copy of the declaration and warrant which he gave the purchaser in accordance with the provisions of rules 2, 3 and 4 of the Fertilizers and Animal Foodstuffs (Declaration and Warrant) Rules.

(b) For each purchase of fertilizers -

- (i) the name and full postal address of the person or concern selling the fertilizer;

- (ii) the original of the declaration and warrant which was given to the purchaser in accordance with the provisions of rules 2, 3 and 4 of the Fertilizer and Foodstuffs (Declaration and Warrant) Rules.

- (c) For each transaction in an animal foodstuff in respect of which a declaration and warrant was issued in accordance with the provisions of rule 8 of the Fertilizers and Animal Foodstuffs (Declaration and Warrant) Rules, the original or a true copy of the said declaration and warrant.

4. The vendor should keep the records prescribed in rule 3 of these Rules in respect of the transactions in any fertilizer and animal foodstuff for at least two years after the date of the transaction in the case of fertilizer and at least one year after the date of the transaction in the case of an animal foodstuff.

5. Any person who fails to keep and maintain the records prescribed in rules 2 and 3 for the period prescribed in rule 4 of these Rules shall be guilty of an offence and liable for a first offence, to a fine not exceeding two thousand shillings or to imprisonment for a term not exceeding two months or to both such fine and such imprisonment and for a second and subsequent offence to a fine not exceeding three thousand shillings or to imprisonment for a term not exceeding three months or to both such fine and imprisonment.

## The Irrigation Act of the Laws of Kenya Chapter 347

No. 13 of 1966, L.N. 243/1976, 6 of 1979.

*Commencement: 24th June 1996*

**An Act of Parliament to provide for the development, control and improvement of irrigation schemes, and for purposes incidental thereto and connected therewith.**

### PART I

#### PRELIMINARY

##### Short title.

1. This Act may be cited as the Irrigation Act.
2. In this Act, unless the context otherwise requires - "agriculture" and "agricultural produce" have the meanings assigned to those expressions in the Agriculture Act;

**Interpretation. 6 of 1979, Sch.**

##### Cap. 318.

"Board" means the National Irrigation Board established by section 3;

"national irrigation scheme" means an area of land designated as a national irrigation scheme under section 14.

### PART II

#### ESTABLISHMENT AND INCORPORATION OF BOARD

##### Establishment and incorporation of Board.

3. (1) There is hereby established a Board, to be known as the National Irrigation Board, which shall be a body

corporate having perpetual succession and a common seal, with power to sue and be sued, and capable of purchasing or otherwise acquiring, holding, managing and disposing of any property movable or immovable, entering into contracts, and doing all things necessary for the proper performance of its duties, and discharge of its functions under this Act and any subsidiary legislation made thereunder.

##### Authentication of seal and proof of documents.

(2) The provisions of the Schedule shall have effect as to the constitution, membership, proceedings of and otherwise in relation to the Board.

(3) The Minister may, subject to this Act and on the advice of the Board, by order amend the Schedule.

4. (1) The affixing of the seal of the Board shall be authenticated by the signature of the chairman, the vice-chairman or one member of the Board duly authorized by the Board in that behalf, and the signature of the secretary to the Board.

(2) Any document, other than one required by law to be under seal, made by, and any decision of, the Board may be signified under the hand of the chairman, or the vice-chairman, or any member of the Board authorized by the Board in that behalf, or the secretary to the Board.

(3) Any document purporting to be a document duly executed or issued or signified under the seal of the Board, or on behalf of the Board in accordance with this section, shall be received in evidence, and shall be deemed to be a document so executed or issued or signified, as the case may be, without further proof, unless the contrary is shown.

##### Meetings of Board.

5. (1) The Board shall be convened by the chairman at least four times in every year.

(2) The chairman may at any time convene a special meeting of the Board, and shall do so within one month of the receipt by him of a written requisition signed by at least three members.

**Appointment of secretary and other officers and staff.**

(3) At every meeting of the Board, the member presiding shall have a casting as well as a deliberative vote.

(4) The quorum of the Board shall be eight.

(5) Subject to subsection (4), no act, decision or proceedings of the Board shall be questioned on account of any vacancy in the membership thereof or on account of any defect or failure in the appointment of any of its members.

6. (1) The Board may appoint and employ a secretary and such other officers and servants as may be necessary or desirable for the efficient conduct and operation of the Board.

(2) The Board may establish and make contributions to a pension, superannuation, provident or medical fund or other contributory scheme for its officers and servants, and may grant pensions, gratuities, retiring allowances or sickness or injury benefits to any officers and servants, and may require such officers and servants to contribute to any pension, superannuation, provident or medical fund or contributory scheme.

**Appointment and powers of agents.**

7. The Board may from time to time appoint and employ upon such terms and conditions as it thinks fit any persons or bodies of persons, corporate or incorporate, to be its agents for the purposes of this Act, and every such agent shall, subject to such limitations as the Board may in each case impose, exercise on behalf of the Board all the powers conferred by this Act or by any subsidiary legislation made thereunder on the Board.

**Committees of Board.**

8. The Board may from time to time appoint committees, whether of its own members or otherwise, to carry out such general or special functions as may be specified by the Board.

**Delegation of powers.**

9. The Board may, by resolution, delegate to any committee, member, officer, servant or agent of the Board the exercise of the powers or the performance of any of the functions or duties which the Board is authorized or required by this Act to exercise or perform, either generally or in any particular case.

**Remuneration and expenses.**

10. (1) The members of the Board (other than public officers in receipt of a salary as such) shall be paid out of the funds of the Board such remuneration as the Board, with the approval of the Minister, shall determine.

**General Manager.**

(2) The officers, servants and agents of the Board shall be paid out of the funds of the Board such remuneration as the Board may from time to time determine.

(3) The Board may, in its discretion, refund such travelling and other expenses as may reasonably have been incurred by its members, officers, servants and agents in the performance of their duties under this Act.

11. (1) There shall be an officer of the Board, to be known as the General Manager, who shall be appointed by the Board, subject to the approval of the Minister, and who shall be responsible for the execution of the policy of the Board and for the control and management of its day-to-day business.

(2) The Board shall delegate to the General Manager such of its functions under this Act as are necessary to transact effectively the day-to-day business of the Board of any kind whatsoever, and in particular, and without prejudice to the generality of the foregoing, the Board shall delegate to the General Manager the power, subject to any instructions of a general nature as may be given by the Board -

- (a) to control and supervise the acts of all officers, servants and agents of the Board in the matters of executive administration in the whole field of irrigation and in all matters concerning the accounts and records of the Board; and
- (b) to dispose of all questions relating to the service of officers, servants and agents of the Board and their pay, privileges and allowances.

**Declaration of interest.**

12. Every member of the Board who is or is likely to be concerned in, or who participates or is likely to participate in the profits of, any contract with or work done for the Board otherwise than in his capacity as a member of the Board shall, on the matter coming before the Board for consideration, immediately declare his interest therein, and shall, unless the Board otherwise agrees, retire from the meeting, and shall in any case abstain from voting on the matter.

### PART III

#### FUNCTIONS AND POWERS OF BOARD

##### Directions of Minister.

13. In the exercise of its powers and the performance of its functions under this Act, the Board shall act in accordance with any general or special directions that may be given to it by the Minister.

##### Designation of national irrigation schemes and vesting of land.

14. (1) The Minister may, by notice in the Gazette, designate any area of land to be a national irrigation scheme.

(2) In respect of land, other than Trust land, in a national irrigation scheme, the Minister shall, in accordance with the law for the time being relating to the compulsory acquisition of land, take such steps as may be necessary to acquire the right, title or interest in such land and to vest it in the Board for the purposes of this Act.

(3) In the case of Trust land forming part of a national irrigation scheme, the Minister, on behalf of the Board, may take the land on lease, on terms to be agreed between the Minister and the county council concerned.

(4) In default of agreement between the Minister and the country council as to the terms of a lease under subsection (3) of this section, the provisions of section 118 of the Constitution of Kenya shall have effect.

##### Functions and powers of Board.

15. (1) The Board shall be responsible for the development, control and improvement of national irrigation schemes in Kenya.

(2) The Board shall have and may exercise all such powers as are necessary to enable it to perform its functions under this Act, and, without prejudice to the generality of the foregoing, the Board shall have power -

- (a) to conduct research and investigation into the establishment of national irrigation schemes;
- (b) in conjunction with the Water Resources Authority established under the Water Act, to formulate, and be responsible for the execution of, policy in relation to national irrigation schemes;
- (c) in consultation with the Minister and the minister for the time being responsible for finance, to raise funds for the development of national irrigation

schemes;

- (d) to co-ordinate and plan settlement on national irrigation schemes;
- (e) to design, construct, supervise and administer national irrigation schemes;
- (f) to determine the number of settlers to be accommodated in a national irrigation scheme;
- (g) to provide land in national irrigation schemes for public purposes;
- (h) to promote the marketing of crops and produce grown or produced on national irrigation schemes and to liaise with organizations responsible for the marketing of agricultural produce;
- (i) to provide, either by itself or by agreement with other persons, for the processing of agricultural produce grown or produced on national irrigation schemes;
- (j) to award scholarships and bursaries for the study of irrigation (both in Kenya and elsewhere) or any other subject which the Board considers to be of benefit to the Board.

### PART IV

#### FINANCIAL PROVISIONS

##### Cess.

16. (1) The Board may from time to time, with the approval of the Minister and the Minister for the time being responsible for finance, by notice in the Gazette, impose either or both -

- (a) a cess on all or any agricultural produce grown on a national irrigation scheme;
- (b) a cess on all or any agricultural produce processed on a national irrigation scheme:

Provided that the cess shall only be levied for the purpose of meeting the cost of services provided in the relevant scheme, and for which services no other direct charges are available or payable.

(2) A cess imposed under subsection (1) shall be at such rate, and shall be payable to the Board by such persons and at such time (not being earlier than one month after publication of the notice) and in such manner, as are



specified in the notice, and shall be recoverable by the Board as a civil debt due to it from the person by whom it is payable.

**Establishment and operation of general fund and other funds, and investment of funds.**

17. (1) The Board shall, with the approval of the Minister, establish a general fund -

(a) into which all moneys received by the Board shall in the first instance be paid; and

(b) out of which all payments made by the Board shall be paid.

(2) The Board may, with the approval of the Minister, establish such other funds as it may deem necessary.

(3) The Board may, with the approval of the Minister, open a banking account or banking accounts to handle such funds as the Board may establish, and may, subject to such conditions as the Minister may impose, invest such of its funds as are not for the time being required for the purposes of its duties and functions under this Act.

(4) The powers of the Minister under subsection (3) shall be exercised with the concurrence of the Minister for the time being responsible for finance and shall, in relation to investments, extend to the amount which may be invested, the nature of the investment and the terms and conditions thereof, and the Minister's approval may be either general or limited to a particular investment.

**Board's powers with regard to receipt of moneys.**

18. The Board is hereby empowered to receive and apply-

(a) all funds which may from time to time be provided by Parliament for the purposes of the Board; and

(b) revenue accruing from any cess imposed under section 16; and

(c) loans raised under section 19; and

(d) any moneys properly accruing to the Board from any other source.

**Borrowing powers of Board.**

19. (1) The Board may, with the approval of the Minister and the Minister for the time being responsible for finance, borrow by way of overdraft or otherwise such sums as it may from time to time require, for all or any of the following purposes -

(a) the provision of working capital;

(b) the establishment or acquisition of property or undertakings required by the Board for the purposes of this Act;

(c) any other expenditure properly incurred by the Board for the purposes of this Act.

(2) The Board may also obtain by way of advance from the Treasury, and the Treasury may, out of moneys provided by Parliament, advance to the Board, moneys for all or any of the purposes referred to in subsection (1).

(3) The Board shall pay interest on advances under subsection (2) at such rates as the Treasury may fix, and the money so advanced and from time to time outstanding, together with the interest thereon, shall, unless the Treasury otherwise agrees, be a first charge on the property, assets, revenues and funds of the Board or of such part thereof as shall be hypothecated to secure such advance, but not upon the property, assets and funds of any pension, superannuation provident or medical fund, or other contributory scheme created in favour of the officers or servants of the Board.

**Special application of revenues.**

20. (1) The Board shall make proper provision for the renewal of wasting assets, for payments of interest and sinking fund charges where appropriate, and for contributions to such reserve and stabilization funds as may be required.

(2) Any excess of the revenues of the Board for any financial year over the total sums (including sums provided under subsection (1) properly chargeable by the Board against its revenues for that year shall be applied by the Board in such manner as the Minister, after consultation with the Board, may direct.

**Accounts.**

21. The Board shall cause to be kept proper books of account, records and vouchers in relation to all its undertakings, funds, activities and property and shall cause to be prepared in respect of each financial year -

(a) trading and profit and loss accounts;

(b) a balance sheet; and

(c) such other accounts as the Minister may require.

**Audit.**

**Cap.530.**

22. (1) The Minister shall from time to time appoint ac-

countants registered under the Accountants Act (in this part referred to as the auditors) who shall annually examine, audit and report on the accounts of the Board.

(2) The Board shall produce and lay before the auditors all books and accounts of the Board, with all vouchers in support thereof, and all books, papers and writings in its possession or control relating thereto, and the auditors shall be entitled to require from all members, officers, agents or servants of the Board such information and explanation as may be necessary for the performance of their duties as auditors.

(3) The expenses of and incidental to the audit shall be paid by the Board.

#### **Annual Report.**

23. (1) The Board shall, within a period of seven months after the end of each financial year, or within such longer period as the Minister may approve, submit to the minister a report on its operations during that year, and the auditor's report, together with the yearly balance sheet and such other statements of account as the Minister shall require; and the Board shall publish them in such manner as the Minister may specify.

(2) A copy of every auditor's report, balance sheet and other statements of accounts submitted in accordance with subsection (1) shall be sent by the Board to the Controller and Auditor-General, who may at any time examine the accounts of the Board, and shall be entitled to require from the Board and the auditors such further information and explanation as he may consider necessary.

(3) The Board's report, with the yearly balance sheet and such other statements of account as the Minister may deem appropriate, together with the auditor's report and any report made by the Controller and Auditor-General, shall be laid by the Minister before the National Assembly as soon as possible after it has been submitted to him.

## **PART V**

### **GENERAL**

#### **Board to appoint advisory committees.**

24. (1) The Board shall appoint an advisory committee in respect of each national irrigation scheme.

(2) The Board shall, with the approval of the Minister, regulate the membership, powers and duties of the advisory committees appointed under subsection (1).

#### **Protection of Board, etc., from liability.**

25. No liability shall attach to the Board or its members, officers, agents or servants for any loss or damage sustained by any person as a result of any act or omission done or omitted to be done in good faith and without negligence in the performance or exercise of any duty or power imposed or conferred by or under this Act.

#### **Appeals.**

##### **Cap.318.**

26. Any person aggrieved by the revocation by the Board of the appoint of an agent for any purpose under this Act, and who has had his representations thereon rejected in writing by the Board, may within twenty-eight days of such rejection being communicated to him appeal to the Agricultural Appeals tribunal established under part XV of the Agriculture Act, and the provisions of that Part (excepting section 195 (2) thereof) shall apply mutatis mutandis in relation to every such appeal.

#### **Regulations.**

27. (1) The Minister may, after consultation with the Board, make regulations generally for the better carrying out of the purposes and provisions of this Act, and without prejudice to the foregoing generality those regulations may provide for -

- (a) the administration and day-to-day control of national irrigation schemes;
- (b) the standards of good husbandry and the control of pests and diseases in national irrigation schemes;
- (c) the regulation of, and the rates payable for, the use of water on national irrigation schemes;
- (d) the control of persons occupying any land comprising or forming part of a national irrigation scheme, the introduction of or the control of settlers on such land, the issue by the Board of licenses or leases to such persons or settlers, the revocation of such licenses and leases, and the terms and conditions which may be attached to such licenses and leases;

Provided that different regulations may be made for different national irrigation schemes, and that before issuing any licenses or leases in accordance with regulations made under this section the Board shall consult the Commissioner for Lands;

- (e) the methods of harvesting, collection, storage, transport, processing, marketing and sale of produce grown on national irrigation schemes;
- (f) the licensing of contractors to perform any function

connected with a national irrigation scheme.

(2) Any regulations made under this section may require acts to be performed to the satisfaction of a prescribed authority, may prohibit their performance without the prior approval of a specified authority, and may empower a specified authority to impose conditions.

(3) Any regulations made under this section may be made to apply generally to all national irrigation schemes or to any specified national irrigation scheme or to any specified area or areas thereof.

(4) Any regulations made under this section may provide for such penalty for the breach of any provision thereof, not exceeding a fine of ten thousand shillings and imprisonment for one year, as the Minister may think fit.

### (s.3) SCHEDULE

L.N.243/1976.

#### CONSTITUTION OF BOARD AND OTHER MATTERS RELATING TO BOARD

1. The Board shall consist of the following members -

- (a) a chairman who shall be appointed by the Minister;
- (b) the Director of Agriculture or a person deputed by him in writing to exercise his functions on the Board;
- (c) one representative from each province in which a national irrigation scheme exists, or is being planned, appointed by the Minister from a panel of not less than three persons associated with irrigation submitted to him by each Provincial Agricultural Board concerned;

Provided that, should a province have no Provincial Agricultural Board, the Minister shall appoint a representative for such province after consultation with persons representing irrigation interests in that province;

- (d) the Director of Water Development or any person deputed by him in writing to exercise his functions on the Board;
- (e) the chairman of the Water Resources Authority established under the Water Act, or any person deputed by him in writing to exercise his functions on the Board.

#### Cap.372.

- (f) the Permanent Secretary to the Treasury or any person deputed by him in writing to exercise his functions on the Board;

(g) the Permanent Secretary for Agriculture or any person deputed by him in writing to exercise his functions on the Board;

(h) not more than three persons appointed by the Minister, who, in his opinion, have qualities of benefit to the Board;

(i) the Permanent Secretary for Health or any other person deputed by him in writing to exercise his functions on the Board.

2. The Board shall elect a vice-chairman annually from among its members.

3. In the absence of the chairman and the vice-chairman from any meeting of the Board the members present shall elect one of their number to preside, and such member shall, for the purposes of that meeting have all the powers and attributes of the chairman.

4. All appointments to the Board and all changes of such appointments shall be notified in the Gazette.

5. The members of the Board appointed under paragraph 1 (h) shall hold office at the pleasure of the Minister.

6. The chairman shall retire at the end of the third year after appointment but shall be eligible for reappointment.

7. Two members appointed under paragraph 1 (c) shall retire annually but shall be eligible for reappointment.

8. The members to retire under paragraph 7 shall be those members who have been continually longest in office (reappointments being deemed for this purpose to break continuity of office), and as between members who have been continuously in office for an equal period shall, in default of agreement, be determined by the Board by ballot.

9. Notwithstanding the provisions of paragraphs 5, 6, 7 and 8, the office of a member of the Board shall, upon declaration by the Minister, become vacant -

- (a) if he resigns his office by writing under his hand addressed to the Minister;
- (b) on his death;
- (c) if he is certified to be insane or otherwise adjudged to be of unsound mind under any written law;
- (d) if in the judgement of the Minister he becomes physically or otherwise incapable of discharging his duties as a member, and remains so for a period of forty consecutive days;

- (e) if he is absent, without the permission of the Board, from three consecutive meetings of the Board;
  - (f) if he adjudged or otherwise declared bankrupt under any written law;
  - (g) if he is sentenced by a court to a term of or exceeding six months imprisonment.
- (10) Any declaration by the Minister under paragraph 9 shall be conclusive, and shall not be questioned in any court.
- (11) On any office becoming vacant under this Schedule, the Minister may by notice in the Gazette, and, in the case of a vacancy under paragraph 1 (c), after submission of a panel of persons as provided therein, appoint another member to fill the vacancy, and, except in the case of a vacancy arising under paragraph 9, may in so doing reappoint the member vacating.

### SUBSIDIARY LEGISLATION

#### Designated Areas under section 14

L.N.67/1977.

#### NATIONAL IRRIGATION SCHEMES

- (a) the area known as Perkerra Irrigation Area in the Baringo District of the Rift Valley Province, the boundaries of which area are set out in the Schedule to a setting apart notice published as Gazette Notice No.4643 of 1959;
- (b) the area known as the Mwea/Tebere Irrigation Area in the Kirinyaga District of the Central Province, the boundaries of which area are set out in the Schedule to setting apart notices published as Gazette Notices Nos. 3090, 3093, 3095, 3096, 3097, 3098, 3100, 3101, 3102, 3103 of 1960;
- (c) the area known as the Galole Special Settlement Area in the Tana River District of the Coast Province, the boundaries of which area are delineated in Legal Notice NO.274 of 1963; and
- (d) the area known as the Ahero National Irrigation Pilot Scheme in the Kisumu District of the Nyanza Province, the boundaries of which are set out in the Schedule to a setting apart notice published as Gazette Notice No.2163 of 1968.

#### Regulations under section 27

L.N.68/1977.

#### THE IRRIGATION (NATIONAL IRRIGATION SCHEMES) REGULATIONS

1. These Regulations may be cited as the Irrigation (National Irrigation Schemes) Regulations, and shall apply to such areas of land as the Minister may, by notice in the Gazette, designate to be national irrigation schemes.

2. In these Regulations, unless the context otherwise requires -

“court” means the court having jurisdiction in the scheme;

“scheme” means any area designated to be a national irrigation scheme under section 14 of the Act;

“authorized dependent” means, in relation to a licensee, his father and mother, wives and such of his children as are unmarried and under the age of eighteen years;

“committee” means an irrigation committee appointed under regulation 3;

“holding” means that part of an area specified in a licence;

“licence” means a licence granted under regulation 2;

“licensee” means any person to whom a licence has been granted, and includes any person who succeeds a licensee under regulation 7;

“manager” means such person as may from time to time be appointed by the Minister to be in charge of a national irrigation scheme.

3. (1) The Minister may appoint a committee for any scheme, such committee to be known as an irrigation committee, to be responsible for advising the manager on the general administration of the scheme in accordance with Government policy.

(2) The committee may either be the District Agricultural Committee of the district in which the scheme is situate or may be composed of such members as the Minister may appoint.

4. Any person who resides in, carries on business in, or occupies any part of the scheme or grazes any stock thereon shall, unless he is the holder of a valid licence granted to him under these Regulations by the manager with the approval of the committee or is the authorized dependant of such licensee, be guilty of an offence.

5. (1) Every licence shall be in the form in the First Schedule, and shall be prepared in duplicate; the original shall be given to the licensee and the duplicate shall be retained by the manager.

(2) The manager shall maintain a register in which he shall enter the name of every licensee, the number of his holding and the names of his authorized dependants.

(3) The manager shall also maintain a separate register in which he shall enter the name of any successor nominated by the licensee under regulation 7, together with the number of the holding in respect of which the successor has been nominated.

6. Before issuing a licence, the manager shall -

- (a) cause these Regulations to be read and explained to the licensee in a language which he understands;
- (b) give the licensee a copy of these Regulations; and
- (c) obtain from the licensee, in the form in the second Schedule, a receipt for the Regulations, an acknowledgement that he understands them and an undertaking to observe them.

7. (1) A licensee may, at any time after the date of being granted a licence, nominate, in writing to the manager, another person to succeed him as licensee in the event of his death; and a licensee may at any time, in writing to the manager, revoke or alter the nomination which may have been made by him:

Provided that no person nominated as successor may succeed until he has attained the apparent age of eighteen years; if he has not reached that age, his guardian under customary law may, within one month of the licensee's death, and with approval of the manager, appoint a person to act on his behalf until the successor is of age.

(2) No person nominated as a successor may succeed without the approval of the committee.

(3) The authorized dependant of a deceased licensee may, within thirty days of his death, appeal to the court against the nomination under paragraph (1), of a successor.

(4) The authorized dependant may -

- (a) where a licensee dies without having nominated a successor in accordance with paragraph (1); or
- (b) where, under paragraph (3), an appeal to the court against the nomination of a successor has been successful,

within one month of the death of the licensee or one month after the determination of the appeal, as the case may be, nominate, in writing to the manager, a successor who must be approved by the court.

(5) In the event of -

- (a) no person being appointed within the time prescribed in the provision to paragraph (1); or
- (b) no person being nominated within the time prescribed in paragraph (4); or
- (c) any person nominated or appointed under this regulation failing to accept such nomination or appointment or failing to assume the responsibilities inherent in such nomination or appointment within a period of three months from the death of the licensee; or
- (d) no successor being acceptable to the committee,

the holding shall be deemed to have been vacated, the licence in respect of such holding shall terminate, and a fresh licence may be granted in accordance with regulations 5 and 6.

(6) In the event of a holding being deemed to have been vacated in terms of paragraph (5) -

- (a) the manager may make provision for the cultivation of any such holding and where appropriate recover the costs from the incoming licensee; and
- (b) in accordance with regulation 23 reasonable compensation may be paid to the authorized dependant of a licensee in respect of any improvement to the holding effected by the licensee.

8. (1) Every licence shall be granted subject to the following conditions -

- (a) a licensee shall devote his full personal time and attention to the cultivation and improvement of his holding and shall not, without the permission, in writing of the manager allow any other person to occupy his holding or to cultivate it on his behalf;
- (b) a licensee shall maintain the boundaries of his holding in a manner satisfactory to the manager;
- (c) a licensee shall maintain at all times his holding and all field, feeder and drainage channels to the satisfaction of the manager;
- (d) a licensee shall maintain to the satisfaction of the manager all irrigation channels and works on or serving his holding;

- (e) a licensee shall cultivate his holding to the satisfaction of, and in accordance with the crop rotation laid down by the manager, and shall comply with all instructions given by the manager relating to the cultivation and irrigation of his holding.
- (f) a licensee shall comply with all instructions given by the manager with regard to good husbandry, the branding, dipping, inoculating, herding, grazing or watering of stock, the production and use of manure and compost, the preservation of the fertility of the soil, the prevention of soil erosion, the planting, felling, stumping and clearing of trees and vegetation and the production of silage and hay;
- (g) a licensee shall not hire, cause to be hired or employ stock or machinery for cultural operations, other than stock and machinery owned by the manager, without prior approval, in writing from the manager;
- (h) a licensee shall not absent himself from the scheme for longer than one month without prior approval, in writing, of the manager.
- (2) Any licensee who fails to comply with the conditions specified in paragraph (1) shall be guilty of an offence.
- (3) Any licensee who refuses, or without reasonable excuse fails, to comply with any of the conditions of this regulation shall, in addition to any penalty that may be imposed under paragraph (2), be liable to have his licence terminated by the Minister on the recommendation of the manager (after confirmation by the committee) and the Minister's decision shall be final.
9. (1) A licensee shall pay to the manager, on demand such rates in respect of water and other services in respect of his holding as shall be calculated in accordance with rates prescribed by the Minister from time to time.
- (2) The whole or part of any rates prescribed under paragraph (1) may be varied or remitted by the Minister either generally or in any particular case, in his absolute discretion.
10. (1) The manager may allocate to a licensee a house to be occupied by him within the scheme, or may permit a licensee to erect his own house.
- (2) In either event it shall be the duty of the licensee to maintain his house and precincts to the satisfaction of the manager, and if the manager is dissatisfied with the condition of the house or precincts he may give written notice to the licensee to the repairs which he considers necessary and specify a reasonable time within which they must be completed.
- (3) If the licensee fails to complete such repairs within

the time specified and to the satisfaction of the manager, the manager may cause such repairs to be carried out and may recover the cost thereof from the licensee.

(4) The licensee may not occupy any house other than that allocated to him without prior permission, in writing, from the manager.

(5) A licensee shall not construct buildings or other works of any kind on his holding or elsewhere in the scheme without the prior consent, in writing, that the structure be removed and the land returned to its original state and if the licensee fails to comply with this direction within one month, the manager may enter the building or structure for the purpose of demolition and any expenses incurred by the manager for the removal of the building or structure may be recovered from the licensee.

11.(1) If a licensee is sentenced to imprisonment for a term of six months or more, his licence may be terminated forthwith.

(2) If a licence is terminated under paragraph (1), a successor may be nominated or appointed in accordance with regulation 7.

12. The manager shall have power to order the destruction of any crops planted in contravention of his instructions or of the provisions of these Regulations and to recover the expenses incurred from the licensee and no compensation shall be payable in respect of crops so destroyed.

13. If, in the opinion of the manager, it would be beneficial to a licensee's crops or to all the licensees in the scheme to cultivate by machinery, or to apply fertilizers, or manure, or to treat any crops or stocks in any way to protect them against diseases, pests, or damage of any kind, then the manager may do so and recover the costs thereof from the licensee or licensees.

14. (1) As soon as each crop other than paddy has been harvested the licensee shall deliver it, other than such portion as he may wish to retain for his own consumption and that of this authorized dependants living with him, to the manager at a collecting station to be appointed by the manager, or shall otherwise dispose of it in accordance with the instructions of the manager.

(2) The licensee shall deliver all paddy harvested to the manager at the collection station appointed by the manager, or shall otherwise dispose of it in accordance with the instructions of the manager.

(3) The licensee may purchase such quantities of milled rice from the manager for his own consumption and that of his authorized dependants living with him, as the

manager may from time to time authorize.

(4) Any licensee who fails to comply with the provisions of paragraph (1) or (2) shall be guilty of an offence.

15. (1) The manager may, when necessary, collect process and market the crops delivered to him under regulation 14 and may market the crops delivered to him under regulation 14 and may arrange for the sale of such crops, in which event he shall give the licensees details of the sales of all such crops as soon as possible.

(2) The manager shall not be obliged to keep or sell the crops of individual licensees separately.

16. (1) A licensee shall not keep on his holding any stock other than those specified in his licence and shall declare to the manager annually the natural increase in such stock and shall comply with any instructions issued by the manager as to their disposal.

(2) A licensee who fails to comply with the provisions of paragraph (1), or with any instructions issued by the manager thereunder, shall be guilty of an offence and where any additional undeclared stock is found in the possession of a licensee to remove such additional stock from the scheme forthwith.

(3) If a licensee fails to remove his additional stock in accordance with an order to that effect given by the manager under paragraph (2), the manager may confiscate and sell such additional stock, paying the proceeds thereof, less any expenses incurred by such confiscation and sale, to the licensee.

17. (1) If in the opinion of the manager, a licensee has been negligent in the use of his land, the use of irrigation water or the cultivation of his crops, the manager may direct him to take such steps as the manager may specify to remedy the effects of such negligence, and, in the event of a licensee failing to comply with any such directions, the manager may take such measures as he considers necessary to safeguard the crop and to preserve the holding and irrigation water and may recover the costs of any such measures from the licensee.

(2) If a licensee is absent owing to illness or any other reasons, the manager may take such measures as he considers necessary to safeguard the crop and to preserve the holding and irrigation water, and may recover the costs of any such measures from the licensee.

18. A licensee shall not permit any of his stock to be upon any part of the scheme which is closed to stock or to damage to any crops or water installations or communications or other property, and shall be liable to pay the cost of the repair of any damage so caused.

19. (1) Any licensee who wilfully or negligently causes to be damaged any road, bridge, or culvert within the scheme shall be guilty of an offence.

(2) The manager may, where such damage has been caused by a licensee, repair any such damage and shall recover the cost of the repairs to such damage from the licensee.

20. The manager may, deduct from the proceeds of the sale, under regulations 15 and 16, of any crops or stock belonging to a licensee -

(a) the costs of expenses incurred by the manager -

(i) in the making of provisions for the cultivation of any holding under regulation 7 (6) (a);

(ii) in the removal of any building or structure or repairs carried out to any house under regulation 10;

(iii) in the destruction of any crops under regulation 12;

(iv) in providing manure, fertilizers, insecticides or any agricultural operations under regulation 13;

(v) in the collecting, processing and marketing of crops under regulation 15;

(vi) in remedying the negligence or safeguarding crops or preserving the holding under regulation 17;

(vii) in repairing any damage caused by stock under regulation 18;

(viii) in repairing damage under regulation 19 (2); and

(b) any amounts due for rates payable under regulation 9, any outstanding amount of any advance made to such licensee for the purpose of the cultivation, irrigation or other improvement of his holding, and such charges as may be agreed to by the minister on the recommendation of the committee.

21. Any person who causes any motor vehicle to be driven within the scheme over any road other than a public road within the meaning of the Public Roads and Roads of Access act unless he is in possession of a permit issued by the manager, and unless he complies with all conditions made on such permit by the manager, shall be guilty of an offence.

### Cap.399.

22. (1) Where the manager is satisfied that a licensee has failed to comply with any of the provisions of these Regulations or with any instructions given thereunder

or under any other law for the time being in force, he may serve a notice in writing on the licensee requiring him to comply with the said provisions, instructions or regulations within such time as is specified in the notice.

(2) If the licensee fails within such time to comply with the requirements of such notice, the manager may, by notice in writing, call upon the licensee to show good cause, by a date specified in the notice, why his licence should not be terminated.

(3) If the licensee fails to show good cause as aforesaid to the satisfaction of the manager, the manager may, with the approval of the committee, give notice in writing to the licensee requiring him to remove himself, his dependants and his stock from the scheme within a period specified in such notice.

(4) A licensee who is given notice under paragraph (3) may, within twenty-eight days of such notice, appeal in writing to the Minister whose decision shall be final.

(5) If there is no appeal, the licence shall be deemed to have terminated on the date specified in the notice.

(6) If there is an unsuccessful appeal, the licence shall terminate on such date as the minister may specify.

(7) Any person whose licence has been terminated under this regulation and who fails to comply with the terms of the notice given him shall be guilty of an offence.

23. Where any licence is terminated in accordance with any of the provisions of these Regulations, a Board consisting of the manager and one representative of both the outgoing and the incoming licensees, shall assess the amount, if any, due to the outgoing licensee or his dependants in respect of capital and labour expended by him in improving the holding, and the manager shall make arrangements for the payment of such amount by the incoming licensee within such time as the manager considers reasonable.

24. The manager shall have power, in the event of any emergency, to order all licensees to undertake emergency repair work in any part of the scheme, and any licensee who refuses to obey any such order by the manager shall

be guilty of an offence.

25. Subject to the provisions of regulations 7, 8, 11 and 22, every license shall be valid for a period of one year from year to year thereafter, but may be terminated at any time -

- (a) by the licensee giving to the manager six months, notice in writing of his intention to surrender his licence;
- (b) by the manager, on instruction of the minister, giving to the licensee 12 months' notice in writing of his intention to terminate the licence.

26. Any person who -

- (a) unlawfully interferes with the flow of irrigation water in canals or the opening or closing of control gates within the area;
- (b) makes unlawful use of irrigation water by taking irrigation water out of turn or otherwise;
- (c) refuses to permit the authorized passage of irrigation water across his holding;
- (d) wilfully damages or obstructs canals or control works; or
- (e) refuses to accept or drain off irrigation water when required to do so,

shall be guilty of an offence.

27. (1) Any person who is guilty of an offence under these Regulations shall be liable to a fine not exceeding two thousand shillings or to imprisonment for a term not exceeding two months, or to both such fine and such imprisonment.

(2) Where any person is convicted of an offence under regulation 4, regulation 14(4) or regulation 22(7), the court may, in addition to any penalty which it may impose, authorize any administrative officer or police officer to cause such person, together with his dependants and property, if any, to be removed from the scheme.



FIRST SCHEDULE (r.5)

LICENCE NO. ....

..... NATIONAL IRRIGATION SCHEME

LICENCE TO OCCUPY HOLDING

..... son of .....

of the ..... District of the ..... Province,

is hereby authorized to occupy holding No. ....

of the ..... National Irrigation Scheme for

the period from the ..... day of ..... 19, and from year to year thereafter unless sooner terminated in accordance with the provisions of the above Regulations, and to keep thereon not more than the following number of stock -

- ..... bovines,
- ..... goats,
- ..... sheep,
- ..... mules,
- ..... donkeys,
- ..... (other stock),

subject to the conditions prescribed by the above Regulations.

Dated this ..... day of ....., 19 .....

.....  
Manager

In accordance with regulation 6 of the above Regulations, I have caused the Regulations to be read and explained to the above-name licensee in the ..... language, which he understands.

.....  
Manager

SECOND SCHEDULE (r.6)

I, ..... , son of .....  
.....  
of the ..... District of the ..... Province,  
hereby acknowledge receipt of a copy of the Irrigation (National Irrigation Schemes) Regulations. I have had these  
Regulations explained to me and I fully understand them and I undertake to observe them and to pay all sums of  
money payable by me.

.....  
Signature or thumb print of  
Licensee

.....  
Witness

.....  
Date

\_\_\_\_\_

## The Factories (Amendment) Act, 1990

*No. 1 of 1990*

*Date of Assent: 11th May, 1990*

*Date of Commencement: 18th May, 1990*

### **An Act of Parliament to amend the Factories Act**

ENACTED by the Parliament of Kenya as follows-

#### **Short title**

1. This act may be cited as the Factories (Amendment) Act, 1990

#### **Amendment of section 1 of Cap. 514**

2. Section 1 of the Factories Act, in this Act referred to as the principal Act, is amended by inserting immediately after the word "Factories" the words "and Other Places of Work".

#### **Amendment of section 2 of Cap. 514.**

3. Section 2 of the principal Act is amended-

(a) by deleting subsection (1) and inserting the following-

(1) Unless otherwise expressly provided, the provisions of this Act shall apply only to factories and other places of work as defined by this act, but shall, except where a contrary intention appears, apply to all such factories and other places of work;

(b) by deleting subsection (2) and inserting the following-

(2) The provisions of this Act shall apply to factories or other places of work belonging to or in the occupation of the Government or a local authority or other public body and to building operations and works of engineering construction undertaken by or on behalf of the Government by or on behalf of the Government or local authority or other public body.

#### **Amendment of section 5 of Cap. 514.**

4. Section 5 of the principal Act is amended in subsection (7) by deleting the expression "the Community" and inserting "or other public body" after "local authority".

#### **Amendment of section 6 of Cap. 514.**

5. Section 6 of the principal Act is amended by deleting subsection (1) and inserting the following-

(1) In this act, unless the context otherwise requires-

"article" includes any solid, liquid or gas, or any combination thereof;

"bodily injury" includes injury to health;

"building operation" means the construction, structural alteration, repair or maintenance of a building (including repainting, redecoration and external cleaning of the structure), the demolition of a building and the preparation for and laying the foundation of an intended building, but does not include any operation which is a work of engineering construction within the meaning of this Act;

"chief inspector" means the chief inspector of factories appointed under this act;

"class or description", in relation to factories, includes a group of factories described by reference to a locality;

"competent person", in relation to any duty or function, means a person who has had adequate training, relevant qualifications and experience to enable him to perform that duty or function;

"driving belt" includes any driving strap or rope;

"fume" includes gas or vapour;

"general register" means the register kept under section 62 of this Act;

“highly flammable liquid” means any liquid, liquid solution, emulsion or suspension which gives off a flammable vapour at a temperature of less than 32 degrees centigrade;

“improvement notice” means a notice issued under section 69A of this Act;

“inspector” means an inspector appointed under this Act;

“Machinery” includes any driving belt;

“magistrate’s court” means a subordinate court of the first or second class;

“maintained” means maintained in an efficient state, in efficient working order and in good repair;

“National Advisory Committee on Occupational Health and Safety” means the National Advisory committee on Occupational health and Safety established under section 67A of this Act;

“occupier” means the person or persons in actual occupation of a factory, whether as the owner or not;

“owner” means the person for the time being receiving the rents or profits of the premises in connection with which the word is used, whether on his own account or as agent or trustee for any other person or who would receive the rents and profits if the premises were leased;

“plant” includes any equipment, gear, machine, apparatus or appliance or any part thereof;

“prime mover” means every engine, motor or other appliance which provides mechanical energy derived from steam, water, wind, electricity, the combustion of fuel or other source;

“process” includes the use of any locomotive;

“prohibition notice” means a notice issued under section 69B of this Act;

“railway” means any railway used for the purposes of public traffic, whether passenger, goods or other traffic, and includes any works used in connection with and for the purposes of the railway;

“sanitary conveniences” includes urinals, water-closets, earth-closets, privies, as pits and any similar convenience;

“steam boiler” means any closed vessel in which for any purpose steam is generated under pressure greater than atmospheric pressure, and includes any economizer used to heat water being fed to any such vessel, and any superheater used for heating steam;

“transmission machinery” means every shaft, wheel, drum, pulley system of fast and loose pulleys, coupling, clutch, driving-belt or other devices by which the motion of a prime mover is transmitted to or received by any machine or appliance;

“work of engineering construction” means the construction of any road, railway line or siding, and the construction, structural alteration or repair (including reporting and repainting) or the demolition of any dock, harbour, inland navigation, tunnel, bridge, viaduct, waterworks, reservoir, pipeline, aqueduct, sewer, sewage works or gas-holder, and includes such other works as may be specified by the Minister by order.

#### **Amendment of section 9 of Cap. 514**

##### **6. Section 9 of the principal Act is amended-**

- (a) in subsection (3), by deleting “two thousand shillings” and inserting “ten thousand shillings” and by deleting “one hundred shillings” and inserting “five hundred shillings”; and
- (b) by inserting the following new subsection (5)-
  - (5) (a) The occupier of any factory registered under this Part shall notify the chief inspector in writing of any proposed change in the registered particulars of that factor prior to effecting the change; and if the chief inspector fails to respond to the notification within thirty days the occupier shall proceed to effect the proposed change.
  - (b) The occupier of a factory who fails to comply with paragraph (a) of this subsection shall be guilty of an offence and liable to a fine not exceeding ten thousand shillings.

#### **Amendment of section 14 of Cap. 514.**

##### **7. Section 14 of the principal Act is amended-**

- (a) in subsection (2), by deleting the words “three hundred and fifty cubic feet” and inserting the words “ten cubic metres”;
- (b) in the proviso to subsection (2), by deleting “fourteen feet” and inserting “4.5 metres”; and
- (c) in subsection (3), by deleting “nine feet” and inserting “three metres”.

#### **Amendment of section 15 of Cap. 514.**

8. Section 15 of the principal Act is amended by re-numbering the existing provision as subsection (1) and inserting the following new subsection (2)-

(2) The Minister may by rules prescribe a standard of adequate ventilation for factories or for any class or description of factories or part thereof and for any other places of work.

**Amendment of section 16 of Cap. 514.**

9. Section 16 of the principal Act is amended by inserting the following new subsections after subsection (2)-

(3) The Minister may by rules prescribe a standard of sufficient and suitable lighting for factories or for any class or description of factories or parts thereof, or for any process, and any other places of work.

(4) Nothing in subsections (2) and (3) of this section or in any rules made thereunder, shall be considered as enabling direction to be prescribed or otherwise given as to whether any artificial lighting is to be produced by any particular illuminant.

**Amendment of section 30 of Cap. 514.**

10. Section 30 of the principal Act is amended by inserting the following subsections (2A) and (2B) immediately after subsection (2)-

(2A) Where the examination under subsection (2) of this section shows that the hoist or lift cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time, the person making the report, shall within seven days of the completion of the examination, send a copy of the report to the chief inspector who may issue an improvement notice or a prohibition notice as appropriate.

(2B) The powers conferred on the chief inspector by subsection (2A) of this section except this power of delegation may be delegated to any inspector by the chief inspector by notice in the Gazette.

**Amendment of section 35 of Cap. 514**

11. Section 35 of the principal Act is amended by inserting the following new paragraph-

(e) no person shall enter a confined space for any purpose unless authorized in writing by the occupier.

**Amendment of section 36 of Cap. 514**

12. Section 36 of the principal Act is amended by inserting the following subsection (2A) immediately after subsection (2)-

(2A) Where any part of a plant contains any explosive or highly flammable liquid, gas or vapour under pres-

sure greater than atmospheric pressure, that part shall not be opened, except in accordance with the following provisions-

- (a) before the fastening of any joint of any pipe connected with the part of the plant or the fastening of the cover of any opening into the part is loosened, any flow of the liquid, gas or vapour into the part or into any such pipe shall be effectively stopped by a stop-valve or otherwise; and
- (b) before any such fastening is removed, all practicable steps shall be taken to reduce the pressure of the liquid, gas or vapour in the pipe or part of the plant to atmospheric pressure; and if any such fastening has been loosened or removed, no explosive or flammable liquid, gas or vapour shall be allowed to enter the pipe or part of the plant until the fastening has been secured or, as the case may be, securely replaced.

**Amendment of section 37 of Cap. 514**

13. Section 37 of the principal Act is amended-

- (a) in subsection (8), by renumbering the existing provision as paragraph (a) and inserting the following new paragraph (b)-
- (b) the Sixth Schedule shall apply in respect of examinations of a boiler when it is cold.
- (c) by deleting subsection (11) and inserting the following new subsections-

(11) No steam boiler which has previously been used shall be taken into use in any factory or premises for the first time in that factory or premises until it has been examined and reported on in accordance with subsection (7), (8) and (9) of this section.

(11A) No new steam boiler shall be taken into use for the first time in any factory or other place of work unless there has been obtained in respect thereof-

- (a) the manufacturer's complete specifications which shall include full details of the composition and physical properties of all rivets, plates, sections, tubes, bars and electrodes used for pressure part;
- (b) dimensional drawings of the complete boiler showing the thickness of plates, details of riveting and the position and extent of all welds;
- (c) the manufacturer's test certificate; and
- (d) a certificate specifying the maximum permissible working pressure of the boiler, stating the nature

of the tests to which the boiler, attachments and fittings have been submitted, issued and signed by the person making the examination.

- (c) by inserting immediately after subsection (12) the following new subsections-

(12A) The person making the report of an examination under this section shall within seven days, after completion of the examination, send to the chief inspector, a copy of the report in every case where the maximum permissible working pressure is reduced, or where the boiler cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time and the chief inspector may, on the basis of the report, issue an improvement notice or prohibition notice as appropriate:

Provided that the chief inspector may delegate the powers conferred on him by this subsection other than this power of delegation, to any inspector by notice in the Gazette.

(12B) If the person making the examination under this section fails to make a thorough examination as required by this section or makes a report which is false or deficient in any material particular, or fails to send to the chief inspector a copy of any report as required, he shall be guilty of an offence and liable to a fine not exceeding ten thousand shillings, or to imprisonment for a term not exceeding three months, or both the fine and imprisonment

- (d) by deleting the word "Community" in subsection (15).

#### Inspection of new section 39A in Cap. 514

14. The principal Act is amended by inserting the following new section immediately after section 39-

#### Cylinder for compressed liquified and dissolved gases.

39A. (1) Cylinders for compressed, liquefied and dissolved gases, and their fittings, shall be-

- (a) so designed as to be suitable for the particular circumstances of their use; and
- (b) of sufficient strength to sustain the internal pressures to which they will normally be subject.

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(2) Cylinders for compressed, liquified and dissolved gases shall conform to a standard specification prescribed

under the Standards Act or where a standard is not prescribed a standard specification approved in writing by the Director, Kenya Bureau of Standards for the purposes of this Act and shall be of good construction, sound material, adequate strength and free from patent defect.

(3) Every cylinder, when constructed or sold, shall be covered by a certificate showing compliance with the standards specifications referred to in subsection (2) of this section, and the certificate shall be obtainable, during the whole life of the cylinder, from the owner of the cylinder.

(4) Every cylinder owner shall keep a cylinder maintenance register in which shall be noted, under the corresponding dates, all tests, internal and external and internal examinations, cleanings and repairs undertaken on the cylinder; and the register shall be available for inspection by an inspector at all times.

(5) It shall be the duty of the cylinder owner to ensure that all cylinders belonging to him are examined and tested and the results of such examinations and tests entered in the cylinder maintenance register by a person approved by the chief inspector by certificate in writing.

- (a) before being placed in service for the first time; or
- (b) before being placed in service after repairs other than changing the neck ring which carries the cap, retapping the neck or changing the foot-ring; and
- (c) at intervals not exceeding two years in the case of cylinders for corrosive gases and five years in the case of cylinders for other gases.

(6) The test that cylinders other than acetylene cylinders shall undergo to comply with the provisions of subsection (5) of this section shall comprise-

- (a) a hydraulic pressure test which shall exceed the maximum permissible working pressure; and
- (b) an internal and external examination in accordance with the requirements of the standard specification referred to in sub-section (2) of this section.

(7) The following particulars shall be clearly and boldly marked on every cylinder-

- (a) owner's name; and
- (b) registered number per maintenance register; and
- (c) clear indication of the gas to be charged; and
- (d) date of test undertaken; and

(e) permissible maximum charging pressure.

(8) Cylinders for compressed, liquefied and dissolved gases shall be clearly marked for the purpose of identification of their contents in a colour conforming to a standard specification of cylinder colour markings.

(9) Markings required under the provisions of subsection (7) of this section shall not be-

- (a) cut into the metal of the cylinder unless special reinforcement has been provided for that purpose; or
- (b) placed on the cap.

(10) In addition to the requirements of sub-section (7) of this section-

- (a) every cylinder for liquefied gases shall be clearly and boldly marked with the permissible maximum weight of the charge of gas for which the cylinder is designed; and
- (b) every cylinder for the compressed gases shall be clearly and boldly marked with the permissible maximum weight of the charge of gas for which the cylinder is designed; and
- (c) every cylinder for the compressed gases shall be clearly and boldly marked with the cubic capacity.

(11) Before being charged for the purposes of subsection (10), every cylinder shall-

- (a) be carefully examined at the charging station to ensure that it complies with the provisions of this section; and
- (b) except in the case of acetylene, be completely emptied.

(12) Cylinders for liquified gases with a critical temperature exceeding the usual ambient temperature shall not be completely filled in order to prevent the generation of dangerous pressure when used at temperatures exceeding this critical temperature, and, cylinders for liquefied gases shall be weighted during charging.

#### **Amendment of section 42 of Cap. 514.**

15. Section 42 of the principal Act is amended by repealing subsection (1) and (2) and inserting the following new subsections-

(1) In every factory there shall be provided and maintained, so as to be readily accessible, means for extinguishing fire, which shall be adequate and suitable having regard to the circumstances of each case, and persons

trained in the correct use of such means shall be present during all working periods.

(2) Except as provided in subsection (2A) of this section and except in the case of highly flammable liquids present in accordance with subsection (2B) of this section or being conveyed within the factory, all highly flammable liquids shall be stored-

- (a) in suitable fixed storage tanks in safe positions; or
- (b) in suitable closed vessels kept in a safe position in the open air, and, where necessary, protected against direct sunlight; or
- (c) in a suitable closed vessel kept in a store-room which either is in a safe position or in a fire-resisting structure; or
- (d) in the case of workroom where the aggregate quantity of highly flammable liquids stored does not exceed fifty litres, in suitable closed vessels kept in a suitably placed cupboard or bin which is a fire-resisting structure;

Provided that no such store as aforesaid shall be so situated as to endanger the means of escape from the factory or any part thereof in the event of a fire occurring in the store.

2(A) Nothing in subsection (2) of this section shall apply to-

- (a) highly flammable liquids in the fuel tanks of vehicles or engines for the purpose of operating the vehicle or engines; or

2(B) The quantity of any highly flammable liquid present any one time in any workplace in course of manufacture or for use or manipulation and in process tanks, process vessels, pipelines, pumps, plant, equipment and apparatus in the workplace shall be as small as is reasonably practical having regard to the processes or operations being carried on.

- (b) any suitable, small closed vessels containing not more than 500 c.c. of highly flammable liquids.

2(C) Except where it is impracticable to do so, and except as provided in subsection (2E) of this section, every storeroom, cupboard, in, tank and vessel used for storing highly flammable liquid shall be clearly and boldly marked "Highly Flammable" or "Flash Point below 32oC" in English or Kiswahili and one local language commonly used where the factory is situated or otherwise with an appropriate indication of flammability.

2(D) Where it is impracticable to mark any storeroom,

cupboard, bin, tank or vessel in accordance with subsection (2C) of this section, the words "Highly Flammable Liquid" or "Flash Point below 32oC" in English or Kiswahili or one local language commonly used where the factory is situated shall be clearly and boldly displayed as near to it as possible.

2(E) Nothing in subsection (2C) and (2D) of this section shall apply to-

- (a) any fuel tanks of vehicles or engines which contain highly flammable liquid for the purpose of operating the vehicles or engines; or
- (b) any suitable small closed vessel containing not more than 500 c.c. of highly flammable liquid.

2(F) Where highly flammable liquids are to be conveyed within a factory they shall, where it is reasonably practicable so to do, be conveyed through a totally enclosed system incorporating pipelines and pumps or similar appliances but where conveyance of highly flammable liquids within a factory through such a totally enclosed system is not reasonably practicable, they shall be conveyed in vessels which are so designed and constructed as to avoid so far as practicable the risk of spilling.

2(G) Where in any process or operation any highly flammable liquid is liable to be spilled or to leak, all reasonably practicable steps shall be taken to ensure that any highly flammable liquid which is spilt or leaks shall be contained or immediately drained off to a suitable container or to a safe place, or otherwise treated to make it save.

2(H) No means likely to ignite vapour from any highly flammable vapours from highly flammable liquids shall be present where a dangerous concentration of vapours from flammable liquids may reasonably be expected to be present.

2(I) Where in any place a dangerous concentration of vapour from highly flammable liquids may reasonably be expected to be present, any cotton or other textile waste or other material in the place-

- (a) which has been used in such manner as to render the cotton waste or other material liable to spontaneous combustion; or
- (b) which is contaminated with any highly flammable liquid, shall be deposited without delay in a metal container having a suitable cover or be removed without delay to a safe place; and separate self-closing metal receptacles shall be provided in work-rooms for oil-soaked waste, rags or other material, subject to spontaneous combustion.

2(J) No person shall smoke, light or carry matches, lighters or other flame producing articles or smoking materials, in any place in which explosive highly flammable or highly combustible substances, are manufactured, used, handled or stored and the occupier shall take all reasonably practicable steps to ensure compliance with the foregoing provisions of this subsection including such steps as-

- (a) the display at or as near as possible to every place in which this subsection applies of a clear and bold notice indicating that smoking is prohibited in that place; and
- (b) except in places where smoking is permitted, the display throughout the factory at every entrance to the factory at which people enter of a clear and bold notice indicating that smoking is prohibited.

2(K) The Minister may make rules on the measures to be taken to reduce the risk of fire breaking out in any factory or of any such fire or smoke therefrom spreading in any factory and such rules may, among other things, prescribe requirements on the internal construction of a factory and the materials to be used in that construction.

#### **Replacement of sections 43, 44 and 45 of Cap. 514**

16. Sections 43, 44 and 45 are repealed and the following new sections inserted-

43. (1) Where an accident in a factory, premises, place of work or location-

- (a) causes loss of life to a person in the factory, premises, place of work or location; or
- (b) disables any person for more than three days,

written notice of the accident, in the prescribed form and accompanied by the prescribed particulars, shall forthwith be sent to an inspector and in the case of a fatal accident within and not later than twenty-four hours of its occurrence.

(2) Where an accident causing disablement is notified under this section, and after notification thereof results in the death of the person disabled, notice in writing of the death shall be sent to an inspector by the employer of the deceased person as soon as the death comes to his knowledge.

(3) Where any accident to which this section applies occurs to a person employed and the occupier of the factory is not the actual employer of the person killed or injured, the actual employer shall, if he fails to report the accident to the occupier immediately, be guilty of an offence and liable to a fine not exceeding five thousand



shillings; but not offence shall be committed under this subsection if a report is made by the actual employer to the chief inspector or an inspector.

#### Notification of dangerous occurrences

44. (1) The provisions of section 43 requiring notice of an accident occurring in a factory to be given shall extend and apply to the classes of dangerous occurrences specified in the Seventh Schedule whether death or disablement is caused or not.

(2) The Minister may, on the advice of the National Advisory Committee on Occupational Health and Safety, by notice in the Gazette amend the Seventh Schedule.

#### Notification of industrial diseases

45. (1) Every medical practitioner attending or called in to visit a patient whom he believes to be suffering from any disease specified in the Eighth Schedule, contracted in any factory, shall (unless such a notice has been previously sent) forthwith send to the chief inspector a notice stating the name and full postal address of the patient and the disease from which, in the opinion of the medical practitioner, the patient suffering, and the name and address of the factory or place of work in which he was last employed.

(2) If any medical practitioner fails to send any notice in accordance with the requirements of this section, he shall be guilty of an offence and liable to a fine not exceeding one thousand shillings.

(3) Written notice of any disease specified in the Eighth Schedule occurring in a factory, shall be sent by the occupier in the prescribed form and accompanied by the prescribed particulars to the chief inspector and the provisions of section 42 of this Act with respect to the notification of accidents shall *mutatis mutandis* apply to any notification of diseases.

(4) The Minister may, as respects all factories or any class or description of factory by rules, apply the provisions of this section to any disease other than those mentioned in the Eighth Schedule.

#### Power to direct formal investigation of accidents and cases of disease

45A. (1) The Minister may, where he considers it expedient to do so, direct a formal investigation to be held into any accident occurring or case of disease contracted or suspected to have been contracted in a factor, premises, place or location and of its causes and circumstances and the following provisions of this section shall have effect with respect to any such investigation.

(2) The Minister may appoint one or more competent persons to hold the investigation, and may appoint any person possessing legal or special knowledge to act as assessor to the investigation.

(3) The person or persons so appointed (in this section referred to as "the tribunal") shall hold the investigation in such manner and under such conditions as they may think most effectual for ascertaining the causes and circumstances of the accident or case of diseases, and for enabling the making of the report required by this section.

(4) The tribunal shall have for the purpose of the investigation all the powers of a magistrate's court when trying information for offences under this Act, and all the powers of an inspector under this Act, and, in addition, power-

(a) to enter and inspect any place or building the entry or inspection of which appears to be tribunal requisite for the purposes of the investigation;

(b) by summons signed by the tribunal to require the attendance of all such persons as the tribunal think fit and to require answers or returns to such inquiries as it thinks fit to make;

(c) to require the production of all books, papers and documents which it considers important for the purpose of the investigation; and

(d) to administer oaths and require any person examined to make and sign a declaration of the truth of the statements made by him in his examination.

(5) Persons attending as witnesses before the tribunal shall be allowed such expenses as would be allowed witnesses attending before a magistrate's court of the first class; and in the case of dispute as to the amount to be allowed, the dispute shall be referred to the registrar or a deputy registrar of the High Court who, on request signed by the tribunal, shall ascertain and certify the proper amount of the expenses.

(6) The tribunal shall make a report to the Minister stating the causes and circumstances of the accident or case of disease and its circumstances and adding any observations which the tribunal thinks right to make.

(7) Any person who without reasonable excuse (proof whereof shall lie on him) either fails, after having had the expenses (if any) to which he is entitled tendered to him, to comply with any summons, order or requisition of the tribunal, or prevents, or impedes the tribunal in the execution of its duty, shall be guilty of an offence and liable to a fine not exceeding three thousand shillings, and, in the case of a failure to comply with a req-

quisition for making any return or producing any documents, if the failure in respect of which he was convicted is continued after the conviction, he shall (subject to the provisions of section 77 of this Act) be guilty of a further offence and liable to a fine not exceeding five hundred shillings for every day on which the failure was continued.

(8) The Minister may cause the report of the tribunal to be made public at such time and in such manner as he thinks fit.

#### **Medical examination rules.**

45B(1) Where the Minister is satisfied that any work involves a risk to the health of the employees, he may make rules requiring-

- (a) medical examination of the employees before they are employed, during their employment, and after the termination of their employment; and
- (b) regular or individual examinations or surveys of health conditions from the point of view of industrial medicine and industrial hygiene.

(2) The Minister may make rules concerning similar examinations to establish whether a particular activity may involve risks to health.

(3) The costs in connection with such examinations shall be paid by the employer.

(4) The employer shall ensure that the examination can take place without loss of earnings for the employees and if possible within normal working hours during their employment.

(5) The employees and former employees shall be under an obligation to undergo examination in accordance with the rules.

#### **Amendment of section 51 of Cap. 514.**

17. Section 51 of the principal Act is amended-

- (a) in subsection (1), by deleting the fullstop at the end thereof and inserting "and the dust, fumes or impurity shall not be allowed to enter into the atmosphere without undergoing appropriate treatment to prevent air pollution or other ill-effect to life and property;
- (b) in subsection (2), by deleting the fullstop at the end thereof and inserting "and the exhaust gases shall not be allowed to enter the atmosphere without undergoing appropriate treatment so as to prevent air pollution, or other ill effect to life and property."

Insertion of new section 52A of Cap. 514.

18. The principal Act is amended by inserting the following new section immediately after section 52-

#### **Marking of containers**

52A. Containers filled with hazardous substances, shall be-

- (a) plainly painted, marked or labelled in a distinctive manner, so as to be readily identifiable; and
- (b) accompanied with instructions for safe handling of the contents.

Amendment of section 55 of Cap. 514.

19. Section 55 of the principal Act is amended by adding to subsection (2) (c) the following paragraph-

- (v) lifting excessive weights.

Insertion of new sections 55A and 55B in Cap. 514.

20. The principal Act is amended by inserting the following new sections immediately after section 55-

#### **Research and related activities**

55A. (1) The Chief inspector shall with the approval of the Minister conduct (directly or in collaboration with other persons or bodies) research, experiments and demonstrations relating to occupational safety and health, including studies of psychological factors involved, and relating to innovative methods, techniques and approaches for dealing with occupational safety and health problems.

(2) The chief inspector shall develop specific plans for such research, demonstration, and experiments as are necessary to produce criteria, including criteria for identifying toxic substances, for the formulation of safety and health standards under this Act; and the chief inspector on the basis of such research, demonstration, and experiments, or any other information available to him, shall develop and publish such criteria necessary for the purposes of this Act.

(3) The chief inspector shall develop criteria dealing with toxic materials and harmful physical substances and agents which will describe exposure levels that are safe for various periods of employment, including, but not limited to the exposure level, at which no employee will suffer impaired health or functional capacities or diminished life expectancy as a result of his work experience.

(4) The chief inspector shall conduct special research,

experiments, and demonstrations relating to occupational safety and health as are necessary to explore new problems including those created by new technology in occupational safety and health, which may require ameliorative action beyond that which is otherwise provided for in this Act and shall also conduct research into the motivational and behavioural factors relating to the field of occupational safety and health.

(5) In order to develop needed information, regarding potentially toxic substances or harmful physical agents, the chief inspector, with the approval of the Minister, may prescribe regulations requiring employers to measure, record, and make reports on the exposure of employees to substances or physical agents which may endanger the health or safety of employees and may by such regulations establish such programmes of medical examinations and tests as may be necessary for determining the incidence of occupational illnesses and the susceptibility of employees to such illness.

Collection, etc. of occupation safety and health statistics.

#### **Amendment of Cap. 514. section 61 of 14**

55B. In order to further the purposes of this Act, the Minister shall develop and maintain an effective programme of collection, compilation and analysis of occupational safety and health statistics which shall cover work injuries and illnesses including all disabling, serious, or significant injuries and illnesses, whether or not involving loss of time from work, other than minor injuries requiring only first aid treatment and which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job.

21 Section 61 of the principal Act is amended by inserting the following new subsection (3)-

(3) The occupier of a factory in respect of which this section is not complied with shall be guilty of an offence.

#### **Insertion of new section 65A in Cap. 514.**

22. The principal Act is amended by inserting the following new section immediately after section 65-

#### **Safety and health committees**

65A. (1) Factories which regularly employ at least twenty employees, shall have a safety and health committee, on which the employer and the workers are represented.

(2) The Minister may by rules prescribe the organization and functions and the activities of safety and health committees including rules on the election of safety rep-

resentatives, their rights and duties.

#### **Amendment of section 67 of Cap. 514.**

23. Section 67 of the principal Act is amended by deleting "Labour Commissioner" and inserting "chief inspector".

#### **Insertion of new section 67A in Cap. 514.**

24. The principal Act is amended by inserting immediately after section 67 the following new section-

67A. (1) There shall be a National Advisory Committee on Occupational Health and Safety consisting of the chief inspector as chairman and one nominee from each of the following Ministries or organizations appointed by the Minister by name and by notice in the Gazette-

(a) the Ministries for the time being responsible for-

- (i) health;
- (ii) environment and natural resources;
- (iii) the Government chemist department;
- (iv) agriculture;
- (v) livestock development;
- (vi) commerce;
- (vii) industry;
- (viii) water development

(b) the Federation of Kenya Employers;

National Advisory Committee on Occupational health and Safety(c) the National Council for Science and Technology;

- (d) the Central Organization of Trade Unions;
- (e) the public universities;
- (f) the Kenya Bureau of Standards.

(2) The Committee shall advise, consult with, and make recommendations to the Minister on matters relating to the administration of this Act.

(3) Subject to any rules of procedure that the Minister may prescribe under this subsection the Committee shall regulate its own procedure but the chairman shall ensure that the Committee meets at least three times in a calendar year.

(4) The allowance of the members of the committee shall be determined by the Minister with approval of the Treasury.

**Amendment of section 69 of Cap. 514.**

25. Section 69 of the principal Act is amended-

- (a) by deleting the full stop at the end of paragraph (h) and adding the following "including the taking of such measurements and photographs and making such recordings as he may consider necessary for the purposes of any examinations or investigation under this Act.";
- (b) by deleting the expression "Labour Commissioner" appearing in proviso (ii) to paragraph (a) and inserting "chief inspector";
- (c) by deleting the proviso to subsection (5) and the colon and inserting a full stop.

**Insertion of new section in Cap. 514.**

26. The principal Act is amended by inserting the following new sections 69A, 69B, 69C, 69D, 69E, 69F, and 69G immediately after section 69-

**Improvement notices.**

69A. If an inspector is of the opinion that a person-

- (a) is contravening any of the provisions of this act or rules made thereunder; or
- (b) has contravened one or more of those provisions in circumstances that make it likely that the contravention will continue or be repeated, he may serve on him a notice (in this Part referred to as "an improvement notice") stating that he is of that opinion, specifying the provision or provisions in respect of which he is of that opinion, giving particulars of the reasons why he is of that opinion and requiring that person to remedy the contravention, or, as the case may be, the matters occasioning it within such period (ending not earlier than the period within which an appeal against the notice can be brought under section 69D) as may be specified in the notice.

**Prohibition notices**

69B. (1) This section applies to any activities which are being or are about to be carried on by or under the control of any person, being activities to or in relation to which this Act or the rules made thereunder apply or will, if the activities are so carried on, apply.

(2) If as regards any activities to which this section applies an inspector is of the opinion that, as carried on or about to be carried on by or under the control of the person in question the activities involve or, as the case may be, will involve a risk of serious personal injury the inspector may serve on that person a notice (in this Part referred to as "a prohibition notice").

(3) A prohibition notice shall-

- (a) state that the inspector is of the said opinion;
- (b) specify the matters which in his opinion give or as the case may be, will give rise to the said risk;
- (c) where in his opinion any of those matters involve or, as the case may be, will involve a contravention of any provision of this Act or the rules made thereunder, state that he is of that opinion, specify the provision or provisions in respect of which is of that opinion, and give particulars of the reasons why he is of that opinion; and
- (d) direct that the activities to which the notice relates shall not be carried on by or under the control of the person on whom the notice is served unless the matters specified in the notice in pursuance of paragraph (b) of this subsection and any associated contravention of provisions so specified in pursuance of paragraph (c) have been remedied.

(4) A direction given under subsection (3) (d) of this section shall take immediate effect if the inspector is of the opinion, and states it, that the risk of serious personal injury is or, as the case may be, will be imminent, and shall have effect to the end of a period specified in the notice in any other case.

**Provisions on prohibition notices and improvement notices**

69C. (1) In this section "a notice" means an improvement notice or prohibition notice.

(2) A notice may (but need not) include directions as to the measures to be taken to remedy any contravention or matters to which the notice relates; and any such directions-

- (a) may be framed to any extent by reference to any code of practice approved by the chief inspector; and
- (b) may be framed so as to afford the person on which the notice is served a choice between ways of remedying the contravention or matter.

### Provisions on prohibition notices and improvement notices.

(3) Where any of the provisions of this Act or the rules made thereunder apply to a building or any matter connected with a building and an inspector proposes to serve an improvement notice relating to a contravention of that provision in connection with that building or matter, the notice shall not direct any measures to be taken to remedy the contravention of that provision which are more onerous than those necessary to requirements of any building rules to which the building or matter would be required to conform.

(4) Before an inspector serves in connection with any premises used or about to be used as a factory or a place of work a notice requiring or likely to lead to the taking of measures affecting the means of escape in case of fire with which the premises are or ought to be provided, he shall consult the fire authority of the area in which the premises are located.

(5) Where an improvement notice or prohibition notice which is to take immediate effect has been served-

- (a) the notice may be withdrawn by an inspector at any time before the end of the period specified therein in pursuance of section 69A or section 68B (4), as the case may be; and
- (b) the period so specified may be extended by an inspector at any time when an appeal against the notice is not pending.

### Appeal against improvement or prohibition notice

69D. (1) In this section "notice" means an improvement notice or a prohibition notice.

(2) A person on whom a notice is served may within fourteen days from the date of its service appeal to the Factories Appeal Board established under section 10 of this Act, and on such appeal the board may either cancel or affirm the notice and, if it affirms it, may do so either in its original form or with such modifications as the board may in the circumstances think fit.

(3) Where an appeal under this section is brought against a notice within the period allowed under subsection (2), then-

- (a) in the case of an improvement notice, the bringing of the appeal shall have the effect of suspending the operation of the notice until the appeal is finally disposed of or, if the appeal is withdrawn, until the withdrawal of the appeal; or
- (b) in the case of a prohibition notice, the bringing of

the appeal shall have the like effect if, but only if, on the application of the appellant the board so directs (and then only from the giving of the direction).

### Power to deal with cause of imminent danger

69E. (1) Where, in the case of any article or substance found by him in any premises or place which he has power to enter, an inspector has reasonable cause to believe that, in the circumstances in which he finds it, the article or substance is a cause of imminent danger or serious personal injury, he may seize it and cause it to be rendered harmless (whether by destruction or otherwise).

(2) Before any article or substance that forms part of a batch of similar articles or any substance is rendered harmless under this section the inspector shall, if it is practicable for him to do so, take a sample of the article or substance and give to a responsible person at the premises where he found it a portion of the sample marked in a manner sufficient to identify it.

(3) As soon as an article or substance has been seized and rendered harmless under this section, the inspector shall prepare and sign a written report giving particulars of the circumstances in which the article or substance was seized and dealt with by him, and shall-

- (a) give a signed copy of the report to a responsible person at the premises where the article or substance was found by him; and
- (b) unless the person is the owner of the article or substance, also serve a signed copy of the report to the owner.

### Inspectors not to disclose information or source of complaints

69F. (1) An inspector shall not disclose any information obtained by him in the course of his duties and the exercise of any of the powers conferred by section 69 of this act (including in particular, any information with respect to any manufacturing process or trade secret obtained by him in any premises entered by him by virtue of any such power) except-

- (a) for the purposes of his functions; or
- (b) for the purposes of any legal proceedings or any investigation or inquiry authorized by Government;

### Inspectors not to disclose information or source of complaints

- (c) with the relevant consent, that is to say, in the case of information furnished in pursuance of a require-

ment imposed under section 69 of this Act, the consent of the person who furnished it, and, in any other case the consent of a person having responsibilities in relation to the premises where the information was obtained.

(2) Subject to subsection (1) of this section, no inspector shall divulge to any person the source of any complaint bringing to his notice any defect or breach of any of the provisions of this Act, and shall give no information to any owner, occupier or employer that a visit or inspection of any factory or place was made in consequence of the receipt of such complaint.

(3) An inspector who contravenes the provisions of subsection (1) or (2) of this section shall be guilty of an offence.

**Approval of plans of factory premises**

69G. (1) No building shall be erected or converted for use as a factory and no structural alteration and no extension shall be made to any existing factory premises except in accordance with plans showing details of the proposed construction, conversion, alteration or extension, approved by the chief inspector.

(2) Upon receipt of written application supported by such particulars as may be prescribed being made to the chief inspector for the approval of any plan described in subsection (1) of this section, the chief inspector shall-

(a) If he is satisfied that the plans provide for suitable premises for use of a factory of the type proposed, issue a certificate of approval for such plants; or

(b) if he is not satisfied, refuse to issue a certificate of approval and shall state in writing to the applicant the reasons for such refusal.

**Insertion of new section 70A in Cap. 514**

27. The principal Act is amended by inserting the following new section 70A immediately after section 70-

70A. (1) Notwithstanding section 32 of the Exchequer and Audit Act, Parliament shall appropriate moneys necessary for the establishment of a fund to be known as the Occupational Health and Safety Fund.

(2) The Occupational Health and Safety Fund shall be administered by the chief inspector.

(3) There shall be paid into the Fund in respect of every factory and place of work registered under this Act a levy charged at the prescribed rates known as the occupational health and safety levy.

(4) There shall be paid out of the fund such moneys as are necessary for the proper functioning of the factories inspectorate and for such matters relating to occupational health and safety in Kenya as the Minister may direct.

(5) The Treasury may make rules governing the efficient management and administration of the Occupational Health and Safety Fund.

**Amendment of section 71 of Cap. 514**

28. Section 71 of the principal Act is amended in subsection (1) by deleting the expression "Labour Advisory Board" and inserting "National Advisory Committee on Occupational Health and Safety".

**Amendment of section 73 of Cap. 514.14**

29. Section 73 of the principal Act is amended by deleting the words "six hundred shillings" and inserting the words "ten thousand shillings"; and by deleting the words "one hundred shillings" and inserting the words "one thousand shillings".Amendment of section 74 of Cap. 514.

30. Section 74 of the principal Act is amended by deleting the words "one hundred shillings" and inserting the words "one thousand shillings".Amendment of section 75 of Cap. 514.

31. Section 75 of the principal Act is amended by deleting the words "two thousand shillings" and inserting the words "twenty thousand shillings".Insertion of new Sixth, Seventh and Eighth Schedules in Cap. 514.

32. The principal Act is amended by inserting the following new Schedules immediately after the Fifth Schedule-

SIXTH SCHEDULE (S. 37 (8) (b))

THE MANNER OF PREPARING A STEAM BOILER FOR THE EXAMINATION WHEN IT IS COLD

1. In addition to the steps required to be taken under paragraph (2) of the Schedule, the preparation of the interior and exterior of a boiler (including, where fitted, an economizer and super heater) for its examination when cold under section 37 shall consist of all or any of one or more of the following steps, that is to say-

(a) the opening out, cleaning and scaling of the boiler; including the removal of doors from mudholes, manholes and handholes;

(b) the removal of firebars;

- (c) in the case of shell type boilers the dismantling of firebridges (if made of brick) and all furnace protective brickwork;
- (d) the opening out for cleaning and inspection of fittings including the pressure parts of automatic controls; and
- (e) in the case of water-tube boilers, the removal of drum internal fittings,

and the person making the examination may require other preparations to be made.

2. All brickwork, baffles and coverings must be removed for the purpose of the thorough examination to the extent require by the person making the examination but in any case these parts must be removed to the extent necessary to expose headers, seams and shells of drums-

- (a) not less frequently than once in every six years in the case of a steam boiler situated in the open or exposed to the weather or damp; and
- (b) not less frequently than once in every ten years in the case of every other steam boiler.

#### SEVENTH SCHEDULE (S. 44)

##### DANGEROUS OCCURRENCES

1. Bursting of a revolving vessel, wheel, grindstone or grinding wheel moved by mechanical power.

2. Collapse of failure of a crane, derrick, winch, hoist or other appliance used in raising or lowering persons or goods, or any part thereof (except the breakage of chain or rope-slings), or the overturning of crane.

3. Explosion of fire causing damage to the structure of any room or place in which persons are employed or to any machine or plant contained therein, and resulting in the complete suspension of ordinary work in such room or place or stoppage of machinery or plant for not less than five hours, where such explosion or fire is due to the ignition of dust, gas or vapour.

4. Electrical short circuit or failure of electrical machinery plant or apparatus, attended by explosion or fire or causing structural damage thereto, and involving its stoppage or disuse for not less than five hours.

5. Explosion or fire affecting any room in which persons are employed and causing complete suspension of ordinary work therein for not less than twenty-four hours.

6. Explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gasses (including air) or any liquid or solid resulting from the compression of gas.

7. The explosion of any steam boiler, failure of fire-tubes or steam tubes or furnace collapse or fusible plug.

8. Accidental or otherwise, escape or leakage or dangerous or toxic gases, fumes, liquid or substances injurious to health.

#### EIGHTH SCHEDULE (s. 45)

##### PRESCRIBED OCCUPATIONAL DISEASES

<i>Description of Disease or Injury</i>	<i>Nature of Occupation</i>
Poison by:	Any occupation involving:
1. Lead or a compound of lead	The use of handling of or, exposure to the fumes, dust or vapour of, lead or a compound of lead, or a substance containing lead.
2. Manganese or a compound of manganese	The use of handling of, or exposure to the fumes, dust or vapour of manganese or a compound, or a substance containing manganese.
3. Phosphorus or phosphine or poisoning due to the anti-cholinesterase action of organic phosphorus compounds.	The use or handling of, or exposure to the fumes, dust or vapour of, phosphorus or a substance containing phosphorus.
4. Arsenic or a compound of arsenic	The use of, handling of, or exposure to the fumes, dust or vapour of, arsenic, or a substance containing arsenic.

Description of Disease or Injury	Nature Occupation
5. Mercury or a compound of mercury	The use of handling of, or exposure to the fumes, dust or vapour of, mercury or a compound of mercury or a substance containing mercury
6. Carbon bisulphide	The use of handling of, or exposure to the fumes or vapour of, carbon bisulphide, or a substance containing carbon bisulphide.
7. Benzene or a homologue of benzene	The use or handling of, or exposure to the fumes of, or vapour containing benzene or any of its homologues.
8. A nitro- or amino- or chloro-derivative of benzene or of a homologue of benzene or poisoning by nitrochloro-benzene	The use or handling of, or exposure to the fumes of, or vapour containing a nitro or amino- or chloro-derivative of benzene or a homologue of benzene or nitrochloro-benzene.
9. Dinitrophenol or a homologue or by substituted dinitrophenols or by the salts of such substances.	The use of handling of, or exposure to the fumes of, or vapour containing, dinitrophenol or a homologue or substituted dinitrophenols or the salts of such substances.
10. Tetrachlorethane	The use of handling of, or exposure to the fumes of, or vapour containing, tetrachlorethane.
11. Tri-cresyl phosphate	The use or handling of, or exposure to the fumes of, or vapour containing tri-cresyl phosphate.
12. Tri-phenyl phosphate	The use or handling of, or exposure to the fumes of, or vapour containing, tri-phenyl phosphate.
13. Diethylene dioxide (dioxan)	The use or handling of, or exposure to the fumes of, or vapour containing, diethylene dioxide (dioxan).
14. Methyl bromide	The use or handling of, or exposure to the fumes of, or vapour containing methyl bromide.
15. Chlorinated naphthalene	The use or handling of, or exposure to the fumes of, or vapour containing chlorinated naphthalene.
16. Nickel carbonyl	Exposure to nickel carbonyl gas.
17. Nitrous fumes	The use or handling of nitric acid or exposure to nitrous fumes.
18. Gonioma Kamassi (African Boxwood)	The manipulation of <i>gonioma Kamassi</i> or any process in or incidental to the manufacture of articles therefrom.
19. Anthrax	The handling of wool, hair, bristles, hides or skins or other animal products or residues, or contact with animals infected with anthrax.



<i>Description of Disease or Injury</i>	<i>Nature Occupation</i>
20. Glanders	Contact with equine animals or their carcasses.
21. (a) Infection by leptospira ictero-haemorrhagiae;	Work in places which are, or are liable to be, infected by rats.
(b) Infection by leptospira canicola	Work at dog kennels or the care or handling of dogs
22. (a) Dystrophy of the cornea (including ulceration of the corneal surface) of the eye;	The use of, handling of, or exposure to, arsenic, tar, pitch, bitumen, mineral oil (including kerosene), soot or any compound product (including quinene or hydroquinone), or residue of any of these sub- stances.
(b) Localized new growth of the skin, papillomatous or keratotic;	
(c) Squamous-celled carcinoma of the skin due in any case to arsenic, tar, pitch; bitumen, mineral oil (including kerosene), soot or any compound product (including quinone or hydro- quinone or residue of any of these substances).	
23. Inflammation, ulceration or malignant disease of the skin or subcutaneous tissues or of the bones or blood dyscrasia, or cataract due to electromagnetic radiations (other than radiant heat), or ionizing particles.	Exposure to electromagnetic radiations than radiant heat or to ionizing particles.
24. Heat cataract	Frequent or prolonged exposure to rays from molten or red-hot materials.
25. Decompression sickness	Subjection to compressed or rarefied air.
26. Cramps of the hand or forearm due to repetitive movements. fingers or arm.	Prolonged periods of handwriting, typing or other repetitive movements of the
27. Subcutaneous cellulitis of the hand (Beat hand) friction or pressure on the hand.	Manual labour causing severe or prolonged
28. Bursitis or subcutaneous cellulitis arising at or about the knee due to severe or prolonged external friction or pressure at or about the knee (beat knee).	Manual labour causing severe external friction or pressure at or about the knee.
29. Bursitis or subcutaneous cellulitis arising at or about the elbow due to severe or prolonged friction or pressure at or about the elbow (beat elbow).	Manual labour, or frequent or repeated movement of the hands or wrist.

<i>Description of Disease or Injury</i>	<i>Nature Occupation</i>
30. Traumatic inflammation of the tendon of the hand or forearm or of the associated tendon sheaths.	Manual labour, or frequent or repeated movements of the hand or wrist.
31. Poisoning by beryllium or a compound of beryllium.	The use or handling of, or exposure to the fumes, dust or vapour of beryllium or a compound of beryllium, or a substance containing beryllium.
32. Primary neoplasm of the epithelial lining of the urinary bladder	<p>(a) Work in a building in which any of the following substances is produced for commercial purposes;</p> <p>(i) Alpha-naphthylamine or beta-naphthylamine.</p> <p>(ii) Diphenyl substituted by at least one nitro or primary amino group or by at least one nitro or primary amino group.</p> <p>(iii) Any of the substances mentioned in subparagraph (ii) if further ring substituted by halogeno, methyl or methoxy groups, but not by other groups.</p> <p>(iv) The salts of any of the substances mentioned in subparagraphs (i) to (iii).</p> <p>(v) Auramine or magnet.</p> <p>(b) The use or handling of any of the substances mentioned in subparagraphs (i) to (iv) of paragraph (a), or work in a process in which any such substance is used or handled or liberated.</p> <p>(c) The maintenance or cleaning of any plant or machinery used in any such process as is mentioned in paragraph (b), or the cleaning of clothing used in any such building as is mentioned in paragraph (a) if such clothing is cleaned within the works of which the building forms a part or in a laundry maintained and used solely in connection with such works.</p>
33. Poisoning by cadmium	Exposure to cadmium fumes.
34. Inflammation or ulceration of the mucuous membranes of the upper respiratory passages or mouth produced by dust, liquid or vapour.	Exposure to dust, liquid or vapour.
35. Non-infective dermatitis of external origin (including chrome ulceration of the skin but excluding dermatitis due to ionizing particles or electromagnetic radiations other than radiant heat).	Exposure to dust, liquid, or vapour or any other external agent capable of irritating the skin (including friction or heat but excluding ionizing particles or electromagnetic radiations other than radiant heat).

*Description of Disease or Injury**Nature Occupation*

36. Pulmonary disease due to the inhalation of the dust of mouldy hay or the mouldy vegetable produce and characterized by symptoms and signs attributable to a reaction in the peripheral part of the broncho-pulmonary system, and give rise to a defect in gas exchange (farmer's lung)

Exposure to the dust of mouldy hay or other mouldy vegetable produce by reason of employment-

(a) in agriculture, horticulture or forestry-

(b) loading or unloading or handling in storage such hay or other vegetable matter; or

(c) handling bagasse.

37. Primary malignant neoplasm of the mesothelium (diffuse mesothelioma) of the plaura or of the peritoneum

(a) The working or handling of asbestos or any admixture of asbestos;

(b) the manufacture or repair of asbestos textiles or other articles containing or composed of asbestos;

(c) the cleaning or any machinery or plan used in any of the foregoing operations and of any chambers, fixtures and appliances for the collection of asbestos dust;

(d) Substantial exposure to the dust arising from any of the foregoing operations.

38. Adeno-carcinoma of the nasal cavity or associated air sinuses.

Attendance for work in or about a building where wooden furniture is manufactured.

39. Pneumoconiosis (including silicosis and asbestosis), bysinosis.

The mining, quarrying and dressing of sandstone, slate and granite; any occupation involving exposure to asbestos dust; iron and steel foundry work; steel dressing; work in the pottery industry; the manufacture of refractory products such as silica bricks; any dusty process which results in pneumoconiosis.

40. Various carcinoma known to be carcinogenic.

Exposure to various chemicals or substances which are

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## Disaster Management Act No. 2 of 1997

### ARRANGEMENTS OF PARTS AND SECTIONS

Section		
	<b>Part I - Preliminary</b>	17. Tenure of office
1. Short title and commencement		18. Meetings of the Board
2. Interpretation		19. Expenses and allowances
	<b>Part II - Declaration of State of Disaster</b>	20. Disclosure of interest
3. Declaration of state of disaster		21. Chief Executive
4. Emergency powers		22. Deputy Chief Executive
	<b>Part III - Disaster Management</b>	<b>Part VI - District and Village Disaster Management Teams</b>
5. Disaster Management Plan		23. District Disaster Management Team
6. Disaster Relief Plans		24. Functions of a District Disaster Management Team
7. Post-Disaster Reconstruction, Rehabilitation and Recovery Plan		25. Powers of a District Disaster Management Team
	<b>Part IV - National Disaster Relief Task Force</b>	26. Village Disaster management Team
8. Establishment of the National Disaster Relief Task Force		27. Volunteers
9. Functions of the Task Force		28. District Disaster Relief Co-ordinator
10. Meetings of the Task Force		29. Powers and duties of District Secretary
	<b>Part V - Disaster Management Authority</b>	30. Orders
11. Establishment of Disaster Management Authority		31. Delegation of powers or responsibilities
12. Working groups		32. District Disaster Management Officer
13. Functions of the Authority		33. Functions of District Disaster Management Officer
14. The Board		<b>Part VII - Finances</b>
15. Function of the Board		34. Fund
16. Termination of appointment		35. Receipts
		36. Disbursements

- 37. Donations
- 38. Financial year
- 39. Annual budget
- 40. Audit
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- 42. Transfer

#### Part VIII - Miscellaneous

- 43. Government assistance
- 44. Reimbursement and indemnification
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- 46. Indemnity
- 47. Offence and penalty
- 48. Regulations
- 49. By-laws
- 50. Intent and purpose
- 51. Repeals

#### ACT No. 2 of 1997

#### Disaster Management Act 1997

An Act to establish the Disaster Management Authority; to regulate its powers and functions and to make provision with respect to emergencies arising out of disasters including prevention, mitigation, preparedness, response and recovery measures for the protection of life and property from the effects of disasters; and to vest responsibility for disaster management jointly and separately with the Disaster Management Authority and the District Secretaries; and for related matters.

**Enacted by the Parliament of Lesotho**

## Part I

### Preliminary

#### Short title and commencement

1. This Act may be cited as the Disaster Management Act, 1997 and it shall come into operation on the date of its publication in the Gazette.

#### Interpretation

2. In this Act, unless the context otherwise requires:-

“appointed member” means a member of the Board appointed by the Minister;

“Authority” means the Disaster management Authority established under section 11 of this Act;

“Board” means the Board of Directors of the Disaster Management Authority established under section 14 of this Act;

“Chief Executive” means the Chief Executive of the Disaster Management Authority appointed under section 21 of this Act;

“disaster” means a progressive or sudden, widespread or localised, natural or man-made event including not only prevalent drought but also heavy snowfalls, severe frosts, hailstorms, tornadoes, landslides, mudslides, floods, serious widespread fires and major air or road traffic accidents;

“disaster management” means a continuous and dynamic multi-sectoral, multi-disciplinary process of planning which seeks, by the systematic study and analysis of disasters, to improve measures relating to prevention, mitigation, emergency preparedness, response and post-disaster recovery;

“emergency” means any occasion, instance or event for which, in the determination of the Prime Minister, exceptional assistance from the government is needed to

supplement national, district, community or individual actions to save lives, protect property and public health and safety or to prevent or mitigate the threat of a catastrophe or extreme hazard in any part of Lesotho;

“fund” means the Disaster management Fund referred to in section 34 of this Act;

“Minister” means the Minister responsible for the administration of this Act;

“mitigation” means measures aimed at reducing the impact of a natural or man-made disaster on the nation or the community;

“preparedness” means measures including the preparation of viable disaster relief plans, maintenance of resources and training of personnel undertaken by the government, non-governmental organisations, communities and individuals to mobilise, organise and provide relief measures required to deal with an impending or current disaster;

“prevention” means measures aimed at stopping a disaster from occurring or preventing such an occurrence having harmful effects on communities;

“recovery” means a process by which people or communities are assisted to return to their proper level of livelihood following a disaster;

“Regulations” means regulations made under section 48 of this Act;

“response” means measures undertaken immediately prior to or during a disaster-induced emergency in order to bring relief to people, communities or enterprises affected by the disaster;

“Task Force” means the National Disaster Relief Force established under section 8 of this Act.

## Part II

### Declaration of State of Disaster

#### Declaration of state of disaster

3. (1) If at any time it appears to the Prime Minister, on the advice of the Board, that any disaster in any area is of such a nature and extent that exceptional measures are necessary to assist and protect the public of such area or that circumstances are likely to arise making such measures necessary, he may declare that with effect from a date specified by him in such declaration, a state of disaster exists within the area defined in such declaration and such declaration shall be published in the Gazette.

(2) The declaration of a state of disaster shall remain in force for a specific period as set out in the declaration and may be extended accordingly.

#### Emergency powers

4. In addition to the general emergency powers set out in the Emergency Powers Order 1988<sup>1</sup> the Minister shall, during a state of disaster, have the following powers:-

- (a) to suspend the provisions of any regulatory statute prescribing the procedures for conduct of government business or the orders, rules or regulations of any government agency, if compliance with the provisions of any statute, order, rule or regulation would in any way prevent, hinder, or delay necessary action in coping with the disaster-induced emergency;
- (b) to utilise all available resources of the Government including stores, equipment vehicles and facilities as reasonably necessary to cope with an emergency;
- (c) to transfer personnel or functions of Government departments and agencies or units thereof for the purpose of performing or facilitating emergency services;
- (d) to implement the relevant provisions of the National Disaster Management Plan to meet emergency requirements;
- (e) to mobilise strategic reserves of commodities and equipment and other resources;
- (f) to have access to and utilisation of the Lesotho Defence Force and Royal Lesotho Mounted Police personnel, vehicles, equipment and radio communications, as well as military aircraft;
- (g) to direct and compel the evacuation of all or part of the population from any disaster-stricken or threatened area if it is deemed that such an action is necessary for the preservation of life and move them to temporary shelter elsewhere where adequate facilities exist for their livelihood;
- (h) to prescribe appropriate routes, modes of transportation and destination in connection with evacuation;
- (i) to control in-coming and out-going traffic to and from a disaster area, the movement of persons within the area and the occupancy of premises therein, making provision for the availability and use of temporary emergency housing;
- (j) to suspend or limit the sale, dispensing or transportation of alcoholic beverages, firearms and explosives;

- (k) to step up the provision of early warning and other information required for preparing for or dealing with a disaster;
- (l) to requisition buildings, vehicles and equipment on the charge of centres and local government institutions needed for emergency purposes;
- (m) to take all necessary measures in order to prevent, alleviate, control and minimise the effects of disasters;
- (n) to make post-disaster reconstruction, rehabilitation and recovery plans;
- (o) to provide assistance to District Secretaries and District Disaster Management Team;
- (p) to delegate appropriate powers and responsibilities to District Secretaries and monitor their effective implementation;
- (q) to improve and enforce restrictions on the supply and usage of water in circumstances of severe prolonged droughts; and
- (r) to prepare an appeal for donor assistance and to receive, accept and account for any donations that may be given for the functions of the Authority.

### **PART III**

## **DISASTER MANAGEMENT**

### **Disaster Management Plan**

5. (1) The Authority shall prepare a National Disaster Management Plan which the Minister shall submit to the Cabinet for approval. The plan shall cover requirements for disaster management including mitigation, preparedness, response and recovery measures.

(2) The National Disaster Management Plan shall, as far as possible, be integrated with National Development Plans and shall be supported by a Disaster Management Manual containing detailed responsibilities and procedures on disaster management.

(3) The National Disaster Management Plan and the Disaster Management Manual shall be reviewed and updated by the Chief Executive once a year or as necessary, particularly at the end of a state of disaster, and the Chief

Executive shall recommend any amendments to the Board which shall then propose the amendments to the Cabinet for approval.

(4) The Chief Executive shall prepare embryo Disaster Relief Plans at national level and each District Secretary shall prepare such plans for the district concerned.

(5) The Lesotho Defence Force and the Royal Lesotho Mounted Police shall prepare their own plans to provide assistance to the civil authorities or the civilian population. These plans shall be based on the National Disaster Management Plan and shall be incorporated in the plan referred to in subsection (1) as appropriate.

### **Disaster Relief Plans**

6. Upon the declaration of a state of disaster:-

- (a) the Chief Executive shall prepare an appropriate National Disaster Relief Plan and, following its agreement by the Board and its approval by the Cabinet, shall implement and maintain that plan;
- (b) each District Secretary shall prepare an appropriate District Disaster Relief Plan for the district concerned and, following its approval by the Chief Executive, shall implement and maintain that plan.

### **Post-Disaster Reconstruction, Rehabilitation and Recovery Plan**

7. During a state of disaster, the Chief Executive shall prepare a Post-Disaster Reconstruction, Rehabilitation and Recovery Plan and, following its agreement by the Board and its approval by the Cabinet, shall implement and maintain that plan at national and district level as appropriate.

## **Part IV**

### **NATIONAL DISASTER RELIEF TASK FORCE**

#### **Establishment of National Disaster Relief Task Force**

8. (1) Upon the declaration of a state of disaster and for its duration, the Prime Minister shall establish a National Disaster Relief Task Force which shall consist of Ministers directly involved with that disaster.

(2) The Prime Minister shall cause the membership of the Task Force to be published in the Gazette.

**Functions of the Task Force**

9. The Task Force shall:-

- (a) provide policy guidelines to the Authority;
- (b) mobilise funds, manpower and other resources required to implement the National Disaster Relief Plan;
- (c) supervise and monitor National and District Disaster Relief Plans;
- (d) initiate the creation of appropriate institutional structures to support the Disaster Relief Plans;
- (e) approve requests for donor assistance.

**Meetings of the Task Force**

- 10. (1) The Task Force shall meet as often as its business requires and especially so during a state of disaster.
- (2) The Task Force may regulate its own procedure at its meetings.

- (b) the Training Group;
- (c) the Water and Sanitation Group;
- (d) the Health and Nutrition Group;
- (e) the Food and Logistics Group; and
- (f) the Agriculture Group.

(2) The working groups shall consist of senior officials of the Authority and senior representatives of central government ministries and units as well as members from the Lesotho Defence Force, Royal Lesotho Mounted Police, Lesotho Council of Non-Governmental Organisations, Non-Governmental Organisations and other agencies directly involved with disaster management.

- (3) The Minister shall appoint the members of the working groups and cause their membership to be published in the Gazette.
- (4) The working groups shall meet at more frequent intervals during an emergency than in times of non-emergency, but at least 4 times in each financial year.
- (5) The terms of reference and composition of the working groups shall be as provided in the Regulations.

**Part V**

**DISASTER MANAGEMENT AUTHORITY**

**Establishment of Disaster Management Authority**

- 11. (1) There is established a Disaster Management Authority which shall consist of a Chief Executive, a Deputy Chief Executive and such other officers as may be appointed.
- (2) The Authority shall be a public office, and accordingly, the laws governing the Public Service shall apply to the Authority and its officers.
- (3) Any other staff required for the purpose of the Authority shall be temporarily employed staff or serving members of the Lesotho Defence Force, the Royal Lesotho Mounted Police or volunteers.

**Working groups**

- 12. (1) The Authority shall have the following 6 permanently established working groups:-
- (a) the Executive Group;

**Functions of the Authority**

13. The Authority shall:-

- (a) act as the central planning, coordinating and monitoring institution for disaster management and post-disaster recovery;
- (b) brief the Board and the National Disaster Relief Task Force from time to time on progress and major problems in disaster management;
- (c) warn the public of an approaching disaster and predict its effects on the country;
- (d) maintain a data collection and dissemination system, and national strategic reserves of essential commodities and equipment for immediate disaster relief;
- (e) formulate disaster mitigation, preparedness and response strategies and action plans to meet all foreseeable requirements in consultation with central and local government, non-governmental organizations and donor agencies;
- (f) prepare and update the National Disaster Management Plan and the supporting Disaster Management Manual;



- (g) hold in readiness a series of National Disaster Relief Plans to meet any likely disaster;
  - (h) develop and sustain viable, effective structures and capacities at central government level and within districts in case of a disaster;
  - (i) create and maintain a national cadre of trained and qualified personnel for disaster management;
  - (j) arrange external training for the staff of government, non-governmental organisations and other local agencies which are directly involved with disaster management;
  - (k) promote general education on disaster management, emergency plans and relief measures;
  - (l) promote public awareness campaigns on disaster at national, district and community levels;
  - (m) conduct public relations and media briefing on disaster related programmes, progress and problems;
  - (n) take all necessary measures in order to prevent, alleviate, contain and minimise the effects of disasters;
  - (o) receive, accept and account for any donations that may be given for the functions of the Authority;
  - (p) make post-disaster reconstruction, rehabilitation and recovery plans;
  - (q) provide assistance to District Secretaries and District Disaster Management Teams; and
  - (r) delegate appropriate powers and responsibilities to District Secretaries and monitor their effective implementation.
- (vi) the Principal Secretary responsible for defence;
  - (vii) the Principal Secretary responsible for health and social welfare;
  - (viii) the Principal Secretary responsible for home affairs;
  - (ix) the Principal Secretary responsible for information and broadcasting;
  - (x) the Principal Secretary responsible for local government;
  - (xi) the Principal Secretary responsible for natural resources; and
  - (xii) the Chief Executive who shall be Secretary;
- (b) the following members to be appointed by the Minister:-
- (i) 3 representatives of non-governmental organisations on the recommendation of non-governmental organisations themselves; and
  - (ii) 2 representatives of the private sector who have wide knowledge and experience of disaster management.
- (2) The Minister shall cause notice of the composition of the Board to be published in the Gazette.

#### Functions of the Board

#### 15. The Board shall:-

- (a) advise the Minister on disaster management policy;
- (b) advise the Prime Minister, through the Minister, on the requirements for and the timing of a declaration of a disaster-induced emergency in accordance with the Constitution and to declare the country, any district or part thereof to be a disaster area; and
- (c) ensure that funds are available to meet disaster related and management expenditures.

#### Termination of appointment

#### 16. The Minister shall terminate the appointment of an appointed member if that member:-

- (a) has been declared insolvent or has made an arrangement with his creditors;
- (b) is incapacitated by physical or mental illness;

#### The Board

#### 14.(1) The Authority shall be managed and controlled by a Board of Directors which shall consist of:-

- (a) the following member ex-officio-
  - (i) the Government Secretary who shall be Chairman;
  - (ii) the Principal Secretary (Economics), Prime Minister's office;
  - (iii) the Principal Secretary responsible for planning;
  - (iv) the Principal Secretary responsible for finance;
  - (v) the Principal Secretary responsible for agriculture;

- (c) has been convicted of an offence involving fraud or dishonesty;
- (d) is otherwise unable or is, in the opinion of the Minister, unfit to discharge the functions of a member or is unsuitable to continue as a member; or
- (e) has been absent from 3 consecutive meetings of the board without the permission of the Chairman.

#### **Tenure of office**

- 17. (1) Every appointed member of the Board shall, unless he vacates office earlier by death, resignation or removal, hold office for 2 years and shall be eligible for re-appointment.
- (2) Every ex-officio member of the Board shall hold office so long as he holds the post by virtue of which he was so appointed.
- (3) An appointed member of the Board may resign his office of appointment by writing under his hand addressed to the Minister.
- (4) If a member of the Board is for any reason unable to exercise the powers or perform the duties of his office, the Minister may, subject to section 14 appoint another person to hold his office during the absence or incapacity of that member.

#### **Meetings of the Board**

- 18 (1) The Board shall meet as often as the business of the Authority may require, but in any case, not less than 4 times in each financial year.
- (2) The Chairman shall preside at all meetings of the Board.
- (3) Any question before the Board at a meeting shall be decided by the majority of votes of the members present and voting.
- (4) The quorum at a meeting of the Board shall be 8 members.
- (5) A presiding member shall have a deliberative vote and in the event of an equality of votes, he shall have a casting vote.
- (6) The Board may co-opt any person to attend any meeting of the Board for the purpose of assisting or advising the Board, but such co-opted person shall not vote.

(7) A special meeting of the Board may be called by the Chairman.

(8) The Secretary shall prepare the agenda and call all meetings for which 14 days notice shall be given, except for the special meeting under subsection (7).

(9) The validity of any act or proceedings of the Board shall not be affected by any vacancy among the members or by any defect subsequently discovered in the appointment of a member or by reason that some person who was not entitled to do so took part in the proceedings.

(10) The Secretary shall distribute the minutes of meetings, approved by the Chairman, as soon as possible after each meeting and before the next meeting and the Chairman of the Board shall confirm the minutes of each meeting at a subsequent meeting.

(11) Subject to this Act, the Board may make provision for the following:

- (a) the proper conduct of business of meetings of the Board;
- (b) the management and administration of the Authority generally;

(12) Subject to this section, the Board may regulate its own procedure.

#### **Expenses and allowances**

19. An appointed member of the Board shall be paid such expenses and allowances as the Board may recommend and the Minister may determine with the concurrence of the Minister responsible for finance.

#### **Disclosure of interest**

20. (1) Where a member of the Board is in any way directly or indirectly interested in a transaction or project of the Authority, he shall disclose the nature of his interest at a meeting of the Board; the disclosure shall be recorded in the minutes of the Board and the member shall not take part in any deliberations or decision of the Board with respect to that transaction or project.

(2) A member of the Board who contravenes subsection (1) commits an offence and is liable on conviction to a fine not exceeding M10,000 or to imprisonment for a period not exceeding 5 years and shall, upon conviction, cease to be a member of the Board.

**Chief Executive**

21. (1) There shall be a Chief Executive of the Authority appointed by the Public Service Commission.

(2) The Chief Executive shall be responsible for the execution of the policy of the Authority and the transaction of its day-to-day business and, without derogating from the generality of this section, he shall also:-

- (a) act, during an emergency, as the National Relief Co-ordinator;
- (b) maintain an adequate national disaster management structure and capacity;
- (c) formulate disaster mitigation, preparedness, response and recovery strategies, disaster management plans and disaster relief plans to meet all foreseeable requirements in consultation with other relevant institutions;
- (d) direct, coordinate, supervise and monitor the work of the Director of the Food Management Unit, the Director of the Food and Nutrition Coordinating Office and District Secretaries in respect of their disaster management, disaster relief and post-disaster roles; and
- (e) carry out any other functions as may be imposed upon him by the Authority, the Board or the Minister.

**Deputy Chief Executive**

22. There shall be a Deputy Chief Executive who shall act as Chief Executive during the absence or incapacity of the Chief Executive and, during an emergency, shall act as the Deputy National Disaster Relief Coordinator.

**Part VI****DISTRICT AND VILLAGE DISASTER MANAGEMENT TEAMS****District Disaster Management Team**

23. (1) Each district shall establish a District Disaster Management Team whose members shall be appointed by the District Secretary.

(2) The District Disaster Management Team shall consist of:-

- (a) the District Secretary who shall be Chairman;
  - (b) the District Engineer (Urban and Rural Water Supply);
  - (c) the District Medical Officer;
  - (d) the District Agriculture Officer;
  - (e) the District Rural Development Officer;
  - (f) the Manager of the District Food Management Unit Stores;
  - (g) the District Non-Governmental Organisations Co-ordinator;
  - (h) the District Supplementary Feeding Coordinator;
  - (i) a representative of the Lesotho Defence Force;
  - (j) a representative of the Royal Lesotho Mounted Police;
  - (k) 2 representatives of churches;
  - (l) 2 representatives of schools;
  - (m) the Chairperson, District Development Council;
  - (n) the Principal Chief; and
  - (o) the District Disaster Management Officer who shall be Secretary.
- (3) A District Disaster Management Team may co-opt any person but that person shall not vote at its meetings.
- (4) The District Disaster Management Team shall work in conjunction with the District Development Council in order to:-
- (a) keep under review all multi-sectoral disaster management plans;
  - (b) monitor all multi-sectoral disaster relief and post-disaster recovery activities carried out in the district.
- (5) The District Disaster Management Team shall meet as often as its business requires and at least 12 times in a year.

**Functions of a District Disaster Management Team**

24. A District Disaster Management Team shall:-

- (a) assist the District Secretary in discharging responsibilities relating to disaster management in the district concerned;

- (b) assess particular hazards facing the district;
- (c) liaise and cooperate with the Authority in ensuring that development plans for the district take into account hazards facing or likely to face the district;
- (d) prepare emergency relief plans for the district in accordance with the guidelines laid down by the Authority and supervise the state of preparedness for emergencies in the district.
- (e) coordinate stockpiling of relief supplies for relief operations in the district;
- (f) receive and decide on all applications for relief assistance in the district;
- (g) promote public awareness of disasters and measures to be taken to prevent or mitigate them in the district; and
- (h) organise training programmes for relief workers to practice the implementation of District Disaster Relief Plans.

#### **Powers of a District Disaster Management Team**

25. A District Disaster Management Team shall have all necessary powers for the efficient performance of its functions under this Act.

#### **Village Disaster Management Team**

26. (1) Each community or a cluster of communities in a district shall establish a Village Disaster Management Team.

(2) The composition of a Village Disaster Management Team shall be jointly determined by the District Secretary and the local Village Development Council taking into consideration the guidelines provided in the National Disaster management Plan and the Disaster Management Manual referred to in section 5 of this Act.

(3) The functions of the Village Disaster Management Team shall be laid down in the by-laws made by the District Secretary in accordance with section 49 of this Act.

#### **Volunteers**

27. (1) Any person, private enterprise, non-governmental organisation, charitable or religious organisation may, by written application to the District Secretary of the district concerned, volunteer to:-

- (a) serve as a member of a District or Village Disaster Management Team established in terms of sections 23 and 26 of this Act.

- (b) provide or assist in the provisions of any disaster management service within any area;

- (c) perform within any area any function connected with disaster management as agreed upon by the District or Village Disaster Management Teams.

(2) The District Secretary may, after reviewing the application, cause the name of the volunteer to be entered in the register kept under the terms of subsection (5).

(3) A volunteer may resign upon giving 30 days' notice to the District Secretary.

(4) A volunteer shall comply with every reasonable order or instruction given to him by the District Secretary for the area concerned or by any person authorized thereto by the District Secretary.

(5) Every District Secretary shall maintain a register of all volunteers in the area within which he may exercise his powers.

#### **District Disaster Relief Co-ordinator**

28. The District Secretary of each district shall, during an emergency, act as the District Disaster Relief Co-ordinator for the district for which he has been appointed.

#### **Powers and duties of a District Secretary**

29. (1) Subject to the provisions of this Act, a District Secretary shall:-

- (a) take any measures as, in his opinion, are necessary to deal with a state of a disaster in the district concerned:

Provided that such measures shall not deprive any person of his life or personal liberty;

- (b) establish, maintain and control every disaster management organisation of every organisation involved with disaster management in the district;

- (c) provide, operate and coordinate all disaster management services and activities within the district; and

- (d) report and be responsible to the Chief Executive on the progress and problems in respect of disaster management, disaster relief and post-disaster roles within the district as frequently as the Chief Executive may stipulate.

(2) During an emergency the District Secretary shall set up a district operations room for providing a working base for the District Disaster Management Team for efficient relief operations within the district.

(3) The District Secretary shall exercise his powers in terms of this Act in cooperation with the Authority, the Lesotho Defence Force and the Royal Lesotho Mounted Police within the district.

### Orders

30. (1) Subject to the provisions of this Act, a District Secretary may, in the district for which he is responsible, by order in writing, direct any person:-

- (a) to supply him with any relevant information concerning the existence and availability of any service, facility or asset whatsoever which could be used for or in connection with disaster management and which is under the control or in the possession of such person;
- (b) to maintain such specified stocks of fuel, food, water or medical supplies, and equipment for use during a disaster-induced emergency as he may reasonably be expected to maintain; and
- (c) to perform any work or render any disaster management service which, as a result of a disaster, is necessary for the purpose of dealing with the situation.

(2) No order shall be given in terms of:

- (a) sub-section (1)(a) to a person in the employment of the government requiring such person to supply information acquired by him the course of his duty as such an employee;
- (b) sub-section (1)(b) requiring the government to maintain any stocks referred to in that paragraph.

(3) A person aggrieved by an order given in terms of subsection (1) may appeal in writing against it to the Minister.

(4) In any appeal in terms of subsection (3), the Minister may, after inviting the District Secretary concerned to submit written representations in the matter and considering any representations so submitted, confirm, vary or set aside the order appealed against or give such other directions in the matter as he thinks appropriate.

### Delegation of powers of responsibilities

31. (1) A District Secretary in the capacity of a District Disaster Relief Co-ordinator or otherwise may, with approval of the Chief Executive, delegate all or any of his powers or responsibilities to a member of the District Disaster Management Team.

(2) The delegation of any power by a District Secretary

in the capacity of a District Disaster Relief Coordinator in terms of subsection (1) shall not divest him of that power or responsibility, and he may at any time revoke or amend any order given by any member of the District Disaster Management Team in the exercise of that power or responsibility, save that, where the District Secretary has been directed by the Chief Executive to delegate any powers or responsibilities to a member or members of the District Disaster Management Team, he shall not revoke or amend an order given by any such team except with the consent of the Chief Executive.

### District Disaster Management Team

32. There shall be a District Disaster Management Officer in each district who shall be appointed by the Public Service Commission and who shall report and be responsible directly to the District Secretary.

### Functions of District Disaster Management Officer

33. The District Disaster Management Officer shall provide a working line between the District Secretary, the District Disaster Management Team the Village Disaster Management Teams in the district and the Authority and shall assist the District Secretary acting as the District Disaster Relief Coordinator or in any other role in relation to:-

- (a) district and community disaster management, disaster relief and post-disaster recovery tasks;
- (b) preparation of reports, undertaking local training and conducting public awareness campaigns; and
- (c) provision of input to national plans for managing disasters.

## Part VII

### FINANCES

#### Fund

34. (1) The Minister responsible for finance shall establish a fund to be known as the Disaster Management Fund.

(2) The Accountant General shall maintain a separate account of the fund in which he shall record the receipts and disbursements referred to in sections 35 and 36.

(3) The Chief Executive shall maintain accounts in which

he shall record receipts into the fund and disbursements from the fund.

(4) In maintaining the accounts referred to in subsection (3) the Chief Executive shall observe the provisions of the Financial Regulations and other applicable laws governing the receipt, control and disbursement of public funds.

#### Receipts

35. (1) There shall be paid into the fund:-

- (a) moneys donated from any source for the purpose of disaster management;
- (b) moneys appropriated by government for this purpose; and
- (c) interest arising out of any investment of the fund.

#### Disbursements

36. There shall be paid out of the fund:-

- (a) moneys required for the discharge of the liabilities of the Authority;
- (b) moneys required to defray expenses incurred by the Authority in the exercise and discharge of its functions; and
- (c) any other expenses as may be approved by the Minister.

#### Donations

37. (1) Donations shall be taken on charge and accounted for in accordance with stores regulations and other applicable regulations governing the receipt, issue and control of public stores, equipment, plants, vehicles, machinery, buildings and related matters.

(2) Donations shall, wherever possible, be only used for the purpose for which they have been donated, however, where no conditions are attached, they shall be used for the purposes of implementing disaster management programmes.

#### Financial year

38. The financial year of the Authority shall be the period from the first day of April to the thirty first day of March of the succeeding year, both days inclusive.

#### Annual budget

39. The Chief Executive shall prepare and present to the

Board for approval, in advance of each financial year, a budget for that year, indicating anticipated revenues, allocation of the revenues and expenditures.

#### Audit

40. (1) The accounts of the Authority shall be audited by the Auditor-General or auditors appointed by him.

(2) The auditors shall complete their audit of accounts of the Authority within three months of the end of each financial year and shall include in the report assessments relating to the effectiveness and the administration of the Authority.

(3) The Board shall submit the auditors' report with comments to the Minister within one month from the date of its completion.

#### Reports

41. (1) As soon as possible after the close of the financial year, but not later than three months thereafter, the Board shall present to the Minister an annual report and audited accounts of the Authority comprising:-

- (a) a report on the activities of the Authority during the preceding year;
- (b) a balance sheet showing the assets and liabilities of the Authority at the close of the financial year;
- (c) a statement showing the receipt and disposal of any stores donated or purchased during the year.

(2) A copy of the annual report and audited accounts shall be submitted by the Minister to the Cabinet at the earliest opportunity.

#### Transfer

42. Upon the establishment of the fund referred to in section 34, all monies in the National Disaster Relief Fund established by the Finance (National Drought Disaster Relief Fund) Notice 1995, shall be transferred to that fund.

## Part VIII

### MISCELLANEOUS

#### Government assistance

43. (1) Where a state of disaster has in terms of section 3

been declared to exist in any area of Lesotho and the Minister considers that the District for that area is unable to provide adequate disaster management services to deal with the disaster, the Minister may after consultation with the District Secretary concerned:-

- (a) by notice published in such manner as he thinks fit:-
  - (i) to such extent and for such purposes as he may specify in the notice, take over any power or duty conferred upon the District Secretary in terms of this Act for the area concerned; and
  - (ii) confer or impose upon any person or authority, any power or duty conferred or imposed upon a District Disaster Relief Coordinator or other person by or in terms of this Act;

Provided that no such notice has been made in any manner other than by publication in the Gazette;

- (b) direct any person employed by the government to render such assistance as the Minister may direct to any District Disaster Relief Coordinator or other person upon whom a power or duty is conferred by or under this Act;

Provided that the Minister shall not confer or impose any such power or duty upon or give such direction to:-

- (i) a police officer, without the consent of the Commissioner of police; or
- (ii) a member of the Lesotho Defence Force, without the consent of the commander of the branch of the Lesotho Defence Force; or
- (iii) a prison officer, without the consent of the Director of Prisons; or
- (iv) an employee of government, without the consent of the Minister responsible for the Ministry in which he is employed.

(2) The Minister may direct any person employed by the government:-

- (a) to evaluate from time to time the preparedness of district authorities within Lesotho in matters relating to disaster management and to report thereon to the Minister;
- (b) to advise district authorities in matters relating to disaster management;
- (c) in collaboration with the District Secretary concerned, to activate disaster management services within any area and to coordinate all activities related to disaster management therein;

Provided that the Minister shall not give any direction in terms of this subsection to:-

- (i) a police officer, without the consent of the Commissioner of Police; or
- (ii) member of the Lesotho Defence Force without the consent of the commander of the branch of the Lesotho Defence Force concerned; or
- (iii) a prison officer, without the consent of the Director of Prisons; or
- (iv) an employee of government without the consent of the minister responsible for the ministry in which he is employed.

#### **Reimbursement and indemnification**

44. The District Secretary shall reimburse and indemnify every volunteer and other person employed in a disaster management organisation established and maintained by him for any reasonable expense or liability incurred by such volunteer or other person as a result of:-

- (a) carrying out any order or performing any disaster management service in terms of this Act; or
- (b) making available for the purpose of disaster management any equipment, land, building or other property.

#### **DISABILITY BENEFITS**

45. (1) The provisions of any enactment relating to the disability payment of compensation on the death of or injury to officers in the Public Service shall, mutatis mutandis, apply in relation to a volunteer or any other person performing any duty in terms of this Act as though he was an officer in the Public Service.

(2) Any compensation payable in terms of subsection (1) shall be paid from the Fund, which is hereby appropriated for the purpose.

#### **Indemnity**

46. Without prejudice to any defence or limitation which may be available in terms of any law, but subject to the provisions of this Act, no claim shall be made and no set-off shall operate against:-

- (a) the Minister;
- (b) the members of the Board;
- (c) the officials of the Disaster Management Authority;

(d) a District Secretary;

(e) a volunteer; and

(f) any person assigned duties by the Chief Executive or the District Secretary in terms of this Act,

in respect of loss or injury caused by or in the course of the exercise or performance or the purported exercise of any power conferred or duty imposed by this Act or an omission to exercise any such power or perform any such duty, unless the act or omission in question was unreasonable or negligent or was done in bad faith.

#### **Offence and penalty**

47. Any person who, without lawful excuse, fails to comply with an order or instruction given in terms of this Act, commits an offence and, on conviction, shall be liable to a fine not exceeding M10,000 or to imprisonment for a period not exceeding 5 years or both.

#### **Regulations**

48. The Minister may make the Regulations for the proper implementation of the provisions of this Act.

#### **By-laws**

49. Subject to the provisions of this Act, a District Secretary within or outside his capacity of a District Disaster Relief Coordinator may make by-laws for carrying out the functions related to any disaster management activity in the district to which he is nominated.

#### **Intent and purpose**

50. If in the opinion of the Minister, through any error, accident or omission, anything required to be done in terms of this Act is omitted to be done or is not done in the manner or within the time determined therein, the Minister may order all such steps to be taken as in his opinion may be necessary to rectify such error, accident or omission or he may validate anything which may have been irregularly done so that the intent and purpose of this Act shall be given effect to.

#### **Repeals**

51. The following Regulations are repealed:-

(a) the National Disaster Relief Fund Regulations, 1977; and

(b) the Finance (National Disaster Relief Fund) Regulations, 1995.

Note:

1. Order No. 4 of 1988.
2. Legal Notice No. 106 of 1977.
3. Legal Notice No. 6 of 1977.
4. Legal Notice No. 107 of 1995.

#### **Government Notice No. 12 of 1997**

#### **Explanatory Memorandum to the Disaster Management Bill 1997**

**Introduced into the National Assembly on the 24th June, 1996**

**(Circulated by authority of the Rt. Hon.**

**The Prime Minister and Minister responsible**

**for Disaster Management, Dr. Ntsu Mokhehle)**

#### **Outline**

#### **Introduction**

1. The Disaster Management Bill, 1996 makes provisions for disaster management in the Kingdom of Lesotho. As such it supports the National Disaster Management plan and, in this respect, will assist the introduction, enforcement and maintenance of the Plan.

2. The Disaster Management Bill, 1996, when it is enacted in Parliament, will be complemented by a Legal Notice setting out Disaster Management Regulations. These enabling Regulations will be submitted to Cabinet for approval and thus may later be amended administratively as necessary.

#### **Long Title of the Bill**

3. An Act to establish the Disaster Management Authority; to regulate its powers and functions and to make provision with respect to emergencies arising out of disasters including prevention, mitigation, preparedness, response and recovery measures for the protection of life and property from the effects of disasters; and to vest responsibility for disaster management jointly and sepa-



rately with the Disaster Management Authority and the District Secretary and for related matters.

### Notes on Clauses

#### Short title and commencement

4. Clause 1 states that the Disaster Management Act, 1996, once passed by Parliament, will be operative from the date of its publication in the Gazette.

#### Interpretation of the Bill

5. Clause 2 defines key terms commonly used in the Bill.

#### Declaration of State of Disaster

6. Clause 3 describes the Prime Minister's powers, under section 232 of the Constitution, to make such a declaration and also mentions the duration of a state of disaster-induced emergency.

#### Emergency Powers

7. Clause 4 gives the Minister additional powers to those contained in the Emergency Powers Order, 1988. These additional powers are:-

- a. To suspend the provisions of any regulatory statute prescribing the procedures for conduct of government business or the orders, rules or regulations of any government agency, if compliance with the provisions of any statute, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the disaster-induced emergency;
- b. To utilise all available resource of the Government including stores, equipment, vehicles and facilities as reasonably to cope with an emergency.
- c. To transfer personnel or functions of government departments and agencies or units thereof for the purpose of performing or facilitating emergency services.
- d. To implement the relevant provisions of the National Disaster Management Plan to meet emergency requirements.
- e. To mobilise strategic reserves of commodities and equipment and other resources.
- f. To have access to and utilisation of Lesotho Defence Force and Royal Lesotho Mounted police personnel, vehicles, equipment and radio communications, as well as military aircraft.
- g. To direct and compel the evacuation of all or part of

the population from any disaster-stricken or threatened area if it is deemed that such an action is necessary for the preservation of life, and move them to temporary shelter elsewhere where adequate facilities exist for their livelihood.

- h. To prescribe appropriate routes, modes of transportation, and destination in connection with evacuation.
- i. To control in-coming and out-going traffic to and from a disaster area, the movement of persons within the area and the occupancy of premises therein, making provision for the availability and use of temporary emergency housing.
- j. To suspend or limit the sale, dispensing or transportation of alcoholic beverages, firearms and explosives.
- k. To step up the provision of early warning and other information required for preparing for or dealing with disaster.
- l. To requisition publicly-owned buildings, vehicles and equipment on the charge of central and local government institutions needed for emergency purposes.
- m. To take all necessary measures in order to prevent, alleviate, contain and minimise the effect of disasters.
- n. To make post-disaster reconstruction, rehabilitation and recovery plans.
- o. To provide assistance to District Secretaries and Disaster Management Teams.
- p. to delegate appropriate powers and responsibilities to District Secretaries and monitor their effective implementation.
- q. To impose and enforce restrictions on the supply and usage of water in circumstances of severe, prolonged drought.
- r. To prepare an appeal for donor assistance and to account for any donations that may be given for the functions of the Authority.

#### Disaster Management plan

8. Clause 5 outlines the content of the Disaster Management plan, the requirement to integrate this Plan with national Development Plans and the need for a supporting Disaster Management Manual. It also states that the Chief Executive of the DMA and District Secretaries are required to prepare embryo National and District Disaster Relief Plans. It further explains that the disaster-related plans of the Lesotho Defence Force and the Royal

Lesotho Mounted Police are based on and are incorporated in the National Disaster Management Plan as appropriate.

#### **Disaster Relief Plans**

9. Clause 6 explains the need for the DMA and District Secretaries to complete the already existing embryo Disaster Relief Plans when a state of disaster is declared. The National Relief Plan must be approved by Cabinet, then implemented and maintained by the DMA. The Chief Executive of the DMA approves District Disaster Relief Plans, which each District Secretary then implements and maintains.

#### **Post-Disaster Reconstruction, Rehabilitation and Recovery Plan**

10. Clause 7 places a duty on the Chief Executive of the DMA to prepare a post-disaster National Reconstruction, Rehabilitation and Recovery Plan which must be approved by Cabinet, then implemented by the DMA and maintained for as long as necessary at national and district levels as appropriate.

#### **Establishment of the National Disaster Relief Task Force (DRTF)**

11. Clause 8 empowers the Prime Minister to set up a Ministerial Task Force for the duration of a disaster and the ministerial membership, decided by the Prime Minister, will be published in the Gazette. The Task Force will consist of those Ministers directly involved with a particular disaster.

#### **Functions of the DRFT**

12. Clause 9 lists the Task Force's emergency functions, namely:

- a. To provide policy guidelines to the DMA.
- b. To mobilise funds, manpower and other resources required to implement the National Disaster Relief Plan.
- c. To supervise and monitor National and District Disaster Relief Plans.
- d. To initiate the creation of appropriate institutional structures to support the Disaster Relief Plans.
- e. To approve requests for donor assistance.

#### **Meetings of the DRFT**

13. Clause 10 authorised the Task Force to meet when necessary and to regulate its own regular meeting during a state of disaster.

#### **Establishment of the National Disaster Management Authority (DMA)**

14. Clause 11 sets up the DMA and authorises the appointment of its officers, namely a Chief Executive, deputy Chief Executive, other appointed officers from the Public Service, possibly LDF and RLMP officers, and possibly volunteers on its staff.

#### **Working Groups**

15. Clause 12 lists the DMA's six standing Working Groups composed of governmental and non-governmental representatives, as well as DMA officers. Their terms of reference and composition are contained in the supporting Regulations as there may be a need to amend them administratively from time-to-time. The DMA's Working groups are:

- a. The Executive Group.
- b. The Training Group.
- c. The Water and Sanitation Group.
- d. The Health and Nutrition Group.
- e. The Food and Logistics Group.
- f. The Agriculture Group.

#### **Functions of the DMA**

16. Clause 13 lists the DMA's functions, namely:

- a. To act as the central planning, coordinating and monitoring institution for disaster management post-disaster recovery.
- b. To brief its Board of Directors and the Ministerial Task Force from time to time on progress and major problems in disaster management.
- c. To warn the public of an approaching disaster and predict its effects on the country.
- d. To maintain a data collection and dissemination system, and national strategic reserves of essential commodities and equipment for immediate disaster relief.
- e. To formulate disaster mitigation, preparedness and response strategies and action plans to meet all foreseeable requirements in consultation with central and local government, uniformed services, non-governmental organisations and donor agencies.
- f. To prepare and update the National Disaster Man-

agement Plan and the supporting Disaster Management Manual.

- g. To hold in readiness a series of National Disaster Relief Plans to meet any likely disaster.
- h. To develop and sustain viable, effective structures and capacities at central government level and within districts in case of a disaster.
- i. To create and maintain a national cadre of trained and qualified personnel of disaster management.
- j. To arrange external and internal training for the staffs of government, uniformed services, non-governmental organisations and other local agencies which are directly involved with disaster management.
- k. To promote general education on disaster management, emergency plans and relief measures.
- l. To promote public awareness campaign on disasters at national, district and community levels.
- m. To conduct public relations and media briefing on disaster related programmes, progress and problems.
- n. To enhance the country's capability and take all necessary measures in order to prevent, alleviate, contain and minimise the effects of disasters.
- o. To receive, accept and account for any donations that may be given for the functions of the Authority.
- p. To make post-disaster reconstruction, rehabilitation and recovery plans.
- q. To delegate appropriate powers and responsibilities to District Secretaries and monitor their effective implementation.

#### **The DMA's Board of Directors**

17. Clause 14 sets up a Board of Directors for the DMA and explains that the board manages and controls the DMA. The membership of the Board, which will be published in the Gazette, comprises:

a. Members by virtue of their appointment:

- (1) Government Secretary (Chairman).
- (2) PS Economics, Prime Minister's Office.
- (3) PS Planning.
- (4) PS Finance.

(5) PS Agriculture.

(6) PS Defence (also representing the LDF).

(7) PS Health and Social Welfare.

(8) PS Home Affairs ((also representing RLMP).

(9) PS Information and Broadcasting.

(10) PS Local Government.

(11) PS Natural Resources.

(12) Chief Executive of the DMA (Secretary)

b. Members appointed by the Minister;

(1) Three representatives of the private sector who have wide knowledge and experience of disaster management.

#### **Functions of the Board of Directors**

18. Clause 15 lists the Board's functions, namely:

- a. To advise the Minister on disaster management policy.
- b. To advise the Prime Minister, through the Minister, on the requirements and the timing of a declaration of a disaster-induced emergency in accordance with the Constitution and to declare the country, any district or part thereof, to be a disaster area.
- c. To ensure that funds are available to meet disaster-related and management expenditures.

#### **Termination of Appointment of Board Members**

19. Clause 16 authorises the Minister to terminate the appointment of a member of the DMA's Board of Directors when that member:

- a. Has been declared insolvent or has made an arrangement with his creditors.
- b. Is incapacitated by physical or mental illness.
- c. Has been convicted of an offence involving fraud or dishonesty.
- d. Is otherwise unable or is, in the opinion of the Minister, unfit to discharge the functions of a member or is unsuitable to continue as a member.
- e. Has been absent from three consecutive meetings of the Board without the permission of the Chairman.

### Tenure of Office of Board Members

20. Clause 17 regulates tenure of membership of the DMA's Board of Directors. Members are appointed by the Minister, serve for a period of 2 years and may be re-appointed.

### Meetings of the DMA's Board of Directors

21. Clause 18 regulates Board meetings as follows:

- a. The Board shall meet as often as the business of the DMA may require, but, in any case, not less than four times in each financial year.
- b. The Chairman shall preside at all meetings of the Board.
- c. Any question before the Board at a meeting shall be decided by the majority of votes of the members present and voting.
- d. The quorum at a meeting of the Board shall be eight members.
- e. A presiding member shall have a deliberate vote and in the event of an equality of votes, he shall have a casting vote.
- f. The Board may co-opt any person to attend any meeting of the Board for the purpose of assisting or advising the Board, but such co-opted person shall not vote.
- g. A special meeting of the Board may be called by the Chairman.
- h. The Secretary shall prepare the agenda and call all meetings for which 14 days notice shall be given, except for the special meeting under g. above.
- i. The validity of any act or proceedings of the Board shall not be affected by any vacancy among the members or by any defect subsequently discovered in the appointment of a member or by reason that some person who was not entitled to do so took part in the proceedings.
- j. The Secretary shall distribute the minutes of meetings, approved by the Chairman, as soon as possible after each meeting and before the next meeting, and the Chairman of the Board shall confirm the minutes of each meeting at a subsequent meeting.
- k. Under the Act, the Board may make provision for the following:

(1) The proper conduct of business of meetings of the Board.

(2) The management and administration of the DMA.

1. Under the Act, the Board regulates its own procedure.

### Expenses and Allowances for Board Members

22. Clause 19 regulates the payment of expenses and allowances to Board Members as appropriate.

### Disclosure of Interest by Board Members

23. Clause 20 provides that Board Members must disclose interest, if any, in any transaction or project, and stipulates the penalties for not doing so.

### Chief Executive

24. Clause 21 states that the Authority's Chief Executive is appointed by the Public Service Commission, with responsibility for administering and managing the Authority, and with other listed main responsibilities. During a disaster-induced emergency, the Chief Executive acts, and is also known, as the National Disaster Relief Coordinator.

### Deputy Chief Executive

25. Clause 22 states that the Deputy stands in for the Chief Executive whenever necessary and acts, and is also known, as the Deputy National Disaster Relief Coordinator during a disaster induced emergency.

### District Disaster Management Team (DDMT)

26. Clause 23 requires each district to establish and maintain a DDMT with a multi-sectoral, multi-disciplinary and multi-representational membership, namely:

- a. District Secretary (Chairman).
- b. District Engineers for Urban and for Rural Water Supply.
- c. District Medical Officer.
- d. District Agricultural Officer.
- e. District Rural Development Officer.
- f. Manager of the District Food Management Unit Stores.
- g. District Disaster Management Officer (Secretary).
- h. District NGO Coordinator (when appointed during an emergency).

- i. Disaster Supplementary Feeding Coordinator (when appointed during an emergency).
- j. Representatives of the LDG and the RLMP.
- k. Two representatives of Churches.
- l. Two representatives of Schools.
- m. Chairperson, District Development Council (ex-officio).
- n. Principal Chief(s) (ex-officio).

#### **Functions of the DDMT**

27. Clause 24 lists the DDMT's functions, with more detail contained in the supporting Regulations. The main functions given in the Bill are:

- a. To assist the District Secretary in discharging responsibilities relating to disaster management in the district concerned.
- b. To assess particular hazards facing the district.
- c. To liaise and cooperate with the DMA in ensuring that development plans for the district take into account hazards facing or likely to face the district.
- d. To prepare emergency relief plans for the district in accordance with the guidelines laid down by the DMA and supervise the state of preparedness for emergencies in the district.
- e. To coordinate stockpiling of relief supplies for relief operations in the district.
- f. To receive and decide on all applications for relief assistance in the district.
- g. To promote public awareness of disasters and measures to be taken to prevent or mitigate them in the district.
- h. To organise training programmes for relief workers to practice the implementation of District Disaster Relief Plans.

#### **Powers of the DDMT**

28. Clause 25 grants the DDMT all powers necessary for the efficient performance of its functions under the Act.

#### **Village Disaster Management Team (VDMT)**

29. Clause 26 requires the District Secretary and the local

Village Development Council (VDC) to establish and maintain a VDMT in each community or cluster of communities, with more details of membership, functions and working relationships between the VDMT and the VDC which oversees the VDMT's work, contained in the supporting Regulations.

#### **Volunteers**

30. Clause 27 regulates the employment of volunteers in district during a disaster-induced emergency. In the context of disaster management, the District Secretary may employ as a registered volunteer any person, private enterprise, NGO, charity or religious organisations to assist with relief or post-disaster recovery activities and to provide any disaster management service. If volunteers or voluntary organisation offer to help, then they comply with the District Secretary's orders or instructions.

#### **District Disaster Relief Coordinator**

31. Clause 28 states that the District Secretary acts, and is also known, as the District Disaster Relief Coordinator during a disaster-induced emergency.

#### **Powers and Duties of the District Secretary**

32. Clause 29 explains the general powers and duties of the District Secretary, in time of non-emergency as well as during a disaster-induced emergency, in respect of disaster management relief and recovery. More detail is contained in the supporting Regulations. The main powers and duties of the District Secretary contained in the Bill require him or her:

- a. To take any measures as, in his or her opinion, are necessary to deal with a state of a disaster-induced emergency, provided that such an order shall not extend to deprive any person of his life or personal liberty.
- b. To establish, maintain and control every disaster management organisation or every organisation involved with disaster management in the district.
- c. To provide, operate and coordinate all disaster management services and activities.
- d. To report and be responsible to the Chief Executive of the DMA on the progress and problems in respect of disaster management, disaster relief and post-disaster roles as frequently as the Chief Executive stipulates.
- e. To set up, during an emergency, a district operating room for providing a working base for the District Disaster Management Team for efficient relief operations.

- f. To exercise his or her powers in terms of this Act in cooperation with the DMA, and with the Lesotho Defence Force and the Royal Lesotho Mounted Police within the district.

#### **Orders Given by the District Secretary**

33. Clause 30 explains that the District Secretary may direct any person:

- a. To supply him with any relevant information concerning the existence and availability of any service, facility or asset whatsoever which could be used for or in connection with disaster management and which is under the control or in the possession of such person.
- b. To maintain such specified stocks of fuel, food water or media supplies, and equipment for use during a disaster-induced emergency as he may reasonably be expected to maintain.
- c. To perform any work or render any disaster management service which, as a result of disaster, is necessary for the purpose of dealing with the situation.

The Bill also covers exceptions and procedures for grievances.

#### **Delegation of Powers and Responsibilities by the District Secretary**

34. Clause 31 regulates the delegation of a District Secretary's powers and responsibilities in respect of disaster management whereby he or she may, with the approval of the DMA's Chief Executive, delegate all or any of his or her powers or responsibilities to a member or members of the DDMT. If this is done, it does not divest the District Secretary of that power or responsibility, and he or she may at any time revoke or amend any order given by any member of the DDMT in the exercise of that delegated power or responsibility, unless the Chief Executive of the DMA stipulates otherwise.

#### **District Disaster Management Officer (DDMO)**

35. Clause 32 states that the DMA attaches a DDMO to each district and that the DDMO reports and is responsible directly to the District Secretary.

#### **Functions of the DDMO**

36. Clause 33 explains the DDMO's main functions, with more detail contained in the supporting Regulations. The main functions included in the Bill are:

- a. To provide a working link between the District Sec-

retary, the DDMT, VDMTs in the district, and the DMA.

- b. To assist the District Secretary with:

(1) District and community disaster management, disaster relief and post disaster recovery tasks.

(2) Preparing reports, undertaking local training, and conducting public awareness campaigns.

(3) Providing input to national plans for managing disasters.

#### **Disaster Management Fund**

37. Clause 34 requires the establishment of a separate Fund and regulates its administration by the Chief Executive of the DMA, whereby all receipts and disbursements are recorded, and the Disaster Management Fund is maintained in accordance with Financial Regulations and other applicable laws.

#### **Receipts**

38. Clause 35 regulates the Fund's receipt of moneys, and investment interest accruing, from donations made for disaster management purposes.

#### **Disbursements**

39. Clause 35 regulates the Fund's disbursement of moneys for discharging the DMA's financial liabilities, expenses incurred by the DMA in exercising its functions, and other expenses approved by the Minister.

#### **Donations**

40. Clause 37 regulates the taking on charge and accounting for of donations made to the Fund in accordance with regulations governing the receipt, issue and control of public store, equipment, plants, vehicles, machinery, buildings and related matters. Donations must be used for the purpose for which they have been donated. If no conditions are attached, donations must be used for implementing disaster management programmes.

#### **Financial Year**

41. Clause 38 states that the DMA's financial year is from 1st April to 31st March of the succeeding year, and thus coincides with that of the Government.

#### **Annual Budget**

42. Clause 39 regulates the DMA's annual budget, approved by the Board of Directors.

**Audit**

43. Clause 40 regulates the audit of the DMA's accounts with a copy of the auditor's report submitted to the Minister.

**Annual Financial Report of the DMA**

44. Clause 41 regulates the submission of the DMA's annual financial report, together with the auditor's report, to the Minister.

**Transfer**

45. Clause 42 states that all monies in the existing National Disaster Relief Fund shall be transferred to the Disaster Management Fund mentioned at paragraph 37 in this memorandum.

**Government Assistance**

46. Clause 43 regulates the procedure for the Minister to provide government assistance to districts or a districts in the event of the need arising from a disaster-induced emergency.

**Reimbursement and Indemnification**

47. Clause 44 regulates the reimbursement and indemnification by the District Secretary of persons engaged in providing disaster management services, equipment, land, building or other property.

**Disability Benefits**

48. Clause 45 regulates compensation for public employees, volunteers and other persons injured or killed whilst employed on authorised disaster management work.

49. Clause 46 regulates indemnity for persons involved with disaster management, unless their act or omission was unreasonable or negligent, or was done in bad faith.

**Offence and Penalty**

50. Clause 47 describes penalties for offences under the Act.

**Regulations**

51. Clause 48 authorises the Act's supporting Regulations.

**By-Laws**

52. Clause 49 authorises a District Secretary to issue by-laws for carrying out disaster management functions.

**Intent and Purpose**

53. Clause 50 authorises the Minister to take appropriate action when any error, accident or omission occurs.

**Repeals**

54. Clause 51 repeals:

- a. Legal Notice No. 6 of 1977.
- b. Legal Notice No. 107 of 1995.

# MALAWI

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## Fisheries Act No.25 of 1997

*(Published 28th November, 1997)*

I assent,

**BAKILI MULUZI, PRESIDENT**

**13th November 1997**

### ARRANGEMENT OF SECTIONS

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**An Act to make provision for the regulation, conservation and management of the fisheries of Malawi and for matters incidental thereto or connected therewith.**

**ENACTED by the Parliament of Malawi as follows-**

### **PART I**

#### **PRELIMINARY**

##### **Short title and commencement**

1. This Act may be cited as the Fisheries Conservation and Management Act, 1997, and shall come into operation on such date as the Minister shall appoint by notice published in the *Gazette*.

##### **Interpretation**

2. In this Act, unless the context otherwise requires-

**“aquaculture establishment”** means any area, enclosure, impoundment, premise or structure set up or used on or in land or water for the cultivation of freshwater fish, and includes any cage or raft or other structure used for the cultivation of fish;

**“Board”** means the Fisheries Advisory Board established under section 5;

**“commercial fisherman”** means-

(a) in the case of an individual, a person who is engaged or intends to engage in fishing for sale throughout the year or a specified season or part of a season each year and who relies on his fishing activities for part of his income; or

(b) in the case of a corporate body or association of persons, one that has an appreciable investment in the fishing industry or intends to make one;

**“commercial fishing”** means taking fish for sale;

**“convention”** includes a treaty, agreement or other arrangement;

**convention area”** means, in relation to any bilateral or multilateral convention, the area to which the convention relates;

**“convention fisheries officer”** means a person appointed by the government of another country to enforce, or having power under the laws of another country to enforce, a convention that provides for the safeguarding of conduct of fishing operations or operations ancillary thereto to which Malawi is a party;

**“convention fishing vessel”** means a fishing vessel registered in a country which is a party to a convention to which Malawi is also a party;

**“Director”** means the Director of Fisheries appointed pursuant to section 3;

**“fish”** means any vertebrate fish or any aquatic crustacean, mollusc or other shellfish or other cold blooded aquatic animal, whether alive or dead, and their young, fry, eggs or spawn and shells and parts thereof but does not include any reptile;

**“fisheries protection officer”** means the Director and any of the fisheries protection officers referred to in section 3(7);

**fishing”** means-

(a) the catching or taking of fish;

(b) any other activity which can reasonably be expected to result in the catching or taking of fish; or

(c) any operation on water in support of or in preparation for any activity described in paragraphs (a) and (b);

**“fisheries management authority”** means any local community organisation established for the purposes of promoting local participation in the conservation and management of fisheries in Malawi;

**fishing licence”** includes a fishing permit issued under this Act;

**fishing vessel”** means any vessel, of whatever size and in whatever way propelled, used in fishing operation or for the processing, storage or carriage of fish or any operations (including transshipment of fish) ancillary thereto, but does not include any vessel used for the transport of fish or fish products as part of a general cargo-

**“fishing waters”** means-

(a) all waters within the land borders of Malawi capable of supporting fish; and

(b) those parts of Lake Malawi over which Malawi exercises sovereignty.

**“foreign fishing vessel”** means any fishing vessel other than a local fishing vessel or a convention fishing vessel;

#### Cap. 63:01

**“forest officer”** has the same meaning as in the Forest Act;

**“Fund”** means the Fisheries Fund established under section 22;

**“large scale commercial fisherman”** means a commercial fisherman prescribed as such;

**“local fishing vessel”** means any fishing vessel-

(a) wholly owned by one or more persons ordinarily resident in Malawi; or

(b) wholly owned by a company, society or association of persons incorporated in or established under the laws of Malawi and controlled by one or more persons ordinarily resident in Malawi;

**“master”**, in relation to a fishing vessel, includes the person in command or in charge of the fishing operations on board the vessel;

“**processing**” in relation to fish, includes cleaning, filleting, icing, freezing, canning, salting, smoking, cooking, pickling, drying or otherwise preserving or preparing fish by any method;

“**processing establishment**” means any premises or vessel on or in which any fish is processed or stored but does not include any restaurant, hotel or eating house or any premises where fish is prepared and stored for sale by retail to the public;

“**registrable vessel**” means a vessel prescribed as being subject to registration under this Act;

“**small scale commercial fisherman**” means a commercial fisherman other than a large scale commercial fisherman;

“**transshipment of fish**” includes the passing of fish from one fishing vessel to another, whether or not the fish has first been taken on board the vessel from which the fish is passed;

“**vessel**” means a steamer, motor vessel, launch, boat, canoe, hovercraft, submersible or floating craft of any description;

#### No. 11 of 1992

“**wildlife officer**” has the same meaning as in the National Parks and Wildlife Act.

## PART II

### ADMINISTRATION

#### Director of Fisheries and Fisheries protection officers

3. (1) There shall be appointed in the public service an officer to be designated as the Director of Fisheries (in this Act otherwise referred to as the “Director”) and other officers subordinate to him who shall be responsible for-

- (a) the conservation of fish stocks;
- (b) the taking of such measures as he may consider appropriate for the protection of fish stocks from the effects of pollution and siltation and from the effects to fish stocks of measures taken to eliminate or control pollution and siltation;

- (c) the assessment of fish stocks and the collection of statistics;
- (d) the development and management of fisheries;
- (e) the monitoring, control and surveillance of fishing operations;
- (f) subject to section 6, the preparation and periodic review of fisheries management plans and the submission of such plans to the Board and to the Minister;
- (g) the regulation and control of fishing operations, including aquaculture and operations ancillary thereto;
- (h) the issue, variation, suspension and revocation of permits and licences for fishing, aquaculture, transshipment and other activities for which permits or licences are required under this Act;
- (i) the collection of fees in respect of permits and licences and registration of fishing vessels;
- (j) the making of such reports as he shall consider appropriate or as the Minister may require;
- (k) any other matter that shall require administration under this Act.

(2) Subject to subsection (3), the Director may, in writing, authorize any public officer to exercise any or all of the powers of the Director, either concurrently with him or in his absence subject to such conditions, including territorial restrictions, as the Director may stipulate in the authorization.

(3) The Director shall personally exercise the powers provided for under section 50.

(4) In the performance of his duties under this Act, the Director shall be subject to the general and special directions of the Minister.

(5) A direction under subsection (4) may include a requirement that a category of fishing licences shall be referred to the Minister before the grant of such licence.

(6) This Act shall be enforced by fisheries protection officers, acting subject to the direction of the Director and, for that purpose, fisheries protection officers shall have the powers set out in sections 30, 31, and 32.

(7) For purposes of this Act, the following persons shall be fisheries protection officers-

- (a) fisheries officers in the Department of Fisheries;

- (b) members of the Malawi Police Force;
- (c) forest officers;
- (d) wildlife officers;
- (e) environmental officers;
- (f) persons in command or in charge of any vessel, aircraft or hovercraft of the armed forces of Malawi or of the Government of Malawi; and
- (g) such other public officers as the Minister may designate by notice published in the *Gazette*.
- (h) any person authorized by or acting under the orders of, any of the persons specified in paragraphs *a, b, c, d, e, f* and *g*

(8) The Director of Public Prosecutions may in writing nominate, by rank, any officer or class of officers of the Department of Fisheries to undertake and prosecute criminal proceedings in respect of an offence committed under this Act.

#### Honorary fisheries officers

4. (1) The Director may, by notice published in the *Gazette*, appoint suitable persons to be honorary fisheries officers to assist in the carrying into effect of the provisions of this Act.

(2) The appointment of an honorary fisheries officer shall be-

- (a) made for a period of three years but shall be renewable; and
- (b) subject to such conditions as shall be prescribed or as the Director shall otherwise impose in the instrument of appointment:

(3) Honorary fisheries officers shall exercise such of the powers of fisheries protection officers as shall be prescribed in the instrument of appointment.

#### Fisheries Advisory Board

5. (1) There is hereby established a board to be known as the Fisheries Advisory Board (in this Act otherwise referred to as the "Board") which shall consist of-

- (a) a Chairman appointed by the Minister;
- (b) a Vice Chairman elected by and from among members of the Board;
- (c) the following *ex-officio* members-

- (i) the Principal Secretary responsible of natural resources;
- (ii) the Director;
- (iii) the Principal Secretary responsible for community services, or his designated representative;
- (iv) the Principal Secretary responsible for agriculture, or his designated representative;
- (v) the Principal Secretary responsible for research and environmental affairs, or his designated representative; and
- (vi) the Principal Secretary responsible for irrigation, or his designated representative.

(d) three members nominated by and from among small scale commercial fishermen and appointed by the Minister;

(e) three members nominated by and from among fisheries protection officers and appointed by the Minister;

(f) one member nominated by and from among large scale commercial fishermen and appointed by the Minister;

(g) one member nominated by and from among fish traders and appointed by the Minister; and

(h) three members appointed by the Minister from the general public and one of whom shall be a person knowledgeable in consumer concerns.

(2) Where there is no association representing any of the persons referred to in paragraph (d), (e), (f) or (g) of subsection (1), the members shall be nominated by the Director after appropriate consultations with fisheries protection officers, fishermen or fish traders, as the case may be.

(3) For the purpose of carrying out its functions under section 6(a), the Board shall appoint a technical sub-committee from among the members of the Board, excepting the Director, and such sub-committee shall have the quorum provided for in subsection (10) and may advise the Director directly on behalf of the Board.

(4) A member of the Board shall, subject to subsections (5) and (6), serve for a term of three years and shall be eligible for reappointment.

(5) An appointed member of the Board, other than an *ex-officio* member, may resign his office at any time by notice, in writing, addressed to the Minister.

(6) The Minister may remove from office any member of the Board, other than an *ex-officio* member, if the Minister is satisfied that the member-

- (a) has become insolvent or has assigned his estate for the benefit of, or made a composition or other arrangements with, his creditors;
- (b) has been absent from three consecutive meetings of the Board without the approval of the Chairman or without other valid cause;
- (c) has been convicted of an offence under this Act;
- (d) has been convicted by a competent court of a criminal offence and sentenced to imprisonment for not less than six months, without the option of a fine, whether or not such sentence has been suspended, and has not received a free pardon;
- (e) is otherwise incapacitated; or
- (f) has financial or other interest that is likely to affect prejudicially the exercise and performance by him of his functions as a member of the Board;
- (g) appointed under paragraph (d), (e), (f) or (g) of sub-section (1), has ceased to be a small scale fisherman, large scale fisherman, fish trader or fisheries protection officer, as the case may be.

(7) On the occurrence of a vacancy in the membership of the Board, the Minister shall appoint a new member for the remainder of the term of the vacating member.

(8) The membership of the Board as first and subsequently appointed and every change in the membership thereof shall be published in the *Gazette*.

(9) Half of the members of the Board shall constitute a quorum.

(10) The Board may, in addition to the sub-committee provided for in sub-section (3), appoint and delegate functions to other sub-committees of the Board the quorum for meetings of which shall be the chairman and the secretary of the sub-committee and half of the remaining members thereof.

(11) A public officer nominated by the Director shall be the secretary of the Board.

(12) A member of the Board, technical sub-committee of sub-committee shall be paid such allowances as the Minister may determine.

(13) Subject to this Act, the Board may regulate its pro-

cedures and meetings in such manner as it shall consider fitting.

#### **Functions of the Board**

6. The Board shall advise the Minister generally on the development, administration, conservation and management of the fisheries of Malawi and shall in particular-

- (a) consider and advise on fisheries management plans and reviews of the plans prepared by the Director prior to the submission of such plans or reviewed plans to the Minister;
- (b) consider and advise on proposals for the introduction of measures prohibiting or restricting the catching of species of fish;
- (c) consider and advise on proposals for the enactment of legislation that may affect the fishing industry;
- (d) consider and advise on proposals for agreements or arrangements to be entered into pursuant to section 52 and proposals for the entry into or accession to conventions that may relate, wholly or in part, to fishing matters;
- (e) consider matters referred to the Board and advise the Government thereon;
- (f) submit such proposals to the Government as it shall consider appropriate;
- (g) have such other functions and duties as the Minister may, from time to time, prescribe.

### **PART III**

#### **LOCAL COMMUNITY PARTICIPATION**

##### **Purposes of this Part**

7. The purpose of this Part is to provide for local community participation in conservation and management of fisheries in Malawi.

##### **Fisheries management agreement**

8. (1) For proper management of fisheries, the Director may enter into a fisheries management agreement with a fisheries management authority providing for-

- (a) a management plan; and
  - (b) assistance to be provided by the Department of Fisheries;
- 2) Subject to performance of unfulfilled obligation under a fisheries management agreement to the right of third party, a fisheries management agreement may be terminated by either party.
- (3) In the event of any dispute arising under a fisheries management agreement, the matter shall be referred to the Minister:

Provided that any party aggrieved with the decision of the Minister may apply to the High Court for review of the decision.

**Minister may make rules**

9. (1) The Minister may, on the recommendation of the Board, make rules for the better carrying into effect of the purposes of this Part.
- (2) Without prejudice to the generality of subsection (1), the rules may-
- (a) provide for conservation and management of fisheries;
  - (b) facilitate the establishment of fisheries management authorities for the benefit of the local communities;
  - (c) encourage District Councils, non-governmental organisations, the private sector and other relevant institutions to contribute towards provision of fisheries extension services, as well as establishment and management of aquaculture, in accordance with guidelines provided by the Department of Fisheries;
  - (d) provide for declaration of endangered species and their management;
  - (e) authorize payments of grants or bonus out of public funds for encouragement of fisheries;
  - (f) prescribe a mechanism for sharing costs and benefits between the Department of Fisheries and fisheries management authorities in regard to confiscated fisheries produce; and
  - (g) provide for procedure to be followed with regard to registration of local registrable fishing vessels and licensing of persons to be engaged in commercial fishing.

**PART IV**

**REGISTRATION OF LOCAL REGISTRABLE FISHING VESSELS**

**Registration of local registrable fishing vessels**

10. (1) Every owner of a local registrable fishing vessel who intends to use the vessel for fishing shall apply to the Director for registration in the prescribed manner.

(2) A vessel not be registered under this section unless-

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- (a) it has been registered, if so required, under the Inland Waters Shipping Act, 1995 and otherwise complies with the requirements of that Act;
  - (b) the vessel carries such identification markings as may be prescribed;
  - (c) the vessel carries such equipment and complies with such other requirements as shall be prescribed; and
  - (d) the owner of the vessel has supplied such information and complied with such other requirements as may be prescribed.
- (3) The Director may revoke a registration under this section if the registered vessel falls into delinquency in relation to any of the requirements of subsection (2) but shall restore such registration on being satisfied that the delinquency has been remedied.
- (4) The registration of a registrable local fishing vessel shall, subject to subsection (5), be valid for one year or such shorter period as may be stipulated in the registration certificate.
- (5) A registration shall not be transferable except as may be prescribed.
- (6) This section shall apply to foreign fishing vessels if so prescribed and, where it is so applied, no foreign fishing vessel shall be used for commercial fishing in the fishing waters unless it is registered under this section.
- (7) The Director shall maintain a register of local registrable fishing vessels in which he shall register such particulars of vessels as may be prescribed.

### Control of fishing by registrable local fishing vessels

11. (1) No local registrable fishing vessel shall be used for commercial fishing in the fishing waters unless it is registered under section 10 and the person using the vessel, or a person working on his behalf, is authorized so to fish by a licence granted under Part VI.

(2) Where a local registrable fishing vessel is used in contravention of subsection (1), the master, owner, charterer or hirer of the vessel shall be guilty of an offence and liable to a fine not exceeding K50,000 and to imprisonment for ten years and to a further fine of K200 per day for each day that the offence continues after conviction.

## PART V

### FOREIGN FISHING VESSELS

#### Fishing by foreign fishing vessels prohibited without a licence

12. (1) No foreign fishing vessels shall be used for commercial fishing in the fishing waters unless the owner or charterer thereof is authorized to fish by a licence granted under Part VI of this Act.

(2) Where any fishing vessel is used in contravention of subsection (1), the master, the owner and the charterer shall be guilty of an offence and liable to a fine of not less than K20,000 and not exceeding K1,000,000 and imprisonment for ten years and to a further fine of K200 per day for each day that the offence continues after conviction.

#### Notification of fish on board by foreign fishing vessels entering fishing waters

13. (1) The master of a foreign fishing vessel that has fish on board shall-

- (a) prior to entry of the vessel into the fishing waters; or
- (b) prior to the vessel leaving an area of the fishing waters in which the owner or charterer is licensed to fish, notify a fisheries protection officer of the amounts and descriptions of fish on board the vessel.

(2) A master who fails to give the notification required under subsection (1) shall be guilty of an offence and liable to a fine not exceeding K50,000 and to imprisonment for ten years.

(3) The giving of a notification under subsection (1) shall not of itself constitute a defence to a prosecution for an offence under section 16.

## PART VI

### FISHING LICENCES, CONDITIONS AND OTHER CONTROLS

#### Prohibition of commercial fishing without a licence

14. (1) No person shall engage in commercial fishing in the fishing waters except under the authority of a licence.

(2) An application for a licence shall be made to the Director in the prescribed form and shall be accompanied by the prescribed fees.

(3) A person who contravenes subsection (1) shall be guilty of an offence and liable to a fine of K20,000 and to imprisonment for four years.

#### Grant of fishing licences and conditions relating thereto

15. (1) Subject to subsection (2), the grant of fishing licence shall be in the discretion of the Director and the licence may authorize fishing generally or may confer limited authority by reference in particular to-

- (a) the area in which fishing is authorized;
- (b) the period, times or particular voyages during which fishing is authorized;
- (c) the quantities, description and size of fish which may be taken; or
- (d) the method of fishing.

(2) Every fishing licence-

- (a) shall specify the fishing gear that is permitted to be used for fishing by or on behalf of the licensee;
- (b) shall not be transferable, except as may be prescribed;
- (c) may authorize fishing either unconditionally or subject to such conditions as may appear to the Director to be necessary or expedient for the regulation of fishing, the conservation or management of fisheries in the fishing waters or for the economic benefit of

Malawi and, without prejudice to the generality of the foregoing, may contain conditions as to-

- (i) the landing of fish caught under the authority of the licence;
- (ii) the use to which fish may be put;
- (iii) the marking of fishing vessels used by licensee;
- (iv) the marking of fishing gear;
- (v) the records of fishing operations that shall be kept on board fishing vessels;
- (vi) the navigation equipment and charts to be carried on board fishing vessels; and
- (vii) the place or places where the licensee may carry out transshipment of fish,

and if a licence condition is contravened, the licensee or the master, as the case may be, of the fishing vessel concerned in such contravention shall be guilty of an offence and shall be liable to a fine of K20,000 and to imprisonment for four years.

#### **Illegal holding of fish**

16. (1) Subject to subsection (2), no master shall take or allow to remain on board a fishing vessel, within the fishing waters, fish which has not been taken under the authority of and in accordance with a fishing licence or other licence provided for under this Act.

(2) It shall be a defence to a prosecution for an offence arising under subsection (1) if the person charged satisfies the court that the fish was not taken or caught in the fishing waters.

#### **Stowage of gear**

17. (1) Where a fishing vessel is in any area of the fishing waters and the person using the vessel is-

- (a) prohibited under this Act from fishing in that area; or
- (b) permitted by fishing licence or otherwise to fish only for certain species or descriptions of fish in that area,

fishing gear of the fishing vessel or so much of the gear as is not required for permitted fishing, shall be stowed in such manner that it is not readily available for use for fishing or in such manner as may be prescribed.

(2) Where this section is contravened, the master of the vessel concerned shall be guilty of an offence and liable to a fine of K10,000 and to imprisonment for two years

and to a further fine of K200 per day for each day that the offence continues after conviction.

#### **Transshipment and export of fish**

18. (1) The Minister may make regulations for the licensing of the transshipment or receiving of fish by fishing vessels in fishing waters or the transport from the fishing waters by any vessel of fish transhipped from any other vessel.

(2) The regulations made under subsection (1) may apply such restrictions and conditions on the granting of licences or permits as the Minister shall consider appropriate and, in particular, may provide for-

- (a) the areas in which transhipping may take place;
- (b) the times when fish may be transhipped or transported; or
- (c) the numbers of transhipments and transportations that may be undertaken and the quantities and descriptions of fish that may be transhipped or transported.

(3) The regulations made under subsection (1) may empower the Director to impose such conditions on the grant of licences thereunder as he shall consider necessary for the regulation of the transshipment or export of fish or the economic benefit of Malawi including conditions as to the treatment on board fishing vessels of fish received on board, and different conditions may be imposed in respect of different fishing vessels or fishing vessels of different descriptions.

## **PART VII**

### **SPECIAL ARRANGEMENTS**

#### **Establishment and operation of aquaculture**

19. (1) The Minister may, on the recommendation of the Director, grant a permit to an applicant authorizing fishing in the fishing waters or specified areas of the fishing waters for-

- (a) scientific research or experimental purposes, the collection of specimens for museums, aquaria or similar institutions; or

#### **Fisheries research permits, etc.**

- (b) emergency supply of food for human beings.



(2) An application for a permit under subsection (1) shall be made to the Director in the prescribed form and shall be accompanied by the prescribed fees.

(3) A permit issued under subsection (1) may exempt the holder thereof from any or all provisions of this Act.

(4) The Minister may, by notice in writing given to the holder of a permit under subsection (1) -

(a) revoke the permit; or

(b) vary or revoke the conditions to which the permit is subject or specify further conditions to which the permit is subject.

## PART VIII

### AQUACULTURE

20. (1) No person shall establish or operate an aquaculture establishment to which this section applies-

(a) otherwise than under the authority of, and in accordance with the conditions of, an aquaculture permit granted by the Director under section 21; and

(b) unless he has been granted rights to use water for that purpose under the Water Resources Act.

#### Cap. 72:03

(2) Any person who establishes or operates an aquaculture establishment in contravention of subsection (1) or harvests the products of such an establishment without the authority of the owner thereof shall be guilty of an offence and liable to a fine of K20,000 and to imprisonment for four years.

(3) This section shall apply to such aquaculture establishments as may be prescribed by the Minister by notice published in the *Gazette*.

#### Aquaculture permits

21. (1) An application for an aquaculture permit shall be made to the Director in the prescribed form and shall be accompanied by the prescribed fees.

(2) An aquaculture permit shall-

(a) not be transferred without the prior written consent of the Director;

(b) confer on the permit holder exclusive rights to harvest the products of the aquaculture establishment within the area specified in the permit;

(c) be subject to such conditions as appear to the

Director to be necessary or expedient for the regulation of aquaculture, the management of fisheries or for the economic benefit of Malawi and, without prejudice to the generality of the foregoing, may contain conditions relating to-

(i) the siting, design and materials used in the construction of the aquaculture establishment;

(ii) sanitary conditions of fish and fish products;

(iii) measures for the prevention of the escape of fish farmed for aquaculture;

(iv) measures for the prevention of fish diseases;

(v) the marketing of fish and fish products of the aquaculture establishment; and

(vi) measures to be taken to minimize the escape of waste products and the pollution of land and water.

## PART IX

### FISHERIES FUND

#### Establishment of Fisheries Fund

22. (1) There is hereby established a fund to be known as the Fisheries Fund (in this Act otherwise referred to as the "Fund").

(2) The Fund shall consist of-

(a) such sums as shall be appropriated by parliament for the purposes of the Fund;

(b) advances made to the Fund under section 24;

(c) such sums or other assets as may be received for the purposes of the Fund by way of voluntary contributions; and

(d) payments made into the Fund under sections 40(5), 45(4), 50(9) and 51(2).

**Fund to vest in Minister**

**Cap 37.01**

23. The Fund shall be vested in the Minister and, subject to this Act, shall be administered in accordance with his directions subject to the provisions of the Finance and Audit Act.

**Advances to the Fund**

24. If in any financial year the income of the Fund together with any surplus income brought forward from a previous year is insufficient to meet the actual or estimated liabilities of the Fund, the Minister responsible for finance may make advances to the Fund in order to meet the deficiency or any part thereof.

**Objects of the Fund**

25. The objects for which the Fund is established shall be the conservation, development, promotion, management and administration of fisheries and fish habitats and to start, operate and expand projects relating to management or conservation of fisheries and fish habitats.

**Application of the Fund**

26. (1) Without derogation from the generality of section 25, the Fund may be applied to-

- (a) research and training which is calculated to promote proper management of fisheries;
- (b) the acquisition of land, equipment, materials and other assets and the construction of buildings in order to promote the objects of the Fund;
- (c) the cost of any scheme which the Minister considers to be in the interest of the management of fisheries;
- (d) meeting any expenses arising from the establishment and maintenance of the Fund; and
- (e) any purpose which the Minister considers to be in the interest of the objects of the fund.

(2) No personal emoluments or pensions of any public officer shall be paid out of the Fund.

**Books and other records of account, audit and reports of the Fund**

**Cap.37:01**

27. (1) The Minister shall cause to be kept proper books and other records of account in respect of receipts and expenditures of the Fund in accordance with the provision of Finance and Audit Act.

(2) The accounts of the Fund shall be audited by the Auditor General, who shall have all the powers conferred upon him by the Finance and Audit Act.

(3) The Minister shall cause to be prepared, as soon as practicable, but not later than six months after the end of the financial year, an annual report on all the financial transactions of the Fund.

(4) The report under subsection (3) shall include a balance

sheet, an income and expenditure account and the annual report of the Auditor General and shall be laid by the Minister before the National Assembly.

**Holdings of the Fund**

28. (1) All sums received for the purposes of the fund shall be paid into a banking account and no amount shall be withdrawn therefrom except by means of cheques signed by such persons as are authorized in that behalf by the Minister.

(2) Any part of the Fund not immediately required for the purposes of the Fund may, on the recommendation of the Board, be invested in such manner as the Minister, after consulting with the Minister responsible for finance, may determine.

**Financial year**

29. The Financial year of the Fund shall be the period of twelve months ending on 31st March in each year:

Provided that the first financial year of the Fund may be a period shorter or longer than twelve months as the Minister shall determine, but in any case not longer than eighteen months.

**PART X**

**ENFORCEMENT**

**General powers of fisheries protection officers relating to fishing vessels**

30. (1) For the purpose of enforcing this Act, a fisheries protection officer may exercise the following powers with respect to any fishing vessel in the fishing waters-

- (a) to stop the vessel;
- (b) to require the master to stop fishing and take the fishing gear of the vessel back on board;
- (c) to require the master to facilitate the boarding of the vessel by all appropriate means;
- (d) to go on board the vessel and take with him such other persons as he may require to assist him in the exercise of his powers;
- (e) to require the master, the crew or any of them to produce, and to examine and take copies of any certificate of registration, licence, official log book, official paper, article of agreement, record of fish caught and any other document relating to the vessel and to the crew or any member thereof or to any person on board the vessel which is in their respective possession or control on board the vessel;
- (f) to require the master to appear and give any explanation concerning the vessel and any crew or any person on board the vessel and any document mentioned in paragraph (e);
- (g) to make any search, examination or enquiry which he considers to be necessary to determine whether any provision of this Act has been contravened;
- (h) to arrest and take or require the master to take the vessel to any place, port or harbour in Malawi for the purpose of carrying out any search, examination or enquiry;
- (i) in the case of any person whom he has reasonable grounds to believe is committing or has committed an offence against this Act, without summons, warrant or other process, to arrest the suspected offender and take or require the master of the vessel to take the vessel in respect of which he has reasonable grounds to believe that an offence has been committed, together with the crew thereof to a port or harbour in Malawi and to bring the crew before a competent court, or to detain the crew and the vessel in Malawi until the alleged offence has been tried;
- (j) having regard to the safety of the vessel, to take steps to immobilize vessel seized, taken or detained in accordance with this section for the purpose of preventing the vessel being taken by any person prior to the release of the vessel under section 38 or 40 by the court;
- (k) in the case of any offence against section 11, 12, or 14 or regulations made under section 61, to seize any vessel together with its equipment, stores and cargo which he believes has been used in the commission of such offence or in respect of which he has reasonable grounds to believe such offence has been committed;
- (l) to seize any fishing gear, instrument or appliance which he believes has been used in the commission of such offence under section 11, 12, or 14 or regulations made under section 61;
- (m) to seize any fish which he believes has been taken or fish product produced in the commission of offence under section 11, 12, or 14 or regulations made under section 61.
- (n) to seize or take copies of any documents which he believes is relevant to any such offence under section 11, 12, or 14 or regulations made under section 61.
- (2) A fisheries protection officer having reasonable grounds for believing that an offence has been committed against this Act may stop, board and search outside the fishing waters any foreign fishing vessel which he has reasonable believe has been used in the commission of that offence or in relation to which he has grounds to believe such offence has been committed and bring such vessel and all persons, fishing gear, fish and other things on board the vessel into the fishing waters.
- (3) In exercising the powers referred to in subsections (1) and (2), a fisheries protection officer may use such force as may be reasonably necessary.
- (4) The powers contained in this section may be exercised in respect of a fishing vessel irrespective of whether the vessel is at the time of such exercise engaged in activities or any activity in any way related to fishing.

#### **Powers of inspection**

**31.** (1) A fisheries protection officer may, for the purposes of determining whether an offence has been committed against this Act-

- (a) require any person to produce for inspection any licence or permit required to be held by such person under this Act for doing any act or carrying out any activity which the officer sees that person doing or carrying out or believes, on reasonable grounds, to have done or carried out;
- (b) inspect any fishing gear, fish, fish product, explosive, poison or article in such person's possession; and
- (c) require such person to furnish his full name and address and to produce adequate means of identification.

(2) A fisheries protection officer may for the purpose of the enforcement of this Act-

- (a) require any vehicle, aircraft, vessel or other means of conveyance to stop;
- (b) enter any vehicle, aircraft, vessel or other means of conveyance, with or without assistance, and inspect the same; and
- (c) upon an inspection under paragraph (b), require the person in charge of the vehicle, aircraft, boat or other conveyance to-
  - (i) produce any manifest or other documents listing cargo on board, and
  - (ii) answer any question concerning such cargo or any other content of the vehicle, aircraft, boat or other conveyance.

(3) If, upon an inspection under subsection (1) or (2), a fisheries protection officer has reasonable grounds to believe that an offence against this Act is being or has been committed, he may exercise such of the powers provided under section 32 as may be appropriate.

**Powers of search, seizure, demolition and arrest**

32. (1) Subject to section 33, a fisheries protection officer may, where he has reasonable grounds to believe that an offence is being or has been committed against this Act,

- (a) enter and search, with or without assistance, any land, building, camp, tent or other premises or any vehicle, aircraft, vessel or other means of conveyance and open and search any baggage, pack or other thing;
- (b) require any person to produce for inspection or copying, in whole or in part, any record or other document that the officer has reasonable grounds to believe contains any information relevant to the administration of this Act;
- (c) seize any fishing gear, explosive, poison, chemical, machinery, equipment, vehicle, vessel, pack animal, aircraft or other thing that he has reasonable grounds to believe has been or is being used or possessed in the commission of such offence;
- (d) seize any fish or fish product which he has reasonable grounds to believe has been, or had been attempted to be, caught, processed, traded, imported or exported or is possessed in contravention of this Act;

- (e) demolish any construction, barrier or trap that appears to him to have been erected or constructed contrary to the provisions of this Act or take possession of the same in the name of the Government; and
- (f) arrest without warrant any person whom he has reasonable grounds to believe is committing or has committed an offence under this Act.

(2) Any fish, fish product, fishing gear, vehicle or other thing that may be seized pursuant to subsection (1) may be so seized whether or not any owner or person in possession or control thereof can be found.

(3) For the purpose of carrying out the powers provided under subsection (1)(a), a fisheries protection officer may break open any hold, compartment, container or other receptacle (including any place or thing that could be used as a receptacle) on a vehicle, aircraft, vessel or any premises.

(4) In carrying out a search under this section in any place, a fisheries protection officer may-

- (a) use or cause to be used any data processing system at the place for the purpose of examining any data contained in or available to the system; and
- (b) reproduce any record or cause to be reproduced from the data in the form of a printout or other intelligible output and take the printout for examining or copying and use or cause to be used any copying equipment at the place to make copies of any record or other document.

(5) A fisheries protection officer may erect a temporary barrier across any road or place and any person approaching the barrier shall, upon being required by the officer so to do, stop and allow the officer to carry out such search of his person, vehicle, pack animal or baggage as the officer shall consider appropriate:

Provided that such barrier shall conform to specifications laid down by the Director who shall act in consultation with other relevant authorities including more particularly those responsible for roads and road traffic.

**Warrant to enter a dwelling place**

33. (1) A fisheries protection officer may not enter a dwelling place except with the consent of the occupier or owner thereof or under the authority of a warrant issued by a magistrate.

(2) When on an *ex parte* application, a magistrate is satisfied that-

- (a) there are reasonable grounds to believe that there is in a dwelling place any thing in respect of which this Act applies;
- (b) entry to the dwelling place is necessary for any purpose relating to the administration of this Act; and
- (c) entry to the dwelling place has been refused or there are reasonable grounds to believe that entry will be refused, the magistrate may at any time sign and issue a warrant authorizing the fisheries protection officer named in the warrant to enter and search the dwelling place, subject to any condition that may be specified in the warrant.
- (3) A fisheries protection officer may use such force as may be reasonably necessary to execute a warrant under this section.

#### **Fisheries protection officer to give receipt**

34. A fisheries protection officer who seizes any fish or other thing under section 30 or 32 shall, where feasible, give a written receipt therefor.

#### **Control of weir**

35. (1) All fishing weirs shall comply with such dimensions and conditions as the Director shall prescribe.

(2) Where any fishing weir does not comply with dimensions and conditions prescribed under subsection (1), the Director shall, if the owner or person having care and control of it can be found, direct that person to alter the weir so as to comply with such dimensions and conditions.

(3) If a direction given under subsection (2) is not complied with within the time stipulated by the Director or, if no time is stipulated, within a reasonable time after the direction is given or if the owner of the weir or person having care or control of it cannot be found, a fisheries protection officer may enter on such land and destroy the weir or alter it to comply with the prescribed dimensions and conditions.

(4) No compensation shall be payable to the owner of a weir altered or destroyed pursuant to this section.

#### **Powers of fisheries protection officers and convention fisheries officers to enforce conventions**

36. (1) For the purpose of enforcing the provisions of any convention with respect to the conduct or safeguarding of fishing operations to which Malawi is a party, a convention fisheries officer may, in relation to a convention fishing vessel, and a fisheries protection officer may, in relation to a local fishing vessel or a foreign fishing

vessel, exercise anywhere within the convention area outside the fishing waters the powers under section 30.

(2) This section shall not authorize a fisheries protection officer or convention fisheries officer to do anything not authorized by the convention which he purports to enforce nor authorize him to exercise in relation to a vessel registered in a country which is a party to the convention any power which the government of that country has informed the other parties to the convention is not to be exercised in relation to its fishing vessels.

(3) Any person who, on any fishing vessel within the fishing waters or on a local fishing vessel outside fishing waters;

(a) fails without reasonable excuse to comply with any requirement imposed or to answer any question asked by a fisheries protection officer under this section;

(b) prevents or attempts to prevent any other person from complying with any requirement imposed or answering any question asked by a fisheries protection officer under this section; or

(c) obstructs any fisheries protection officer while exercising any of the powers conferred on him under this section or wilfully obstructs such officer in the exercise of any of those powers;

shall be guilty of an offence and liable to a fine of K20,000 and to imprisonment for four years.

(4) Subsection (3) shall apply in relation to things done on a local fishing vessel in a convention area outside the fishing waters by or in relation to a convention fisheries officer who is exercising powers to enforce the provisions of the convention relating to that area as it applies in relation to things done on any fishing vessel within those limits by or in relation to a fisheries protection officer.

#### **Indemnity**

37. No civil or criminal action shall lie against the Director, a public officer, a fisheries protection officer, an honorary fisheries officer, a convention fisheries officer or any other person acting under the authority of the Director in respect of any act done or omitted to be done by him in good faith in the purported exercise of his powers under this Act if there shall have been reasonable cause for such act or omission.

#### **Security for release of a fishing vessel**

38. (1) Where a fishing vessel is arrested, seized or detained under this Act and an information or charge is laid against the master, the owner or the charterer of the

vessel in respect of the offence for which the vessel has been arrested, seized or detained, the master, the owner or the charterer or the agent of the owner or of the charterer of the vessel may, at any time before the determination of the information or charge, apply to the court before which the information or charge is due to be determined for the release of the vessel on the provision of security in accordance with this section.

(2) Where, on hearing an application pursuant to subsection (1), the Court-

(a) is satisfied that reasonable security has been given to the Government in respect of the aggregate of the maximum penalty to which the defendant may be liable and the costs and expenses that the Government may recover under section 46, the Court may order the release of the fishing vessel; or

#### Security for release of a fishing vessel

(b) order the release of the fishing vessel on the execution by any suitable person or persons approved by the Court of a reasonable bond in favour of the Government in the prescribed form and conditioned in accordance with subsection (4) in an amount not less than the aggregate of the maximum penalty to which the defendant may be liable and the costs and expenses that the Government may recover under section 46.

(3) Notwithstanding subsection (2), the Court may, where it is satisfied that there are special circumstances to justify it doing so, order that the bond shall be in a specified amount that is less than the amount required by that subsection.

(4) The condition of the bond shall be that if-

(a) the defendant is found not guilty of the information or charge;

or

(b) the defendant, on being convicted of the information or charge, pays in full, within fourteen days after he is convicted, the amount of the fine imposed by the Court and the amount of all costs and expenses due from him to the Government under section 46, the bond shall be of no effect but that otherwise the bond shall remain in full force and effect.

(5) The amount specified in the bond shall be recoverable in full in any court of competent jurisdiction as a debt due to the Government, jointly and severally, by the person or persons by whom the bond is given unless the person or persons prove the due performance of the condition for which the bond was made.

(6) In this section, "fishing vessel" includes all equipment on board or used by a vessel and all fish seized from the vessel under this Act and detained on board the vessel in the custody of the Government.

#### Disposal of seized fish and other perishables

39. (1) Where any fish or other thing of a perishable nature is seized in accordance with section 30 or 32 the Director may, notwithstanding any other provision of this Act-

(a) return the fish or other thing to the person from whom it was seized on receiving security that is, in the opinion of the Director, adequate for the equivalent value of the fish or thing by way of a bond or other stipulation conditioned for payment of such equivalent value in the event that such amount shall be adjudged by the Court to be forfeited to the Government;

or

(b) cause the sale of the fish or other thing at its reasonable market value and, if court proceedings are instituted, pay the proceeds of sale into Court pending an order by the Court in respect of the forfeiture or otherwise of the proceeds or, if no proceedings are instituted, release the proceeds to the person from whom the fish or other thing was seized.

(2) Where any live fish is seized in accordance with section 30 or 32 it may be released or destroyed at the discretion of the seizing officer where he considers such act desirable in order to prevent undue suffering to the seized fish or for other good and sufficient reason.

(3) Any live fish of a species listed in Appendix I to the *Convention on International trade in Endangered Species* seized in accordance with section 30 or 32 may not be disposed of so as to become an object of trade.

#### Persons arrested, etc., to be brought before Court

40. (1) Any person arrested and, subject to section 39, any vessel, article or thing arrested, detained or seized shall be brought before, or be under the jurisdiction of, a court of competent jurisdiction as soon as it is reasonably possible, but not later than forty-eight hours after the arrest, detention or seizure, or if the period of forty-eight hours expires outside ordinary court hours or on a day which is not a court day, the first court day after such expiry.

(2) Where no prosecution pursuant to subsection (1) is instituted within thirty days of the arrest, any vessel, article or other thing detained or seized when in the possession of or under the control of arrested person or the proceeds of sale thereof shall, subject to section 39(2), be returned to that person.

(3) Where a person who has been charged with an offence under this Act fails to appear to answer the charge within ninety days, the Director may apply to the Court for the vessel, article or other thing detained or seized in accordance with section 30 or 32 to be forfeited to the Government and the Court shall make such order as it shall consider just.

(4) Subject to subsection (5) and section 39, where a vessel, article or any other thing is detained or seized in accordance with section 30 or 32 and no person is arrested, the vessel, article or thing shall be returned to the owner or the person having possession, care or control of it at the time of detention or seizure.

(5) If the lawful owner of a vessel, article or any other thing detained or seized in accordance with section 30 or 32 cannot be traced within thirty days of such seizure, it shall be forfeited to the Government and, subject to section 39(3) and otherwise to other provision of this Act, be disposed of as the Director, in his discretion, shall consider fit, and, if disposed by sale, any proceeds of sale thereof shall be paid into the Fund.

(6) Where a vessel, article or any other thing has been detained or seized in accordance with section 30 or 32 and the Court does not order the forfeiture of the vessel, article or other thing, it, or any proceeds realized from its disposal, shall be returned to the owner thereof or the person having the possession, care or control of it at the time of detention or seizure.

(7) Where an owner of a vessel, article or any other thing or a person having possession, care or control of it at the time of its arrest, detention or seizure is convicted of an offence under this Act and a fine is imposed-

- (a) the vessel, article or thing may be detained until the fine is paid;
- (b) the vessel, article or thing may be sold in satisfaction of the fine; or
- (c) any proceeds realized from its disposal under subsections 3 and 5 may be applied in payment of the fine.

## PART XI

### PROHIBITIONS AND OFFENCES

#### Prohibition of transfer, etc., of fish

41. (1) No person shall, without a permit granted by the Director-

(a) transfer fish from an aquaculture establishment or any other water to any different aquacultural establishment or water;

(b) stock any water with fish; or

(c) introduce into any water any fish not indigenous thereto.

(2) An application for a permit under subsection (1) shall be made to the Director in the prescribed form and shall be accompanied by the prescribed fees.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

(4) Where the Director is satisfied that subsection (1) has been contravened, he may cause the fish to be seized and destroyed or otherwise disposed of.

#### Prohibited fishing methods

42. (1) No person shall-

(a) use any explosive, device capable of producing an electric current, poison or other noxious substance for the purpose of killing, stunning, disabling or catching fish or in any way rendering such fish more easily caught;

(b) use any other method of fishing or gear that is unlawful; or

(c) carry or have in his possession or control, any explosive, device capable of producing an electric current, poison or other noxious substance, or gear that is unlawful in circumstances indicating an intention of using such explosive, device, poison, noxious substance or gear for the purpose of killing, stunning, disabling or catching fish or in any way rendering such fish more easily caught.

(2) Any unlawful explosive, device capable of producing an electric current, poison or other noxious substance or gear prescribed under this section found on board any vessel or in the possession or control of any person within the vicinity of any of the fishing waters shall be presumed, unless the contrary is proved, to be intended for the purposes referred to in subsection (1).

(3) Any person who-

(a) contravenes subsection (1); or

(b) lands, sells, receives or is found in possession of fish knowing or having reasonable cause to believe it to have been taken in contravention of this section, shall be guilty of an offence and liable to a fine not exceeding K30,000 and to imprisonment for six years.

**Pollution, etc., of rivers, streams, lakes or other parts of the fishing waters**

43. (1) No person shall disturb, injure, poison, kill or detrimentally affect any fish, fish spawning ground, including any aquatic plant life or food for fish in any river, stream lake or other part of the fishing waters by casting, discharging, introducing or allowing to fall, flow or percolate into such waters any sawdust or sawmill refuse, oil, chlorinated hydrocarbon, biocide, pesticide, toxic or any other substance, heavy metal or other material or rubbish which could lie on the bed of such waters.

(2) For purposes of subsection (1), a person shall be considered to discharge any of the substances referred to therein if he places or discharges or causes or permits to be placed or discharged any waste or natural water containing waste in a position where that waste or any other waste emanating as a result of a natural process from that waste is liable to fall or descend into or be washed or percolate into or to be carried by wind, tide or current into any natural water.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

(4) Any person who has been convicted of an offence under subsection (3) shall be guilty of an offence if he neglects or refuses to remove the material in respect of which the contravention arose within a reasonable time after having been ordered so to do by a fisheries protection officer.

(5) Any person convicted of an offence under this section shall be liable to a fine of not less than K20,000 and not exceeding K1,000,000 and if the offence is a continuing one, to a further fine of K1,000 per day for each day that the offence continues after conviction.

**Obstruction, etc., of fisheries protection officers**

44. (1) Any person who-

- (a) resists arrest or wilfully obstructs a fisheries protection officer in the exercise of his powers under this Act;
- (b) refuses or neglects to comply with any order, requisition, direction or notice lawfully made or given under this Act;
- (c) without reasonable excuse fails to-
  - (i) answer any question asked by a fisheries protection officer; or
  - (ii) produce anything required to be produced, in pursuance of this Act;

(d) subject to section 33, fails to allow a search or inspection under this Act; or

(e) prevents or attempts to prevent another person from complying with orders, requisitions or directions or from answering such questions or producing anything or allowing a search or inspection;

shall be guilty of an offence and liable to a fine of K30,000 and to imprisonment for six years.

(2) Any person who-

(a) for the purposes of obtaining any licence, permit or registration; or

(b) in purported compliance with any requirement to provide any information under this Act,

provides information which he knows to be false in a material particular or recklessly provides information which is false in a material particular shall be guilty of an offence and liable to a fine of K10,000 and to imprisonment for two years.

(3) Any person who, without lawful authority, alters or defaces any registration certificate, licence, permit, return or other documents issued, furnished or kept pursuant to this Act shall be guilty of an offence and liable to a fine of K5,000 and to imprisonment for one year.

**Offences, penalties and proceedings**

45. (1) Any person who contravenes any provision of this Act for which no offence is specifically provided shall be guilty of an offence.

(2) Any person who is guilty of an offence under this Act for which no penalty is specifically provided shall be liable to a fine of K20,000 and to imprisonment for four years.

**Cap. 1:01**

(3) Any regulation made under this Act may, notwithstanding the provisions of section 21 (e) of the General Interpretation Act, prescribe a fine of up to K5,000 and imprisonment for up to one year for an offence committed against any provision of such regulation.

(4) Where any person is convicted of an offence under this Act, the Court may, in addition to any other penalty that it may impose, order that any fishing gear, instrument or appliance used in the commission of such offence and any fish on board a fishing vessel or the proceeds of sale thereof, if already sold, be forfeited to the Government and, it so forfeited, be disposed of in such manner as the Director may direct:



Provided that if the disposal is by sale, the proceeds thereof shall be paid into the Fund.

(5) For the purposes of any proceedings under this Act, any fish found on board a fishing vessel shall be presumed to have been caught-

- (a) within the fishing waters or in an area where the vessel is required to have a licence or permit to fish; and
- (b) within the vicinity of the vessel at the time the fish is so found where the licence or permit to fish specifying the vessel restricts fishing to a particular area,

unless the contrary is proved.

(6) An attempt to commit an offence under this Act shall itself constitute an offence and may be dealt with in like manner as if the attempted offence had been committed.

(7) Any master who tranships, receives on board a fishing vessel, transports or in any other manner deals with fish caught or transhipped in contravention of this Act shall be guilty of an offence.

(8) Any person who aids, abets, counsels or procures an offence under this Act or conspires to commit such offence shall be guilty of the offence so aided, abetted, counselled or procured or conspired to be committed.

(9) Notwithstanding any law providing for the limitation of time within which proceedings may be commenced, any proceeding in respect of an offence under this Act involving a foreign fishing vessel may be commenced at any time after the commission of the offence.

(10) A certificate signed by the Director or any officer authorized by him to the effect that on a date specified in the certificate-

- (a) a fishing vessel specified in the certificate was not registered, licensed or specified in a permit under this Act;
- (b) the accused person or any other named person was not the holder of a licence or permit under this Act; or
- (c) a person was registered as the owner of a vessel or was the holder of a licence or permit under this Act,

shall, in the absence of proof to the contrary, be sufficient evidence of the matter stated in the certificate.

## PART XII

### COURT PROCEEDINGS, ADMINISTRATIVE PROCEEDINGS AND PENALTIES

#### Jurisdiction of magistrates courts

46. (1) All penalties, costs, expenses, offences and proceedings under this Act may be recovered, prosecuted and taken before a magistrate's court.

(2) In respect of offences under this Act and notwithstanding any other written law to the contrary the magistrate courts are hereby given extended territorial jurisdiction and jurisdiction to impose any penalty provided for under this Act and may award the Government such costs and expenses incurred in relation to the prosecution of charges.

#### Convention offences

47. (1) The Minister may by order published in the *Gazette* provide for the enforcement of any restriction or obligation relating to fishing contained in a convention to which Malawi is a party.

#### Liability of members of companies, etc.

(2) An order made under subsection (1) may provide for the imposition by a magistrate's court of penalties for contravention of such restrictions and obligations.

(3) Any person who uses a fishing vessel within the fishing waters in contravention of any restriction referred to in subsection (1) shall be guilty of an offence.

#### Liability of members of companies, etc.

48. Where any offence under this Act is committed by a company or by any member of a partnership, firm or business, society or association of persons, every director or officer of that company or any other member of the partnership or other person concerned with the management of such partnership, firm or business, society or association of persons shall be liable for the offence unless he proves to the satisfaction of the Court that-

- (a) he used due diligence to secure compliance with this Act; and
- (b) the offence was committed without his knowledge, consent or connivance.

**Forfeiture of licence, permit or registration**

49. Upon the conviction of any person of an offence under this Act, the court shall, in addition to any other penalty provided for in this Act, forfeit any licence, permit or registration granted or made under this Act and any fees paid for that licence, permit or registration, and the convicted person shall be ineligible, for a period of three years from the day of the conviction, to holding any such licence or permit or of being so registered under this Act.

**Administrative penalties**

50. (1) Where the Director has reasonable grounds to believe that-

- (a) an offence under this Act has been committed by any person;
- (b) the offence is of a minor nature; and
- (c) having regard to the previous conduct of the person concerned and of the vessel, if a vessel is involved, it would be appropriate to impose a penalty under this section,

he may cause a notice, in writing, in accordance with subsection (2) to be served on that person.

(2) A notice under subsection (1) shall be in the prescribed form and shall specify-

- (a) the nature of the offence and the date of its commission;
- (b) a summary of the facts upon which the allegation that an offence has been committed is based; and
- (c) any other matter that the Director considers relevant to the imposition of a penalty;

and shall be endorsed with a statement setting out the provisions of this section.

(3) Any person on whom a notice under subsection (1) is served may, within thirty days after such service, by notice in writing to the Director require that the proceedings in respect of the alleged offence be dealt with by the court or admit the offence.

(4) Where pursuant to subsection (3) a person opts to have the alleged offence dealt with by a court-

- (a) no further proceedings shall be taken under this section by the Director; and
- (b) nothing in this section shall be construed to prevent proceedings in respect of the alleged offence to be

dealt by the Court or the imposition by the Court of any penalty or forfeiture under this Act upon such conviction in such proceedings.

(5) Where pursuant to subsection (3), a person opts to admit the offence he may, by notice in writing to the Director-

- (a) admit the offence; and
- (b) make submissions to the Director as to the matters he wishes the Director to take into account in imposing any penalty under this section.

(6) Where a person on whom a notice under subsection (1) is served does not, within thirty days after the notice is served on him-

- (a) require that proceedings in respect of the alleged offence be dealt with by the Court; or
- (b) admit the offence,

he shall, on the expiration of that period, be presumed to have admitted the offence.

(7) Where pursuant to this section a person admits or is presumed to have admitted an offence, the Director may, after taking into account any submissions by the person under subsection (5), impose a monetary penalty on the person in respect of the offence not exceeding one half of the maximum penalty to which the person would be liable if he were convicted of the offence by the Court.

(8) Where the Director imposes a penalty on a person under this section in respect of an offence, the Director shall serve that person with a notice in writing in the prescribed form of the particulars of the penalty and place where the penalty should be paid.

(9) A person on whom a penalty is imposed under this section shall pay the penalty within thirty days after the notice of the penalty is served on him in accordance with subsection (8) and the penalty shall be paid into the Fund.

(10) Without prejudice to the requirement of subsection (9), a penalty imposed under this section shall be recoverable by the Government from the person on whom it has been imposed in the same manner as a fine is recoverable on conviction of an offence.

(11) Where an offence has been admitted or is presumed to have been admitted under this section no further charge may be laid in respect of the offence against the person who has admitted or is presumed to have admitted the offence.

(12) This section shall not apply-

(a) in respect of any offence under section 11 or 12;

or

(b) to any offence or alleged offence in respect of which a charge has already been preferred.

#### **Detention or forfeiture of fishing vessel on failure to pay fine**

51. (1) If any fine or amount of costs is adjudged to be due by the owner, master or charterer of any fishing vessel in respect of a contravention of any provision of this Act, the Court may, if no security or if it considers that insufficient security has been given to the Government, order that in default of payment the defendant shall give security for the payment of the amount due and if such security, is not given, the Court may order the detention of the fishing vessel used in the contravention and such fishing vessel may be detained in Malawi until the amount due is paid or sufficient security is given.

(2) If a fine is not paid or security is not given within thirty days of the order of the Court or such longer period as the Court may determine, the Court may order that, in the case of any offence under section 11, 12 or 13 any vessel and equipment used in the commission of the offence shall be forfeited to the Government and, if so forfeited, be disposed of in such manner as the Director, may in direct:

Provided that if the disposal is by sale, the proceeds thereof shall be paid into the Fund.

### **PART XIII**

#### **INTERNATIONAL CO-OPERATION IN FISHERIES**

##### **Fisheries access agreements**

52. (1) The Minister may, on the recommendation of the Board, enter into fisheries access agreements with other foreign states providing for allocation of fishing licences to commercial fishermen of such states.

(2) Any agreement entered into under this section shall include a provision establishing the responsibility of the foreign state to take necessary measures to ensure compliance by commercial fishermen from that state with the terms and conditions of the agreement and with the laws relating to fishing in the fishing waters.

##### **Cross-border management**

53. For the proper management of cross-border fisheries, the Director may produce management plans which lead to the realization of common fisheries goals in shared bodies of water.

##### **Regional fora**

54. Implementation of common plans may be reviewed in bilateral or regional fora, such as Joint Permanent Commissions of Co-operation and the Southern Africa Development Community.

##### **Implementation of agreements**

55. The Minister may, on the recommendation of the Board, specify by an order published in the *Gazette*, the measures for the proper implementation of relevant provisions of any agreement on fisheries to which Malawi is a party.

### **PART XIV**

#### **MISCELLANEOUS**

##### **Applications, fees and charges**

56. (1) All applications under this Act shall be-

- (a) made in the prescribed manner; and
- (b) accompanied by all information, including documents required under this Act.

(2) All applications made pursuant to this Act shall be accompanied by the appropriate prescribed fee and all licences, permits, certificates and other documents shall be issued subject to such conditions as shall be endorsed thereon and such other conditions and such fees as may be prescribed.

(3) The Director shall be empowered to levy such charges for services and other actions undertaken by him or on his behalf as shall be prescribed.

##### **Suspension or cancellation of registration, licences or permits**

57. (1) The Director may suspend or cancel any registration, licence or permit made or granted under this Act or amend any of the terms or conditions thereof if-

- (a) the licensee or person owning the registered vessel has been convicted of an offence under this Act;
- (b) he is satisfied that the registration, licence or permit was granted in error or on the basis of false or misleading information;
- (c) he has proof to believe that the holder thereof has contravened any of the conditions to which the registration, licence or permit is subject;
- (d) he considers that such cancellation or suspension is required for the regulation of fishing or aquaculture, the conservation or management of fisheries or for the economic benefit of Malawi; or
- (e) so requested by the holder thereof.

(2) The Director may, and in the case of a cancellation or suspension under subsection (1)(d) shall, order a refund of part or all of the fee paid for such cancelled or suspended registration, licence or permit.

(3) The Director shall, within fourteen days of a suspension, cancellation or variation of conditions under this section, notify the holder of the registration or the licensee, as the case may be, in writing, of such suspension, cancellation, variation and he shall give reasons therefor.

#### **Appeals against suspension, cancellation or variation of registrations, licences or permit**

58. (1) Where a registration certificate, licence or permit has been suspended, cancelled or varied under section 57, the person aggrieved by such suspension, cancellation or variation may appeal in writing to the Minister within thirty days.

(2) Any person who, having appealed to the Minister under sub section (1), is aggrieved by the decision of the Minister may, within thirty days thereof, apply to the High Court for judicial review of the decision of the Minister.

#### **Fishing districts and district fees**

59. (1) For the purposes of the issue of licences and permits, the levying of licence and permit fees and the administration and expenditure of the district fees provided for in subsection (2), the Director may, from time to time, by notice published in the *Gazette* designate fishing districts and may in like manner alter or rescind any fishing district.

(2) Fees prescribed pursuant to this Act, whether for licences, permits or for any other matter, may include, in addition to a fee payable to the Government, a district fee to be collected by the Director at the same time and in the same manner as the fee payable to the Govern-

ment.

(3) District fees shall be used for the benefit of the people in the fishing district in respect of which the licence, permit or other matter for which the fee was paid relates.

(4) District fees shall be administered in such manner as shall be prescribed.

#### **Statistical information**

60. (1) The Director may, prior to the registration of a local fishing vessel or the issue of a fishing licence, require the applicant to provide him with such statistical information concerning fishing as he may direct.

(2) The Director shall have power to require commercial fishermen and persons owning or working on local fishing vessels and fish wholesalers and retailers and proprietors of catering establishments to make returns in such form as he may decide and at such periods as may be prescribed of all fish which are caught, landed, bought or sold by them.

#### **Regulations**

61. (1) The Minister may, on the recommendation of the Board, make regulations for the better carrying into effect of the purposes of this Act.

(2) Without prejudice to the generality of subsection (1), the regulations may provide for-

- (a) anything which is to be or may be prescribed under this Act;
- (b) the conservation, management and protection of fish resources, including the establishment of closed areas and close seasons, the prescription of the limits on the amounts, sizes and weights of fish caught, retained or traded, the prescription of mesh sizes of nets, the control of use of types of fishing gear and the attachment of identification marks thereto, the control and prohibition of methods of fishing and the protection of fish stocks and their habitats from the actual or potential effects of pollution or siltation or from the actual or potential effects of measures taken to eliminate or control pollution or siltation;
- (c) measures to protect fish breeding grounds from damage caused by specific fishing methods or the clearing or collection of aquatic plants;
- (d) the manner of and conditions for recognition by the Government of associations and other bodies that represent fishermen or fish traders;
- (e) the prescribing of fish for which a licence to fish shall

- be required by persons other than commercial fishermen;
- (f) the licensing of any kind of fishing including any activity related to fishing;
- (g) the regulation of recreational and subsistence fishing including restrictions on the amount of fish that may be caught;
- (h) a quota or total allowable catch for any fish or in respect of any method of fishing in any part of the fishing waters and authorising the Director to allocate any such quota or total allowable catch to such commercial fishermen as he may specify by notice in the *Gazette*.
- (i) the different categories of commercial, amateur, recreational or other fishing licences;
- (j) the regulation of the import and export of live fish and fry, eggs and spawn thereof;
- (k) the promotion and control of the cultivation of fish, including the issue by the Director of a code of practice for the maintenance and operation of aquaculture establishments;
- (l) the regulation of the landing of fish, including the designation of landing places and the control of the handling and transportation of fish and fish products;
- (m) the licensing of fish processing establishments;
- (n) the regulation of the export and import of fish and fish products;
- (o) the control of quality standards and grading of fish sold, exported or imported and the making of rules by the Director in respect thereof;
- (p) the payment of fees on applications for permits, licences and registrations and on the issue of permits, licences or registrations;
- (q) the conditions and procedures of applications for any licences, permits or other documents and their forms.
- (r) the appointment of local agents for foreign commercial fishermen;
- (s) the placing of observers on fishing vessels;
- (t) the provision by applicants for licences and licensees of bonds or other forms of security for securing their compliance with the obligations under and the terms and conditions of their licences;
- (u) reports to be made for the purposes of this Act;
- (v) compliance with and the implementation of obligations of Malawi under any convention and may include the application to convention vessels of any of the provisions of this Act which do not relate exclusively to foreign fishing vessels with any necessary modifications to provisions relating to any matters, including qualifications for ownership of fishing vessels; and
- (w) the establishment of local fisheries committees to which the Director, in his discretion, may delegate some powers,

### Repeal and Savings

#### Cap. 66:05

62. (1) The Fisheries Act is repealed.

(2) Any subsidiary legislation made under the Fisheries Act repealed by subsection (1), in force immediate before the commencement of this Act-

(a) shall remain in force unless in conflict with this Act, and shall be deemed to be subsidiary legislation made under this Act;

(b) may be replaced, amended or repealed by subsidiary legislation made under this Act.

### Transitional

#### Cap. 66:05

63. (1) Subject to subsection (3), every licence, permit and authority granted or issued under the Fisheries Act shall continue to have effect until the expiry thereof in accordance with the terms thereof.

(2) Every local fishing vessel shall be deemed to be registered for the purposes of this Act for thirty days from the coming into force of the Act and thereafter a fishing vessel shall be considered to be registered for the purposes of this Act until the vessel is registered or registration is refused pursuant to this Act provided that application for registration has been made within thirty days of the coming into force of the Act for the registration of the vessel under the Act.

(3) Where an owner of a fishing vessel fails to apply for registration within thirty days of the coming into force of this Act or is refused registration of the vessel a person permitted to fish under subsection (1) who is using the vessel shall within fourteen days of such refusal or within forty four days of the coming into force of this Act, where the owner fails to apply, cease to use such vessel.

(4) A person who is operating an aquacultural establishment when by regulations made under this Act he is required to obtain a permit for such establishment shall be considered to be licensed to operate the establishment for thirty days from such regulations coming into force and thereafter until such permit is

granted or refused provided that application has been made for such permit within thirty days of the coming into force of the regulations.

Passed in Parliament this twenty-eighth day of October, one thousand, nine hundred and ninety-seven.

**R. L. GONDWE**

**Clerk of Parliament**

## MAURITANIA

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### Ordonnance N°. 83.127 du 5 Juin 1983 portant réorganisation foncière et domaniale.

Le Comité Militaire de Salut National a délibéré et adopté;

Le Président du Comité Militaire de Salut National, Chef de l'Etat, promulgue l'ordonnance dont la teneur suit;

**ARTICLE PREMIER:** La terre appartient à la nation et tout Mauritanien, sans discrimination d'aucune sorte, peut, en se conformant à la Loi, en devenir propriétaire, pour partie.

**ARTICLE 2:** L'Etat reconnaît et garantit la propriété foncière privée qui doit, conformément à la Chariâa; contribuer au développement économique et social du pays.

**ARTICLE 3:** Le système de la tenure traditionnelle du sol est aboli.

**ARTICLE 4:** Tout droit de propriété qui ne se rattache pas directement à une personne physique ou morale et qui ne résulte pas d'unemise en valeur juridiquement protégée est inexistant.

**ARTICLE 5:** Les immatriculations foncières prises au nom des chefs et notables sont réputées avoir été consenties à la collectivité traditionnelle de rattachement.

**ARTICLE 6:** Les droits collectifs légitimement acquis sous le régimantérieur, préalablement cantonnés aux terres de culture, bénéficient à tous ceux qui ont, soit participé à la mise en valeur initiale, soit contribué à la pérennité de l'exploitation.

L'individualisation est de droit. A défaut d'accord pour le partage, et si l'ordre social l'exige, les opérations de redistribution seront réalisées par l'Administration.

**ARTICLE 7:** Les actions foncières collectives sont irrecevables en justice. Les affaires de même nature actuellement pendantes devant les cours et tribunaux seront éradiés des rôles sur décision spéciale de la juridiction saisie. Les arrêts ou jugements de radiation sont inattaquables.

**ARTICLE 8:** Toute forme d'affermage de la terre non conforme à la Chariâa est prohibée; les parties ne peuvent, par leurs conventions déroger à cette disposition d'ordre public.

**ARTICLE 9:** Les terres "mortes" sont la propriété de l'Etat. Sont réputées mortes les terres qui n'ont jamais été mises en valeur ou dont la mise en valeur n'a plus laissé de traces évidentes.

L'extinction du droit de propriété par l'indirass" est opposable aussi bien au propriétaire initial qu'au ses ayants droits, mais ne s'applique pas cependant aux immeubles immatriculés.

**ARTICLE 10:** Les terres qui ont appartenu à l'Etat, en vertu des dispositions de la loi 60.139 du 2 Août 1960, demeurent domaniales, et les prescriptions des articles 12 et 13 ci-dessous leur sont applicables.

**ARTICLE 11:** Les biens fonciers vacants et sans maître sont acquis à l'Etat dans les conditions définies par la Chariâa.

**ARTICLE 12 :** Quiconque désire accéder à la propriété d'une terre domaniale doit impérativement en obtenir au préalable la concession; celle-ci ne devient définitive et n'emporte transfert de propriété qu'après mise en valeur réalisée aux conditions imposées par le cahier des charges et, s'il y a lieu, par l'acte de concession.

**ARTICLE 13:** La mise en valeur d'une terre domaniale sans concession préalable ne confère aucun droit de propriété à celui qui l'a faite. En pareil cas, l'Etat peut, soit reprendre le terrain, soit régulariser l'occupation.

Lorsque le terrain ne comporte pas de plantations, constructions ou ouvrages, la reprise n'ouvre à aucune indemnité. Dans le cas contraire, l'occupant irrégulier sera indemnisé pour ses dépenses, à moins qu'il ne préfère enlever ou détruire à ses frais ses plantations, constructions ou ouvrages.

Dans tous les cas et conformément à la Chariâa,

l'indemnisation tient uniquement compte des matériaux pouvant être récupérés après enlèvement ou destruction de l'immeuble.

A défaut d'accord amiable sur le montant de l'indemnité, celle-ci est fixée par la juridiction civile compétente saisie à la diligence de l'occupant évincé.

**ARTICLE 14:** L'Etat procède par voie administrative pour la préservation de ses pouvoirs en justice pour faire la preuve que le terrain n'est pas domanial.

L'action en contestation doit être impérativement introduite, sous peine de déchéance, dans un délai d'un mois après la notification de la mise en demeure de libérer les lieux.

Le demandeur en contestation dispose seulement de deux mois pour produire ses moyens de preuve; ce délai de conclusion ne peut être prorogé. Les jugements rendus sur la contestation ne sont pas susceptibles d'appel. Le pouvoir en cessation formé contre, ces décisions n'a pas d'effet suspensif.

**ARTICLE 15:** L'Etat est obligatoirement cité en qualité de partie intervenante dans — instance visant à faire reconnaître à des particuliers des droits de propriété sur le sol.

Cette règle ne s'applique pas, et l'Etat n'a pas à être cité, lorsque le terrain a déjà fait l'objet d'une concession domaniale devenue définitive.

**ARTICLE 16:** Les tribunaux doivent se déclarer incompétents toutes les fois que la revendication porte sur une terre domaniale.

**ARTICLE 17:** L'exception tirée du caractère domanial du terrain litigieux peut être proposée concurremment par l'Administration ou par défendeur en revendication; le juge peut aussi la soulever d'office.

A défaut d'acquiescement, le tribunal doit surseoir à statuer au fond et renvoyer les parties devant la juridiction compétente pour la solution de cette question préjudicielle.

La juridiction de renvoi est saisie, en contestation de domanialité, à la diligence du demandeur en revendication.

**ARTICLE 18:** Le juge des contestations se limite à dire si la terre est domaniale ou ne l'est pas. Défense lui est faite dans ce dernier cas de se prononcer sur le droit de propriété et d'en désigner, même indirectement, le titulaire.

**ARTICLE 19:** Les jugements rendus en application des articles 14 et 17 ci-dessus ne sont contradictoires à l'égard de l'Etat que si l'Administration a été représentée ou a déposé des conclusions écrites.

**ARTICLE 20:** Les concessions de grande superficie ne seront accordées que si l'investissement projeté présente un impact économique et social appréciable et seulement dans la mesure où les intérêts légitimes des petits propriétaires sont sauvegardés.

**ARTICLE 21 :** Le droit de propriété ne peut empêcher la réalisation d'un projet d'intérêt national ou régional et ne saurait en particulier entraver l'expansion harmonieuse d'une agglomération urbaine.

Nul ne pourra cependant être contraint de céder ses droits si ce n'est pour cause d'utilité publique et moyennant juste compensation.

**ARTICLE 22:** Tous puits et forages situés en dehors des propriétés privées sont déclarés d'utilité et d'usage publics.

**ARTICLE 23:** L'espace vital des agglomérations rurales est protégé. Les modalités de cette protection seront précisées par voie réglementaire.

**ARTICLE 24:** Les droits individuels régulièrement constitués sur des fonds de terre de toute nature sont facultativement soumis au régime de l'immatriculation.

L'immatriculation devient cependant obligatoire à l'occasion de certains transferts de propriété limitativement énumérés par la réglementation foncière.

**ARTICLE 25:** Les droits qui ne résultent pas d'une concession définitive sont assujettis, préalablement à leur inscription, à une procédure administrative de vérification.

**ARTICLE 26 :** Les contestations domaniales relèvent exclusivement de la compétence des chambres mixtes des tribunaux.

Les règles de la procédure civile ordinaire s'appliqueront chaque fois qu'elles ne sont pas contraires aux dispositions ci-énoncées.

**ARTICLE 27:** Le régime juridique de la propriété foncière demeure fixé par la Chariâa pour tout ce qui n'a pas été réglé par la présente ordonnance.

**ARTICLE 28:** Des décrets pris en conseil des ministres préciseront en tant que de besoin les modalités d'application de cette ordonnance, qui abroge et remplace la loi n° 60.139 du 2 Août 1960.



**ARTICLE 29:** La présente ordonnance sera publiée suivant la procédure d'urgence et exécutée comme loi de l'Etat.

**Fait à Nouakchott, le 5 Juin 1983.**

**Pour le Comité Militaire de Salut National,**

**Le Président: Lieutenant-Colonel MOHAMED KHOUNA OULD HAIDALLA**

## Décret N° 84-009/ portant application de l'ordonnance n° 83.127 du 5 Juin 1983 portant réorganisation foncière et domaniale.

LE PRESIDENT DU COMITE MILITAIRE DE SALUT NATIONAL,

Sur rapport du Ministre de l'Intérieur;

VU la Charte Constitutionnelle du Comité Militaire de Salut National du 25 Avril 1981,

VU l'ordonnance n° 83 127 du 5 Juin 1983, portant organisation foncière et domaniale;

VU le décret 133 80 du 17 décembre 1980, portant règlement organique relatif aux attributions des Ministres;

VU le décret 91 83 du 29 Septembre 1983 fixant la Composition du Gouvernement;

VU le décret 50 81 du 8 Mai 1981, portant délégation de pouvoir au Premier Ministre;

LE CONSEIL DES MINISTRES ENTENDU,

### DECRETE

**ARTICLE PREMIER:** L'Etat est l'incarnation juridique de la Nation. Il assure la gestion du patrimoine national.

**ARTICLE 2:** Pour être juridiquement protégée, la mise en valeur d'une terre doit consister en constructions, plantations, cultures, ou digues de retenue d'eau.

Cette mise en valeur doit être conforme à l'ordonnance 83.127 du 5 Juin 1983, et au présent décret.

**ARTICLE 3:** Pour chaque agglomération rurale, l'espace vital sera fixé par arrêté du Ministre de l'Intérieur, sur avis du Gouverneur de la Région concernée.

Cet avis est exprimé au vu des appréciations des services régionaux de la sécurité, de l'agriculture et de l'hydraulique.

**ARTICLE 4:** Constitue une agglomération rurale tout ensemble d'au moins cinquante habitations permanentes, installées dans une zone viable.

Les critères de viabilité sont fixés par une circulaire du Ministre de l'Intérieur sur avis des Ministres chargés de l'Hydraulique et du Développement Rural.

**ARTICLE 5:** Les puits et forages, situés en dehors des propriétés privées, mais réalisés par des personnes privées, ne peuvent être réservés à leur usage exclusif.

Ceux qui les ont réalisés jouissent seulement d'un droit de priorité.

Les modalités de jouissance de ce droit seront précisées par circulaire du Ministre de l'Intérieur.

**ARTICLE 6:** Les collectivités sédentaires ou attachées à des puits ou forages réalisés et entretenus régulièrement par elles, jouissent en priorité de leur usage.

### L'INDIVIDUALISATION DE LA PROPRIETE

**ARTICLE 7:** Les immatriculations de terrains à usage agricole, prises au nom des chefs et notables et en leur qualité, bénéficient à tous les membres de la collectivité de rattachement qui ont participé à la mise en valeur initiale, ou contribué à la pérennité de l'exploitation.

**ARTICLE 8:** Sont réputés avoir participé à la mise en valeur initiale ou contribué à la pérennité de l'exploitation tous ceux qui, par leur travail, ou par leur assistance, ont permis la réalisation et le maintien de cette mise en valeur.

**ARTICLE 9:** Les opérations amiables de partage en vue de l'individualisation doivent, sous peine de nullité, être supervisées et approuvées par l'autorité administrative locale et portées sur un registre foncier spécial.

**ARTICLE 10:** Il est institué dans chaque département, un registre foncier, destiné à constater les accords et les décisions de partage des terres collectives.

Les dispositions relatives à la tenue de ce registre seront fixées par arrêté du Ministre de l'Intérieur.

**ARTICLE 11:** Les opérations amiables de partage sont enregistrées dès leur clôture et sont immédiatement exécutoires.

**ARTICLE 12:** Préalablement à toute opération de

partage, une réserve foncière au moins égale au dixième de la superficie des terres à partager, sera créée d'office par l'autorité locale.

Cette réserve est destinée en premier lieu à garantir les droits éventuels des personnes non présentes ou non représentées aux opérations ci-dessus, pendant une période de deux ans à compter de l'enregistrement du partage.

A l'expiration du délai prévu à l'alinéa précédent, cette réserve peut, soit être affectée à un projet d'intérêt local, régional ou national, soit faire l'objet d'un partage complémentaire.

**ARTICLE 13:** A défaut d'accord amiable, si l'ordre social l'exige, et si la redistribution ne compromet pas la rentabilité des terres, les opérations de partage sont réalisées en présence des membres de la collectivité concernée, par une commission présidée par le Préfet et comprenant:

- un Magistrat du Tribunal départemental,
- le Commandant de la Brigade de Gendarmerie,
- le Chef du Service agricole régional,
- un Représentant des Structures d'Education des Masses.

**ARTICLE 14:** Sur avis du Préfet concerné, le Gouverneur décide par arrêté l'intervention de ladite Commission, et en rend compte dans la semaine, au Ministre de l'Intérieur.

**ARTICLE 15:** Le Préfet convoque la commission, fixe le lieu de rassemblement de la collectivité, et la date du partage qui doit intervenir un mois après réception par lui de l'arrêté d'intervention.

Il en assure la plus large publicité par les moyens officiels d'affichage et de radiodiffusion.

**ARTICLE 16:** Le procès-verbal des opérations de partage réalisées conformément à l'article 13, est inscrit au registre foncier après approbation par le Gouverneur.

Les dispositions de l'article 12 sont également applicables.

**ARTICLE 17:** Le partage est effectué individuellement, sans discrimination d'aucune sorte et de façon équitable.

Les intérêts des ayants-droit et des personnes qui auraient pu bénéficier des dispositions de l'article 8, seront sauvegardés conformément à la Charia.

**ARTICLE 18:** Les cessions, les échanges et les remembrements ne sont autorisés qu'après enregistrement du partage.

Tout transfert de propriété postérieur aux opérations de redistribution doit être constaté par acte du Greffier du Tribunal Départemental et inscrit au registre foncier.

A défaut, la nullité est de plein droit.

**ARTICLE 19:** Dans le cas des terres où sont pratiquées des cultures de décrue les parcelles individualisées sont perpendiculaires au cours d'eau ou au barrage.

**ARTICLE 20:** Les exigences d'ordre social sont appréciées par le Ministre de l'Intérieur qui peut ordonner aux autorités territoriales d'engager la procédure de partage.

**ARTICLE 21:** Toute collectivité qui exprime le désir de conserver ses terres indivises, doit se transformer en coopérative régulièrement constitué dont les membres sont égaux en droit et en devoir.

Il en est de même pour les collectivités dont les terres ne peuvent être individualisées pour des causes d'ordre économique ou technique constatées par la Commission prévue à l'article 13 du présent décret.

## CONSESSIONS DES TERRES DOMANIALES

**ARTICLE 22:** Les concessions de toute nature, à titre provisoire ou définitif sont accordées dans les formes ci-après:

-par décret en Conseil des Ministres lorsque la superficie du terrain est supérieure à deux mille mètres carrés en zone urbaine et à trente hectares en zone rurale;

-par arrêté du Ministre des Finances:

- a) **en zone rurale:** pour les superficies supérieures à cinq hectares mais n'excédant pas trente hectares,
- b) **en zone urbaine:** -pour les superficies inférieures à deux mille mètres carrés dans les lotissements réidentiels, commerciaux, industriels et artisanaux.
  - pour les superficies comprises entre mille et deux mille mètres carrés dans les lotissements réservés à l'habitat évolutif;
  - arrêté du Gouverneur pour les superficies n'excédant pas:
    - mille mètres carrés dans les zones réservées à l'habitat évolutif, et dans les zones non loties,

-deux hectares ou cinq hectares pour les concessions rurales accordées respectivement à des personnes physiques ou à des personnes morales.

La déchéance des titulaires de concessions provisoires ou définitives est prononcée par décret en Conseil des Ministres pour les superficies supérieures à deux mille mètres carrés en zone urbaine et trente hectares en zone rurale, par arrêté du Ministre des Finances dans les autres cas.

**ARTICLE 23:** Les dispositions qui suivent ne visent que l'aliénation des terrains domaniaux, l'Administration conservant la faculté de passer des baux aux conditions spécialement arrêtées pour chaque cas particulier, de consentir des ventes ou des échanges dans tous les cas où il sera souhaitable de procéder à des affectations aux services publics à condition que l'occupation des immeubles qui en font l'objet soit immédiate et effective.

### CONCESSIONS RURALES

**ARTICLE 24:** Les concessions rurales provisoires sont accordées aux clauses et conditions ordinaires du cahier des charges en annexe, et à celles particulières mentionnées dans l'acte de concession.

**ARTICLE 25:** Quiconque désire obtenir une concession provisoire d'un terrain rural, doit déposer, entre les mains du Chef de la Circonscription concernée, pour être adressée au Gouverneur ou par l'intermédiaire de celui-ci au Ministre des Finances, une demande énonçant:

- 1° - son état civil complet; s'il s'agit d'une personne morale, sa dénomination, son capital et son siège social;
- 2° - une déclaration d'élection de domicile dans l'Etat;
- 3° - une description aussi complète que possible du terrain, ses situations, contenances et limites;
- 4° - l'affectation que le demandeur se propose de donner à la terre en produisant un dossier technique précisant les actions de mise en valeur à accomplir et leur impact économique et social;
- 5° - la déclaration qu'il a pris connaissance des lois, décrets et arrêtés réglementant les concessions domaniales dans l'Etat et qu'il s'engage à en respecter toutes les prescriptions.

A la demande de concession provisoire devront être annexes:

- 1° - une procuration en due forme si le demandeur agit pour le compte d'une autre personne physique ou morale;

2° - une copie dûment légalisée des pièces d'identité du requérant;

3° - pour les Etrangers, une attestation délivrée par le Ministre de l'Intérieur précisant que l'intéressé est en règle avec les dispositions relatives à l'immigration;

4° - pour les personnes morales une expédition ou un double des actes constitutifs;

5° - un croquis en trois expéditions signé du requérant, visé par le chef de circonscription administrative et avalisé par les services techniques compétents donnant la situation du terrain par rapport à des repères fixes et facilement indentifiables, ses limites et sa superficie approximative, et sa distance de l'agglomération la plus proche.

**ARTICLE 26:** Toute demande de concession rurale qui devra être annotée des pièces jointes, sera enregistrée sous un numéro d'ordre et à sa date de réception, dans un registre ouvert à cet effet et tenu par les bureaux de la Circonscription Administrative intéressée. Cet enregistrement comporte mention des noms et qualité du demandeur.

Récépissé lui en est délivré.

Si la demande de concession intéresse plusieurs circonscriptions administratives, le Chef de la Circonscription qui la reçoit en adresse une copie à ses collègues par l'intermédiaire du Gouverneur intéressé. Mention de ces envois est faite sur la demande originale.

**ARTICLE 27:** Le dépôt d'une demande de concession domaniale ne confère par lui-même aucun droit d'aucune sorte au demandeur qui doit impérativement s'abstenir de s'installer ou d'entreprendre une action quelconque sur le terrain avant d'en avoir obtenue régulièrement la concession.

En cas d'inobservation de cette prescription, l'occupant irrégulier ne saurait être considéré comme de bonne foi, et se verra appliquer les dispositions de l'article 13 de l'ordonnance 83.127 du 5 Juin 1983.

**ARTICLE 28:** Le Chef de la Circonscription Administrative, après avoir vérifié si la demande est établie en conformité avec l'article 25 ci-dessus, la porte à la connaissance du public:

- par voie de radiodiffusion
- par affichage tant aux lieux réservés à cet effet qu'à l'intérieur des bureaux de la Circonscription Administrative, et dans les villages situés dans le voisinage immédiat du terrain sollicité.

Ces affiches feront connaître les noms des demandeurs, la nature de l'exploitation projetée, la désignation du terrain sollicité avec indication de sa situation, ses limites et de sa superficie.

**ARTICLE 29:** A l'expiration du délai d'un mois à compter de la date de l'affichage, et si aucune contestation de domanialité n'a été exprimée, le Chef de la Circonscription Administrative transmet au Gouverneur ou au Ministre des Finances, le dossier de l'affaire comprenant:

- la demande et les pièces annexées
- une copie de l'affichage
- le rapport faisant l'exposé des renseignements en sa possession relativement au terrain demandé et à la capacité financière du demandeur
- un dossier technique du projet ainsi que l'engagement, par le demandeur de fournir tous renseignements conformément aux exigences des services compétents, chargés de l'application et du suivi de la mise en valeur retenue
- Son appréciation sur l'impact économique et social du projet, et les incidences de ce dernier sur les intérêts des petits propriétaires.

**ARTICLE 30:** En cas de contestation de la domanialité du terrain demandé, exprimée dans le délai prévu à l'article précédent, l'autorité administrative surseoit à la transmission du dossier jusqu'à ce qu'il soit statué sur le caractère domanial ou nom du terrain conformément aux dispositions de l'article 14 de l'ordonnance n° 83.127 du 5 Juin 1983.

**ARTICLE 31:** L'acte de concession provisoire, est notifié à l'intéressé après accomplissement, par celui-ci des formalités prescrites et paiement de tous frais et droits réglementaires.

**ARTICLE 32:** La concession provisoire prend fin:

- 1 - par l'expiration du délai imparti lorsqu'il n'est pas accordé de prorogation;
- 2 - par renonciation volontaire;
- 3 - par décès du concessionnaire si les héritiers ne sollicitent pas dans le délai de six mois à partir de la date du décès, ou n'obtiennent pas le transfert soit à leur profit, soit au bénéfice d'un candidat-acquéreur de leurs droits;
- 4 - par dissolution de la personne morale concessionnaire, sauf faculté accordée à l'associé bénéficiaire d'un acte de partage de solliciter un transfert;

5 - par déchéance du concessionnaire prononcée par l'autorité concédante;

**ARTICLE 35:** Après réalisation du cinquième de la mise en valeur retenue, le concessionnaire pourra obtenir, sur sa demande, la concession définitive du terrain moyennant le versement du prix de cession et des frais annexes: bornage, frais d'immatriculation, de mutation foncière, droits d'enregistrement et de timbres.

La concession définitive sera accordée par décret en Conseil des Ministres ou par arrêté selon les distinctions prévues à l'article 22.

Le décret ou l'arrêté vaudront titre de propriété.

**ARTICLE 36:** Le décret ou l'arrêté de concession définitive contiendront inscription d'une clause résolutoire garantissant l'accomplissement des obligations de mise en valeur dans les délais impartis et interdisant de consentir, avant la radiation de cette clause, toute cession totale ou partielle, sans autorisation de l'autorité compétente.

**ARTICLE 37:** Le bénéficiaire d'une concession rurale ayant satisfait aux conditions de mise en valeur ex aux obligations imposées par l'acte de concession et le cahier des charges, pourra obtenir la concession définitive du terrain, soit par décret en Conseil des Ministres, soit par arrêté selon les distinctions prévues à l'article 22.

Le décret ou l'arrêté ne sera pris, qu'après règlement du prix de cession stipulée dans l'acte de concession provisoire, ainsi que les frais annexes, énumérés à l'article 35.

**ARTICLE 38:** La constatation de la mise en valeur d'une concession provisoire, ainsi que l'évaluation des impenses évoquées à l'article 34, seront effectuées par une commission présidée par le chef de la Circonscription Administrative et comprenant les chefs des services techniques intéressés.

**ARTICLE 39:** Préalablement à la concession provisoire, le terrain qui en fera l'objet doit être immatriculé au nom de l'Etat.

#### CONCESSIONS URBAINES LOTISSEMENTS

**ARTICLE 40:** Les services de l'Habitat et de l'Urbanisme établissent les plans de lotissement d'après l'état des lieux levé par les services de la Topographie et de la Cartographie, en tenant compte des constructions en dur édifiées sur les terrains lotis, des titres fonciers appartenant à des particuliers et des concessions déjà accordées, mises en valeur et non encore titrées.

**ARTICLE 41:** Après visa des services techniques

concernés, les projets de lotissement sont soumis au Ministre chargé de l'Urbanisme.

**ARTICLE 42:** Le dossier du projet comprend, outre les avis des services visés à l'article précédent, le cahier des charges définissant la destination des diverses zones le minimum de mise en valeur exigée, les servitudes de reculement, le pourcentage et le volume des constructions et, de façon générale, les règles d'urbanisme imposées.

Le projet est approuvé en Conseil des Ministres, à l'initiative du Ministre chargé de l'Habitat.

Le décret d'approbation déclare le plan d'utilité publique et stipule qu'il vaudra alignement après abornement.

**ARTICLE 43:** Le plan de lotissement est appliqué sur le terrain et chaque lot est délimité par des bornes de type réglementaire.

**ARTICLE 44:** Les services des Domaines engageront la procédure d'immatriculation, au nom de l'Etat, des terrains faisant l'objet des plans de lotissement:

1°) à l'exclusion:

- des lots déjà immatriculés
- de ceux sur lesquels existent des droits permettant à leurs détenteurs de poursuivre, pour leur propre compte, la délivrance d'un titre foncier.

2°) après purge de tous autres droits.

**ARTICLE 45:** Les centres lotis comprennent:

- 1°) des lotissements résidentiels, commerciaux, industriels ou artisanaux, soumis à des conditions particulières de mise en valeur.
- 2°) des lotissements réservés à l'habitat évolutif et au commerce de détail des nationaux.

**A - LOTISSEMENTS RESIDENTIELS, COMMERCIAUX, INDUSTRIELS ET ARTISANAUX**

**ARTICLE 46:** Quiconque désire se rendre acquéreur d'un lot doit adresser au Ministre des Finances, par l'intermédiaire du chef de la Circonscription Administrative, une demande contenant:

- a) - ses noms, prénoms, nationalité, profession
- b) - tous renseignements sur sa situation financière et son programme d'investissement,

c) - la désignation du lot sollicité et l'usage auquel il est destiné.

A cette demande devra être annexée:

- a) - la copie certifiée conforme, par le Chef de la Circonscription Administrative, des pièces d'identité du requérant,
- b) - le cas échéant, un exemplaire des statuts de la personne morale demanderesse.

Le Chef de la Circonscription Administrative, joindra à ces documents son avis et toutes précisions utiles sur la situation de fortune et de solvabilité de l'intéressé.

**ARTICLE 47:** Les demandes concernant les lotissements situés dans le District de Nouakchott sont adressées au Directeur des Domaines qui les instruit et les transmet, accompagnées de ses observations, au Gouverneur du District.

Une commission consultative est chargée d'examiner lesdites demandes et de donner sur chacune d'elles un avis motivé. Cette commission est composée de:

Le Gouverneur du District de Nouakchott  
Président

- L'Adjoint Economique du Gouverneur  
Membre
- Le Directeur des Domaines  
Membre
- Le Directeur de l'Habitat et de l'Urbanisme  
Membre
- Un représentant des Structures d'Education des Masses  
Membre

Le Président peut appeler tout fonctionnaire ou toute personne susceptibles d'apporter par leurs avis une contribution utile aux travaux de la Commission.

Le secrétariat de la Commission est assuré par le Directeur des Domaines.

Les propositions de ladite commission sont consignées dans un procès-verbal et transmises au Ministre des Finances pour décision.

**ARTICLE 48:** Les autorisations d'occuper sont délivrées par le Ministre des Finances après paiement du prix principal du terrain et des frais de bornage.

L'autorisation est préalablement signée par le bénéficiaire

qui s'engage, sous peine de déchéance, à clôturer dans un délai de deux ans à compter de la date de l'autorisation, et à édifier dans le délai de cinq ans à compter de la même date, des constructions conformes aux prescriptions des plans et règlement d'urbanisme, d'une valeur au moins égale à l'investissement minimum dont le montant aura été précisé au cahier des charges.

**ARTICLE 49:** Les autorisations d'occuper sont délivrées par priorité aux établissements industriels et commerciaux indiscutablement liés au développement du pays, et, aux organismes d'utilité sociale en vue de l'organisation de leurs services.

L'avis préalable des Ministres concernés est requis.

**ARTICLE 50:** Les autorisations d'occuper sont personnelles, elles ne peuvent être vendues ni données ou transférées pour quelque motif que ce soit sous peine de déchéance immédiate, et du retour au Domaine du terrain et des constructions éventuelles.

Toutefois, en cas de décès du bénéficiaire, les héritiers pourvus d'un acte de notariété établi par le Tribunal ou le Notaire, pourront solliciter le transfert des droits du défunt.

**ARTICLE 51:** Après délivrance du permis de construire et réalisation du minimum de mise en valeur précisé à l'article 48, le titulaire de l'autorisation d'occuper obtiendra, sur sa demande, la concession définitive du terrain moyennant le versement des droits et frais autres que ceux prévus à l'article 48.

La délivrance du Titre Fonction sera obligatoire pour l'Administration à l'expiration du délai de mise en valeur.

La concession définitive sera accordée par décret en Conseil des Ministres ou par arrêté ministériel, selon les distinctions prévues à l'article 22.

Le décret ou l'arrêté vaudront titre de propriété.

Les dispositions de l'article 36 du présent décret sont applicables.

**ARTICLE 52:** La constatation de mise en valeur sera faite par une commission composée:

1°) - du chef de la circonscription administrative ou de son représentant,

2°) - du chef de subdivision des travaux publics.

La Commission propose:

- soit la concession définitive

- soit la déchéance du titulaire

- soit la prorogation des délais pour une période d'un an au maximum, si cette prorogation a été sollicitée par l'intéressé et paraît justifiée,

- soit la main-levée de la clause résolutoire inscrite ou à inscrire sur le Titre Foncier.

**ARTICLE 53:** La déchéance du titulaire d'une concession définitive sera prononcée par décret en Conseil des Ministres ou par arrêté ministériel, selon les dispositions prévues à l'article 22.

La déchéance du titulaire d'une autorisation d'occuper ainsi que la main-levée de la clause résolutoire seront prononcées par arrêté du Ministre des Finances.

La prorogation des délais sera accordée par décision de l'autorité concédante.

**ARTICLE 54:** En cas de déchéance, le prix du terrain ainsi que les frais et droits déjà versés seront acquis au Trésor public.

## B - LOTISSEMENTS RESERVES A L'HABITAT EVOLUTIF

**ARTICLE 55:** Les nationaux qui désirent se fixer dans les quartiers réservés à l'habitat évolutif et au commerce de détail adresseront au chef de la circonscription administrative, une demande en vue d'obtenir une autorisation d'occuper.

Seront agréées par priorité ceux qui, déjà installés dans la zone lotie, n'auront pu requérir l'octroi d'un titre foncier.

Une même personne ne peut prétendre à la délivrance de plus d'une autorisation d'occuper.

**ARTICLE 56:** Les bénéficiaires des autorisations d'occuper sont désignés par une Commission nommée par le Gouverneur et présidée par le Chef de Circonscription Administrative.

**ARTICLE 57:** Les autorisations d'occuper sont tirées d'un carnet à souche coté et paraphé par le Chef de Circonscription Administrative, à trois volets détachables, dont l'un est remis au bénéficiaire et l'autre à la Direction des Domaines pour annotation du répertoire des centres lotis.

Un répertoire des centres lotis sera également tenu au siège de la Circonscription Administrative.

Au cours de vérifications périodiques, les agents de la

Direction des Domaines s'assureront de la concordance de ces répertoires.

**ARTICLE 58:** La délivrance des autorisations d'occuper donne lieu à la perception d'un prix dont le montant est fixé au cahier des charges propre à chaque lotissement, ou par le Conseil Régional.

**ARTICLE 59:** Les autorisations d'occuper sont essentiellement personnelles et ne peuvent bénéficier qu'à leurs titulaires.

Elles ne peuvent être vendues ni données ou transférées pour quelque cause que ce soit sous peine de déchéance immédiate.

**ARTICLE 60:** Par dérogation aux dispositions de l'article précédent, le permissionnaire pourra présenter à l'agrément de l'autorité compétente un candidat acquéreur auquel il sera autorisé à aliéner les dépenses réalisées, sous les conditions suivantes;

1° - Que la mise en valeur soit au moins égale au minimum imposé par le cahier des charges;

2° - Que le permissionnaire soit empêché d'achever la mise en valeur par un cas de force majeure ou par tout autre motif faisant présumer l'absence d'intention spéculative.

Les dérogations de cette nature ne pourront être accordées en aucun cas pendant une période d'un an à compter de la date de la délivrance de l'autorisation.

**ARTICLE 61:** L'aliénation des impenses a lieu selon la procédure suivante:

Le permissionnaire adresse à l'autorité compétente une demande exposant les motifs pour lesquels la mise en valeur ne peut être achevée. Il joint à sa demande:

- l'original du permis d'occuper
- l'acte de cession des impenses, en trois exemplaires conformes à l'annexe 2.

L'autorité compétente, après avoir statué sur le bien fondé de la demande, adresse les actes de cession au Receveur de l'Enregistrement.

Le Receveur procède à la formalité de l'enregistrement, après recouvrement des droits de mutation exigibles, conformément au Code des Impôts.

Dès réception des deux exemplaires de l'acte de cession qui lui sont retournés avec la mention d'enregistrement, l'autorité annule l'ancien permis et établit un nouveau permis au nom du cessionnaire.

**ARTICLE 62:** En cas de décès du permissionnaire, les héritiers pourvus d'un acte de notariété établi par le Tribunal ou par un Notaire, pourront solliciter le transfert des droits du défunt.

**ARTICLE 63:** Les permissionnaires sont tenus de cloturer les lots, conformément aux dispositions du cahier des charges, dans un délai de deux ans à compter de la délivrance de l'autorisation.

Pour obtenir la concession définitive, ils devront mettre les lots en valeur dans un délai de cinq ans.

**ARTICLE 64:** Les permissionnaires sont tenus de se conformer au plan d'alignement et de nivellement qui leur sera donné par les services de l'Habitat et de l'Urbanisme.

**ARTICLE 65:** Le défaut de clôture dans le délai de deux ans en l'absence de mise en valeur dans un délai de cinq ans entraînent la déchéance d'office.

En cas de déchéance, le prix versé reste acquis au Trésor à titre de pénalité.

**ARTICLE 66:** La mise en valeur sera constatée par la Commission constituée comme il est dit à l'article 38.

Cette constatation pourra être demandée à tout moment par le permissionnaire, mais sera faite d'office par l'Administration à l'expiration du délai de cinq ans, sauf prorogation exceptionnelle d'un an au maximum.

**ARTICLE 67:** Après constat de la mise en valeur, les permissionnaires obtiennent, sur leur demande, la concession définitive du terrain qui leur sera accordée par décret en Conseil des Ministres, par arrêté ministériel ou par arrêté du Gouverneur, selon les distinctions prévues à l'article 22, moyennant le versement, au Bureau des Domaines, de tous droits d'enregistrement, de timbre, de conservation foncière, et des frais de bornage.

**ARTICLE 68:** Sont soumis à la chambre mixte du tribunal régional territorialement compétent, tous litiges auxquels donnent lieu l'exécution des clauses des actes de concession.

Toutes notifications et significations relatives à l'exécution de ces actes doivent être faites:

1° - Celles des parties au Ministre des Finances

2° - Celles de l'Administration, aux parties intéressées, en leur domicile figurant sur les requêtes déposées et sur les actes de concession.

En cas de changement de domicile les notifications sont faites à l'adresse initiale des intéressés.



**ARTICLE 69:** L'autorisation, visée à l'article 36 du présent décret, relative à la cession des terrains urbains ou ruraux avant la radiation de la cause résolutoire, est accordée sous les conditions suivantes:

- 1° - Que la mise en valeur déjà réalisée soit au moins égale au cinquième de l'investissement total exigé.
- 2° - Que le propriétaire soit empêché d'achever la mise en valeur par un motif faisant présumer l'absence d'intention spéculative.

### DISPOSITIONS SPECIALES

**ARTICLE 70:** Toute convention d'affermage se traduisant par le partage des fruits de l'exploitation est prohibée.

Il en est de même pour les conventions ayant pour objet la location de matériel agricole et de bêtes de traction ainsi que la fourniture de semences ou d'engrais.

Dans tous les cas la contrepartie doit être exprimée en termes de monnaie nationale.

**ARTICLE 71:** Les biens fonciers vacants et sans maîtres à l'exception de ceux qui appartiennent à des ayants-droits mineurs, ou qui sont immatriculés peuvent être intégrés dans le domaine de l'Etat par arrêté du Ministre des Finances.

La vacance est constatée par un procès-verbal dressé par une commission désignée par arrêté du Gouverneur et comprenant:

- Le Préfet du Département concerné:  
Président
- Un Magistrat du Tribunal régional compétent
- Les Chefs des services techniques concernés
- Le Commandant de la Brigade de Gendarmerie du département
- Deux personnalités répondant aux critères de parfaite moralité.

**ARTICLE 72:** L'arrêté du Gouverneur énonce:

- la composition et la nature du bien foncier
- sa situation géographique par rapport à des repères fixes
- une estimation de sa valeur

Il sera affiché et radiodiffusé dans toutes les langues nationales.

**ARTICLE 73:** L'arrêté d'intégration sera pris, six mois après la date du procès-verbal de vacances.

Les biens intégrés, ne peuvent être ni immatriculés, ni cédés à une personne privée avant l'expiration d'un délai de deux ans à compter de la date d'intégration.

Au cours de ce délai, si le propriétaire présumé produit la preuve de son droit et des raisons valables de son abandon, il pourra rentrer en possession de ses biens après s'être acquitté des frais éventuels de consolidation et d'administration.

**ARTICLE 74:** Le Ministre des Finances retrocède les biens intégrés aux propriétaires répondant aux conditions prévues à l'alinéa 3 de l'article précédent par arrêté pris sur avis du Gouverneur compétent.

**ARTICLE 75:** Pour parvenir à l'immatriculation, les droits fonciers ne résultant pas d'une concession définitive sont soumis à la procédure ci-après.

**ARTICLE 76:** Dès réception d'une demande d'immatriculation, le chef de la Circonscription Administrative procède à une enquête destinée à établir les conditions dans lesquels l'immeuble est détenu.

**ARTICLE 77:** Lorsque la concession a fait l'objet d'une autorisation administrative conforme aux dispositions de la loi 60.139 du 2 Août 1960, le requérant devra produire l'acte de concession à l'appui de sa demande d'immatriculation.

Le Chef de la Circonscription Administrative s'assure de la régularité des documents déposés et fait procéder à la constatation de la mise en valeur dans les conditions prévues aux articles 38 et 52 ci-avant.

**ARTICLE 78:** Lorsque la mise en valeur est antérieure à la loi visée à l'article précédent, elle devra consister en constructions, cultures, plantations, digues de retenues d'eau comme il est dit à l'article 2 du présent décret.

Après enquête publique le Chef de la Circonscription Administrative dresse un procès-verbal établissant les conditions dans lesquelles le requérant détient l'immeuble.

La constatation de la mise en valeur est effectuée conformément aux dispositions des articles 38 et 52 ci-avant.

**ARTICLE 79:** Les terrains visés à l'article précédent

pourront être immatriculés pour des superficies maxima déterminées comme suit:

- 1°) construction : 1 000 mètres carrés
- 2°) cultures : superficie réellement et régulièrement mise en culture
- 3°) cultures perennes (arbres fruitiers y compris palmiers dattiers) : superficie mise en valeur à raison de 100 unités à l'hectare
- 4°) cultures de case : superficie mise en valeur.

**ARTICLE 80:** A titre transitoire, les personnes qui ont, par achat, échange ou cession gratuite, acquis une autorisation d'occuper délivrée à un attributaire initial peuvent, gratuitement et sans pénalité, régulariser leur situation dans un délai d'un an à compter de la date de publication du présent décret:

Passé ce délai, les dispositions de l'article 50 seront applicables.

**ARTICLE 81:** La Procédure de régularisation des situations visées à l'alinéa premier de l'article précédent, sera précisée par une circulaire conjointe des Ministres de l'Intérieur et des Finances.

**ARTICLE 82:** Sont abrogées toutes dispositions contraires au présent décret.

**ARTICLE 83:** Les Ministre de l'Intérieur, de la Justice, des Finances, du Développement Rural, de l'Equipement et de l'Hydraulique, sont chargés chacun en ce qui le concerne, de l'exécution du présent décret qui sera publié au Journal Officiel.

Nouakchott, le 19 Janvier 1984

**LT. COLONEL MOHAMED KHOUNA O/ HAI DALLA**

**LE MINISTRE DE L'INTERIEUR, COLONEL AHMEDOU O/ ABDALLAH**

**LE MINISTRE DE LA JUSTICE ET DE L'ORIENTATION ISLAMIQUE, COLONEL CHEIKH O/ BOIDDA**

**LE MINISTRE DES FINANCES ET DU COMMERCE  
SIDI O/ AHMED DEYA**

**LE MINISTRE DE L'EQUIPEMENT  
LT. COLONEL GAABRIEL CIMPER**

**LE MINISTRE DU DEVELOPPEMENT RURAL  
L'HYDRAULIQUE  
MOHAMED O/ AMAR**

**LE MINISTRE DE L'ENERGIE ET DE  
MOHAMED FADEL O/ DAH**

P.C.C.C.

**LE MINISTRE SECRETAIRE GENERAL DU GOUVERNEMENT  
MOHAMED OULD AMAR**

**REPUBLIQUE ISLAMIQUE DE MAURITANIE**

## ANNEXE 1

## CAHIER DE CHARGES

Clauses et Conditions auxquelles sont prononcées les concessions rurales

**ARTICLE 1:** L'exercice des droits de jouissance sur le terrain concédé pour une durée de trois ans, sauf prorogation de délai, est soumis aux clauses et conditions du présent cahier des charges.

## MISE EN VALEUR

**ARTICLE 2:** Le concessionnaire devra sous peine de déchéance:

- 1 - clôturer le terrain concédé dans un délai de douze mois à compter de la date de notification de l'octroi de la concession avec les haies vives ou mortes.
- 2 - y établir dans un délai de 3 ans à compter de la même date, des installations comportant notamment des aménagements et équipements ruraux, des plantations d'arbres, des bâtiments sous réserve de leur admission par les Ministères compétents en conformité avec le plan.
- 3 - respecter les règles techniques de mise en valeur rurale et de reboisement conformément au code forestier et les règles d'hygiène, de salubrité publique, d'urbanisme actuellement en vigueur ainsi que toutes autres qui pourraient être édictées.

## REDEVANCES FRAIS

**ARTICLE 3:** En contrepartie des droits de jouissances qui lui sont conférés, le concessionnaire devra, sous peine de déchéance, verser annuellement et d'avance une redevance à la Caisse du Receveur des Domaines. L'avis du Ministre du Développement Rural est requis pour la fixation de la redevance annuelle.

Cette redevance est payable dans les trois premiers mois de chaque année; la première redevance étant exigible en entier dans les 15 jours de l'octroi de la concession.

Les droits d'enregistrement et de timbres devront être payés en même temps que la redevance afférente à la première échéance.

## RESERVES SPECIALES

**ARTICLE 4:** Le concessionnaire prend les terrains dans l'état où ils se trouvent sans pouvoir prétendre à garantie, indemnité ou diminution de redevance pour quelque cause que ce soit.

Le concessionnaire ne peut disposer des cours d'eau qui bordent ou contournent ou traversent la concession pour y pratiquer des prises d'eau ou des aménagements pour l'irrigation, ou y exécuter un travail quelconque, si ce n'est conformément aux dispositions des textes réglementant le domaine public et les servitudes d'utilité publique.

La concession comprend le sol et le sous-sol à l'exception des mines et des gîtes de toutes substances concessibles.

Les terrains restent grevés de toutes servitudes de passage indispensable dûment constatées au moment de l'attribution de la concession provisoire.

En outre, les terrains faisant l'objet de concession demeurent, pendant toute la durée d'occupation provisoire soumis aux servitudes de passage que l'Etat jugera indispensable de constituer.

Dans tous les cas, la concession n'est donnée que sous réserve des emprises du Domaine Public.

Le concessionnaire doit subir également, toute réduction dans la contenance de la propriété concédée, motivée par la reprise des terrains nécessaires aux besoins des services publics ou à l'exécution de travaux d'intérêt général.

Cette reprise donne lieu à indemnisation fixée d'accord partie. A défaut d'accord, il est statué par le Tribunal compétent.

L'expertise est obligatoire si elle est demandée par l'une des parties.

## **TRANSFERT:**

**ARTICLE 5:** Il est interdit au concessionnaire de transférer ses droits provisoires sans autorisation de l'autorité concédante. L'inobservation de cette disposition entraîne la nullité de l'acte de cession et le retrait sans indemnité de la concession provisoire.

## **DECHEANCE**

**ARTICLE 6:** Le concessionnaire pourra être déchu de ses droits par décret en Conseil des Ministres ou par arrêté du Ministre des Finances.

- un mois après une mise en demeure restée sans effet:
- 1°) s'il n'a pas justifié avant l'expiration de la concession provisoire de la réalisation de la mise en valeur qui lui est imposée;
- 2°) s'il n'a pas acquitté la redevance annuelle dans un délai d'un mois à compter de la date de l'échéance.
- d'office, s'il cède ou loue sans autorisation préalable ses droits provisoires ou ses installations.

## **CONSESSIONS DEFINITIVES**

**ARTICLE 7:** A l'expiration du délai de trois ans prévu pour la durée de la concession provisoire, ou dans un

## **LE CONCESSIONNAIRE**

délai moindre, le concessionnaire pourra obtenir la concession définitive du terrain concédé, s'il justifie de la réalisation de la mise en valeur qui lui est imposée.

**ARTICLE 8:** Le prix de la concession rurale est déterminé par le Ministère du Développement Rural, après estimation par la commission prévue à l'article 38 et approbation par le Ministre des Finances.

## **JURIDICTIONS COMPETENTES**

**ARTICLE 9:** Toutes les contestations relatives à l'exécution des clauses et conditions du présent cahier des charges seront de la compétence des chambres mixtes des tribunaux régionaux.

**ARTICLE 10:** Les notifications et significations devront être faites:

- 1 - Par le concessionnaire, au Ministre des Finance, ou au Gouverneur concerné
- 2 - Par l'Administration, au concessionnaire à son domicile élu dans l'Etat.

## **ELECCTION DE DOMICILE**

**ARTICLE 11:** Pour l'exécution des clauses et conditions du présent cahier des charges le concessionnaire fait élection de domicile.

## **L'AUTORITE CONCEDANTE**

## Ordonnance n° 84-208 du 10 septembre 1984 portant Code d'hygiène.

Le Comité militaire de salut national a délibéré et adopté;

Le Président du Comité militaire de salut national, chef de l'Etat, promulgue l'ordonnance dont la teneur suit:

### TITRE PREMIER

#### MESURES SANITAIRES GENERALES

##### CHAPITRE PREMIER RÈGLEMENTS SANITAIRES

**ARTICLE PREMIER:** Dans chaque Région, l'autorité administrative compétente est tenue de protéger l'hygiène publique et d'établir un règlement sanitaire applicable à l'ensemble de la région. Ce règlement est établi sur la proposition des autorités sanitaires locales et après avis du ministre chargé de la santé.

**ARTICLE 2:** Le règlement sanitaire détermine:

1° Les précautions à prendre par les autorités sanitaires et par les autorités administratives locales pour prévenir ou faire cesser les maladies transmissibles et spécialement les mesures propres à assurer la protection des denrées alimentaires mises en vente, la désinfection ou la destruction des objets à l'usage des malades ou qui ont été souillés par eux et généralement des objets quelconques pouvant servir de véhicule à la contagion;

2° Les prescriptions destinées à assurer la salubrité des maisons et de leur dépendance, des voies privées, closes ou à leur proximité, des logements loués en garni et des centres et agglomérations quelle qu'en soit la nature;

3° Les prescriptions relatives à l'alimentation en eau portable et à la surveillance des puits, à l'évacuation des matières usées et aux conditions auxquelles doivent satisfaire les fosses d'aisance.

**ARTICLE 3:** Les dispositions des articles 1 et 2 ne font pas obstacle aux droits des autorités administratives lo-

cales de prescrire, par arrêté, des dispositions particulières, en vue d'assurer la protection de la santé publique. Ces arrêtés sont approuvés conjointement par les ministres chargés de l'Intérieur et de la Santé publique.

##### CHAPITRE II LUTTE CONTRE LES ÉPIDÉMIES ET VACCINATIONS CONTRE CERTAINES MALADIES TRANSMISSIBLES

**ARTICLE 4:** La lutte contre les épidémies et les vaccinations contre certaines maladies transmissibles s'effectueront conformément à la réglementation en vigueur.

**ARTICLE 5:** Toute personne qui exerce, dans un établissement ou organisme public ou privé de prévention ou de soins appartenant aux catégories dont la liste est établie par arrêté conjoint du ministre chargé de la Santé publique et du ministre chargé du Travail, une activité professionnelle l'exposant à des risques de contamination, doit être immunisée contre la tuberculose, la diphtérie, le tétanos, les fièvres typhoïdes et paratyphoïdes et la poliomyélite.

Les conditions de cette immunisation sont fixées par arrêté du ministre chargé de la Santé publique.

**ARTICLE 6:** La déclaration à l'autorité sanitaire de tout cas de maladie à déclaration obligatoire est impérative, d'une part pour tout médecin ou autre agent des services de santé qui en a constaté l'existence, d'autre part pour le principal occupant, chef de famille ou d'établissement, des locaux où se trouve la maladie et, à son défaut, dans l'ordre ci-après; pour le conjoint, l'ascendant le plus proche du malade ou toute autre personne résidant avec lui ou lui donnant des soins.

**ARTICLE 7:** Les maladies auxquelles sont applicables les dispositions de l'article ci-dessus concernant la déclaration des maladies contagieuses sont définies par décret pris sur le rapport du ministre chargé de la Santé publique.

**ARTICLE 8:** La désinfection est obligatoire pour tous les cas prévus à l'article 6. Les mesures de désinfection sont décidées par le ministre chargé de la Santé publique.

**ARTICLE 9:** Le contrôle sanitaire aux frontières est régi sur le territoire national par les dispositions des règlements sanitaires pris par l'Organisation mondiale de la Santé, conformément aux articles 21 et 22 de sa constitution, des arrangements internationaux et des lois et règlements nationaux intervenus ou à intervenir en cette matière, en vue de prévenir la propagation par la voie terrestre, maritime ou aérienne des maladies transmissibles.

**ARTICLE 10:** Ont qualité pour constater les infractions en matière de contrôle sanitaire aux frontières, les médecins de la santé publique, les médecins-officiers, les gardes et agents chargés du contrôle sanitaire aux frontières, commissionnés et assermentés dans les conditions fixées par décret.

**ARTICLE 11:** Il est interdit à tout fonctionnaire ou agent public, commandant ou officier d'un navire ou d'un aéronef, tout médecin d'altérer, de dissimuler sciemment dans un document ou une déclaration, des faits sanitaires de nature à compromettre la santé des populations.

### CHAPITRE III MESURES D'ASSAINISSEMENT DE BASE

#### Section 1 L'EAU POTABLE

**ARTICLE 12:** Sans préjudice des dispositions des textes qui régissent les entreprises exploitant les eaux minérales, quiconque offre au public de l'eau en vue de l'alimentation humaine, à titre onéreux ou gratuit et sous quelque forme que ce soit, y compris la glace alimentaire, est tenu de s'assurer que cette eau est propre à la consommation.

**ARTICLE 13:** En vue d'assurer la protection de la qualité des eaux, l'acte portant déclaration d'utilité publique des travaux de prélèvement d'eau destinée à l'alimentation des collectivités humaines détermine, autour du point de prélèvement, un primètre de protection.

**ARTICLE 14:** Ouvrages d'amenée et de distribution d'eau.

##### 1° Protection des ouvrages

Toutes les dispositions doivent être prises pour assurer la protection des ouvrages d'amenée et de distribution d'eau potable contre les contaminations extérieures, conformément à la réglementation et aux instructions techniques du ministère chargé de la Santé publique.

Les ouvrages de captage, de traitement, de stockage et

d'élévation des eaux, doivent être protégés des crues et installés de manière à éviter tout risque de pollution.

##### 2° Réservoirs de distribution

Les réservoirs de distribution sont couverts et établis de manière à permettre leur vidange totale et leur nettoyage périodique. Ce nettoyage doit pouvoir être effectué sans coupure d'eau.

Les réservoirs ne doivent être alimentés qu'en eau potable et par surverse, sauf exception justifiée.

Une aire circulaire étanche de deux mètres de rayon au minimum et légèrement inclinée vers l'extérieur assure leur protection contre les infiltrations superficielles; un caniveau doit éloigner les eaux s'échappant du dispositif de pompage.

L'ensemble de l'ouvrage doit être maintenu en bon état d'entretien et en état constant de propreté. Il doit être procédé à son nettoyage et à sa désinfection sur injonction des autorités administratives compétentes, à la diligence de l'autorité sanitaire.

##### 3° Désinfection

La désinfection du réseau d'adduction collective et des réservoirs est obligatoire avant leur mise en service et s'effectuera dans les conditions fixées par les instructions techniques du ministère chargé de la Santé.

En outre, des mesures de désinfection complémentaires peuvent être prescrites en cours d'exploitation là où les contaminations seraient observées ou à craindre.

##### 4° Desserte des immeubles

Dans toutes les agglomération possédant un réseau de distribution publique d'eau potable, toutes les voies publiques ou privées doivent, dans tous les cas où cette mesure est techniquement réalisable, comporter au moins une conduite de distribution.

Tout immeuble desservi par l'une ou l'autre de ces voies est relié à cette conduite par un branchement. Ce branchement est suivi d'un réseau de canalisations intérieures qui met cette eau à la disposition de tous les habitants de l'immeuble, à tous les étages et à toute heure du jour et de la nuit.

##### 5° Précautions concernant d'autres réseaux de distribution d'eau

En dehors de l'eau potable, provenant de la distribution publique, toutes les eaux d'autres origines sont considérées a priori comme non potables et ne peuvent être utilisées qu'à certains usages industriels,

commerciaux ou agricoles non en rapport avec l'alimentation et la toilette, dans les conditions de distribution et d'emploi ci-après.

Dans le cas où un immeuble est desservi, à l'exclusion des parties réservées à l'habitation, par une canalisation d'eau non potable, celle-ci doit être entièrement distinguée de la première et recouverte d'une peinture ou de tout autre signe distinctif conforme aux normes fixées par arrêté. Tout robinet de puisage d'eau non potable est surmonté d'une plaque apparente et scellée à demeure, portant d'une manière visible "Eau dangereuse à boire".

#### 6° *Entretien des installations en vue d'éviter le gaspillage de l'eau*

Les propriétaires, locataires et occupants doivent maintenir les installations intérieures en bon état d'entretien et de fonctionnement et supprimer toute fuite dès qu'elle est déclarée.

**ARTICLE 15:** En l'absence d'une distribution publique d'eau potable, l'usage de l'eau des sources et des puits publics ou particuliers n'est autorisé pour l'alimentation humaine que si elle est potable et si toutes les précautions sont prises pour la mettre à l'abri de toutes contaminations.

- a) *Puits:* L'orifice des puits est protégé par une margelle surélevée destinée à limiter la pénétration des animaux et des corps étrangers. Leur paroi doit être étanche dans la partie non captante et la margelle doit s'élever à 50 cm au minimum au-dessus du sol.
- b) *Sources:* L'ensemble de ces dispositions s'applique aux sources et à leurs ouvrages de captage, en ce qui concerne leur entretien et leur protection à l'égard des contaminations.

Les autorités administratives et sanitaires veilleront à l'application des mesures prévues au présent article dans la limite des possibilités techniques et des disponibilités économiques.

Un arrêté du ministre chargé de la Santé publique déterminera les conditions d'application du présent article.

**ARTICLE 16:** Les citernes destinées à recueillir l'eau de pluie doivent être étanches et protégées des pollutions externes. Elles comportent un dispositif d'aération muni d'un treillage métallique inoxydable et de la taille d'un millimètre au maximum, pour empêcher les insectes et petits animaux d'y pénétrer. Les parois intérieures doivent être en matériaux inertes vis-à-vis de l'eau de pluie.

Elles seront munies de dispositifs spéciaux destinés à écarter les premières eaux de lavage des toitures. Un filtre à gros éléments doit arrêter les corps étrangers, tels que terre, gravier, feuilles, détritiques et déchets de toutes sortes.

Elles doivent être soigneusement nettoyées et désinfectées une fois par an.

Sur la couverture des citernes enterrées, un revêtement de gazon est seul toléré, à l'exclusion de toute autre culture. L'usage des pesticides, des fumiers organiques ou autres y est interdit. Les conditions de protection des citernes sont conformes à celles prescrites pour les puits et les sources.

L'utilisation des canalisations en plomb pour le transport et la distribution de l'eau de citernes est interdite.

L'eau des citernes doit être a priori considérée comme suspecte. Elle ne peut être utilisée pour l'alimentation que lorsque sa potabilité a été établie.

Une protection doit être assurée contre toute pollution d'origine extérieure, contre la pénétration d'animaux, d'insectes et contre les variations de températures, lorsqu'il s'agit d'une eau naturellement fraîche.

Des dispositions sont prises pour assurer la continuité de l'alimentation en eau potable pendant la mise hors circuit des réservoirs et pour permettre, aux fins de contrôle, des prélèvements de l'eau à l'arrivée et à la sortie.

## **Section 2 ASSAINISSEMENT DU MILIEU**

**ARTICLE 17:** *Elimination des matières usées, solides et liquides.* La collecte et l'élimination des matières usées solides est à la charge des autorités administratives ou des collectivités locales.

Les matières usées liquides doivent être éliminées par les réseaux d'égouts publics, installés et entretenus par les services compétents. Les propriétaires d'immeubles sont tenus de brancher leurs installations sanitaires à ces réseaux.

En l'absence de tels réseaux, tout immeuble disposera d'installations sanitaires convenables et sera doté d'un système d'assainissement particulier de type fosse septique et puisard, conformément aux normes réglementaires.

**ARTICLE 18:** *Propreté du milieu:* Les mesures de propreté concernant les habitations et leurs alentours, les

voies publiques, les terrains clos ou non, les plages, doivent être assurées régulièrement, suivant le cas, soit par les usagers, soit par les autorités immobilières responsables, en vertu du cahier des charges.

## CHAPTER IV DISPOSITIONS SPÉCIALES RELATIVES AUX DENRÉES ALIMENTAIRES

### Section 1 LES MAGASINS D'ALIMENTATION

**ARTICLE 19:** Les magasins de vente doivent être aérés, ventilés et correctement éclairés. Ils doivent pouvoir être fermés sur la voie publique par un ou plusieurs dispositifs appropriés, de manière à protéger les denrées du soleil et des pollutions de toute nature.

L'utilisation des sous-sols ainsi que des pièces sans fenêtre est interdite, sauf dérogation spéciale.

Les murs et les plafonds doivent être maintenus en état parfait de propreté. Ils doivent être blanchis au moins une fois par an à la chaux ou lavés régulièrement.

Le sol doit être en matériaux durs (carrelage, ciment) et lisses ou recouvert d'un revêtement imperméable. Il est lavé au moins une fois par jour. L'écoulement des eaux de lavage est assuré. Le balayage à sec est interdit.

Les magasins ne doivent en aucun cas servir à l'habitation ni abriter aucune activité industrielle ou artisanale autre que celle visée ci-dessus.

Les comptoirs de vente, étals, tables et tout matériel analogue en contact avec les denrées alimentaires sont revêtus d'un matériel imperméable et lisse, maintenu en état permanent de propreté.

Toutes les précautions sont prises pour que les denrées non présentées sous emballage d'origine soient à l'abri des pollutions. Les denrées altérables à la chaleur, emballées ou non, doivent être conservées dans une enceinte réfrigérée, les autres étant protégées par des cloisons transparentes ou de fins treillis.

Il est interdit de déposer sur le sol des denrées alimentaires non emballées, même pendant les opérations d'approvisionnement.

L'accès des animaux, notamment des chiens, est interdit. Cette interdiction doit être affichée à l'entrée de chaque magasin. Les exploitants sont tenus de veiller à la protection contre les insectes et les rongeurs.

Si un débit de boissons à consommer sur place est installé

dans le même local qu'un magasin de denrées alimentaires, ils doivent être nettement séparés. Ces débits sont soumis aux mêmes règles que les magasins de vente, en ce qui concerne l'aménagement et l'entretien.

### Section 2 LES VENTES À L'EXTÉRIEUR

**ARTICLE 20:** Les denrées alimentaires vendues à l'extérieur sur les marchés et autres lieux publics de vente sont soumises aux conditions générales ou particulières les concernant et font l'objet d'une protection rigoureuse contre les pollutions de toute nature. Le niveau supérieur de la bordure de protection des denrées alimentaires est situé à une hauteur d'un mètre du sol.

La manipulation des denrées non protégées ou conditionnées n'est pas autorisée.

### Section 3 HYGIÈNE DES MANIPULATIONS

**ARTICLE 21:** Les papiers imprimés et le papier journal peuvent être utilisés au contact des fruits, des racines, tubercules, bulbes non épluchés ni lavés.

Les déchets de toutes sortes sont immédiatement placés dans des récipients étanches munis d'un couvercle, qui doivent être vidés et nettoyés au moins une fois par jour.

Toutes les denrées avariées, conditionnées ou non, doivent être retirées de la vente.

La collecte et le transport des récipients de déchets ne peuvent être entrepris qu'après la fermeture des magasins.

**ARTICLE 22:** Transport de denrées alimentaires. Les moyens de transport utilisés pour les denrées alimentaires ne doivent pas constituer, du fait de leur aménagement, de leur état d'entretien ou de leur chargement, un risque de contamination, d'altération ou de souillure pour ces denrées. Ils sont dotés des équipements nécessaires à la bonne conservation des denrées.

**ARTICLE 23:** *Ateliers et laboratoires de préparation des aliments.*

1° Le sol, les murs et cloisons, jusqu'à une hauteur d'au moins deux mètres, sont revêtus de matériaux durs, résistants aux chocs, imperméables, imputrescibles et permettant un lavage efficace.

2° L'écoulement des eaux de lavage des locaux et du matériel doit être assuré. Notamment, le sol doit être lavé au moins une fois par jour, le balayage à sec est interdit.



3° L'aération et la ventilation doivent être assurées en permanence et permettre l'évacuation rapide des buées et vapeurs de cuisson.

4° Les propriétaires ou gérants doivent prendre toutes mesures pour éviter la pénétration des mouches ou autres insectes, oiseaux, rongeurs et autres animaux et faire procéder, si nécessaire, aux opérations de désinsectisation et de dératisation, en évitant toute contamination des denrées alimentaires.

5° Tous les ustensiles servant à la préparation ou au conditionnement des aliments, planches, couteaux, hachoirs, fourchettes et cuillères, passoirs et étamines, doivent être maintenus constamment en bon état de propreté. Ils seront nettoyés au fur et à mesure de leur emploi par un lavage manuel ou mécanique, à l'eau chaude additionnée de produits autorisés, suivi d'un rinçage à l'eau, tel qu'il ne puisse entraîner aucune contamination et qu'il élimine tout résidu alimentaire.

6° Les déchets, rebuts et détritiques de toutes sortes sont immédiatement disposés dans un récipient muni d'un couvercle rabattable, vidé, nettoyé et désinfecté au moins une fois par jour.

#### **ARTICLE 24:** *Distribution automatique des aliments.*

1° Les appareils distributeurs automatiques d'aliments doivent être situés sur des emplacements éloignés de toutes sources de contamination.

2° Sans préjudice de l'application de la réglementation en vigueur, les denrées placées dans des appareils de distribution automatique doivent être maintenues à une température convenant à leur conservation et elles sont renouvelées en temps utile, de manière à demeurer à l'abri de toute souillure provenant notamment des pièces de monnaie et des billets de banque.

3° Les appareils distributeurs de bonbons et de friandises ne doivent débiter que des denrées incluses dans des emballages individuels.

#### **Section 4: Hygiène du personnel**

**ARTICLE 25:** Sans préjudice de l'application de la réglementation en vigueur, les personnes appelées, en raison de leur emploi, à manipuler les denrées alimentaires, tant au cours de leur collecte, préparation, traitement, transformation, conditionnement, emballage, transport, entreposage, que pendant leur exposition, mise en vente et distribution, sont astreintes à la plus grande propreté corporelle et vestimentaire, sous la responsabilité de l'employeur.

Dans les ateliers de préparation des aliments, il est interdit de fumer.

La manipulation des denrées alimentaires est interdite aux personnes susceptibles de les contaminer, notamment celles qui sont atteintes d'infections cutané-muqueuses, respiratoires ou intestinales. Tout sujet atteint d'une telle affection constatée par un examen clinique ou bactériologique doit être écarté jusqu'à guérison complète, confirmée par attestation médicale.

Le personnel doit utiliser les installations sanitaires mises à sa disposition: vestiaires en nombre suffisant, cabinets d'aisance sans communication directe avec les locaux et annexes. Les lavabos seront placés à côté des cabinets d'aisance et à proximité des lieux de travail.

### **Section 5 LES BOISSONS**

#### **Sub-Section 1: Boissons autres que le lait**

**ARTICLE 26:** Les dispositions suivantes concernant les établissements de fabrication, de conditionnement et de vente des denrées alimentaires liquides tels que fabriques de sodas et limonades, d'eaux gazeuses, de sirop, brasseries, cidreries et les établissements où l'on procède à la mise en fûts ou en bouteilles de vin spiritueux, doivent être respectées.

1° Les locaux doivent satisfaire aux prescriptions relatives aux ateliers de préparation des aliments.

2° Seule, une eau reconnue potable distribuée en tous points par des canalisations distinctes peut être utilisée pour la fabrication des limonades et sodas, des eaux gazeuses ainsi qu'en brasserie et en cidrerie.

Les machines et appareils de toutes sortes utilisés pour la fabrication et le conditionnement de ces denrées liquides doivent être conçus pour permettre, si nécessaire, un démontage facile de leurs différents éléments en vue de leur entretien. Ils sont nettoyés à l'eau potable additionnée de produits autorisés, rincés et égouttés.

Les récipients divers destinés au stockage de ces denrées sont nettoyés de la même façon.

Les matériaux de conditionnement et les matériaux de bouchage: capsules, rondelles, lièges doivent être neufs et dans un état de propreté excluant toute contamination.

**ARTICLE 27:** *Hygiène des débits de boissons.* Les cafés, brasseries, bars et buvettes, les salons de thé, les débits de boissons, quel que soit leur emplacement, sont soumis aux dispositions de l'article ci-dessus en ce qui concerne l'hygiène de la vaisselle et de la verrerie.

Par ailleurs, la vente ambulante des boissons doit être faite de telle sorte que les véhicules soient aménagés de

façon à protéger les produits débités contre toute souillure ou altération.

**ARTICLE 28:** *Dispositions spéciales relatives à la fabrication de certaines boissons.* La fabrication et la vente de toute boisson dans laquelle interviennent de plantes, parties de plantes, extraits de végétaux ou tout autre produit, font l'objet d'une réglementation.

Sub-section 2: Lait et produits laitiers

**ARTICLE 29:** Le nettoyage des appareils et des récipients ainsi que celui des magasins de vente est réglementé.

Le matériel servant à la distribution doit être d'un entretien facile.

Les laits et produits laitiers dits frais, vendus tant sous emballage d'origine qu'au détail, doivent être maintenus à l'abri de toute altération et exposés pour la vente en quantité aussi minime que possible et aux températures convenables selon les procédés admis.

Les crèmes préparées, et notamment les crèmes foisonnées, ne peuvent être vendues en vrac. Elles doivent être protégées contre toute contamination.

Le personnel employé à la fabrication et à la manutention de ces produits doit être instruit des risques à contamination auxquels ces produits peuvent être exposés.

Le premier contrôle du lait cru en provenance du producteur consiste à vérifier son odeur. Le contrôle est ensuite effectué pour les impuretés ou les micro-organismes et d'éventuelles autres anomalies: eau de mouillage ou agents conservateurs, adultérations.

Les laits fermentés, yaourt, beurre acidophile locaux, katch, petit lait avec une bonne concentration d'acide lactique sont préservateurs sans offrir cependant toutes les garanties. Leur fabrication et leur vente sans autorisation sont interdites.

**ARTICLE 30:** *Fabrication et vente des glaces et crèmes glacées.* Ces denrées doivent répondre aux dispositions réglementaires, notamment en ce qui concerne:

- le matériel servant à la fabrication;
- la température des produits mis en vente;
- leur fabrication.

Ces prescriptions s'appliquent aussi bien à la vente ambulante que celle pratiquée en magasin.

Les crèmes glacées pourront renfermer, outre des produits laitiers, du sucre, des oeufs et de l'eau ainsi que des matières aromatisantes, des colorants, des stérilisateurs admis pour la préparation des denrées alimentaires.

Les glaces ou les crèmes ne doivent pas contenir:

- a) plus de 300.000 germes aérobies mésophiles par ml;
- b) plus de 10 coliformes par ml;
- c) pas de Escherichia Coli dans 0,10 ml;
- d) pas de staphylocoques pathogènes dans 0,01 ml;
- e) pas de salmonelles.

Au cas où ces préparations constitueraient un danger pour la santé publique, leur écoulement pour la consommation doit être immédiatement suspendu.

Les pâtisseries et denrées apparentées doivent être placées dans des emballages en matières plastiques et doivent être réfrigérées.

Les crèmes et produits similaires doivent être présentés dans des récipients d'une propreté méticuleuse et maintenus à une température de 10 degrés et à l'abri des mouches et des poussières. Leur manipulation doit se faire avec des cuillères et jamais avec les doigts.

#### Section 6: Aliments d'origine végétale

**ARTICLE 31:** a) Le déversement ou le dépôt de déchets, vidanges, ordures ménagères, gadoues, matières fécales sont interdits sur tous les terrains où sont cultivés des fruits et légumes susceptibles d'être consommés crus et dont la partie comestible peut se trouver au contact de ces déchets. Les engrais organiques, fumiers composés ne doivent être répandus qu'un mois au plus tard avant les récoltes.

- b) Les fruits et légumes doivent être conformes aux prescriptions en vigueur en matière de résidus de pesticides. Ils ne doivent, en outre, présenter ni odeur ni goût anormaux.
- c) Les fruits et légumes doivent avoir atteint un degré de développement et de maturité naturelle et les produits altérés doivent être éliminés à la vente.
- d) Les fruits doivent être exempts de terre, de même que les légumes. Si le lavage des fruits ou de légumes s'avère nécessaire, de l'eau potable sera utilisée et l'opération sera suivie d'un égouttage approprié.

### Section 7: Aliments d'origine animale

**ARTICLE 32:** Viande. La vente des produits carnés est soumise à une législation particulière et contrôlée par le service de l'inspection vétérinaire.

La vente des viandes et produits dérivés en dehors des locaux de vente (boucheries, marchés, charcuteries) doit être rigoureusement proscrite.

Les prescriptions générales concernant l'hygiène des magasins d'alimentation leur sont applicables. Des mesures renforcées peuvent être prises par décret.

**ARTICLE 33:** *Poissons et produits de pêche.* Les poissons ne seront vendus que dans les établissements et les marchés publics autorisés. Ils doivent être frais et ne doivent pas avoir subi la moindre altération.

**ARTICLE 34:** La vente des autres produits marins: coquillages, huîtres qui peuvent être le siège de toutes sortes de microbes pathogènes (bacilles typhiques en particulier) fera l'objet d'une réglementation spéciale par décret.

### Section 8: La restauration collective

**ARTICLE 35:** *Hygiène des restaurants et locaux similaires.* Les dispositions suivantes s'appliquent aux salles à manger et annexes des restaurants, buffets et brasseries servant des repas, ainsi qu'aux établissements de restauration collective.

1° Les murs, parois et sols doivent être maintenus en bon état de propreté. Leur revêtement doit être lavable et facile à nettoyer.

2° Le lavage du sol et son nettoyage doivent être opérés après chaque service. Le lavage à sec est interdit.

3° Les locaux doivent être bien et ventilés. Les arrivées d'eau non potable y sont interdites.

4° Des cabinets d'aisance en nombre suffisant sont à la disposition de la clientèle. Ils ne doivent jamais communiquer directement avec la salle où sont servis les repas, ni avec les autres locaux renfermant des denrées alimentaires. Des lavabos, équipés pour le savonnage et l'essuyage des mains, y sont annexés.

5° Les tables doivent être recouvertes d'un matériel lavable et doivent être nettoyées après le départ de chaque client.

6° Les carafes d'eau doivent être vidées et entretenues en parfait état de propreté, dans l'intervalle des repas et lavées après chaque service.

7° La vaisselle, y compris les carafes, doit être lavée à l'eau chaude additionnée d'un produit autorisé, rincée à l'eau potable courante et séchée à l'abri de toute contamination.

## TITRE II

### POLICE D'HYGIENE

#### CHAPITRE PREMIER PROCÉDURE

##### Section 1: Des pouvoirs du personnel d'hygiène

**ARTICLE 36:** Les personnels d'hygiène ainsi que les agents commissionnés du service d'hygiène sont chargés de rechercher et de constater les infractions à la législation de l'hygiène et de la salubrité des habitations, voies publiques, plages, installations industrielles et tous autres établissements publics et privés. A cet effet, ils opèrent sur l'ensemble du territoire national.

**ARTICLE 37:** On entend par "personnels d'hygiène" le médecin-chef et ses adjoints, les ingénieurs sanitaires, les inspecteurs sanitaires et les contrôleurs et agents d'hygiène.

Sont "agents d'hygiène commissionnés du service d'hygiène" les agents appartenant à des administrations autres que celle du service d'hygiène et qui ont été commissionnés par le ministre chargé de la Santé pour remplir les fonctions prévues par le présent code.

**ARTICLE 38:** Les personnels d'hygiène et les agents commissionnés prêtent serment devant le tribunal régional de la circonscription administrative où ils sont appelés à servir. Le serment est enregistré sans frais au greffe de la juridiction et n'est pas renouvelé en cas de changement de résidence dans le ressort d'une autre juridiction.

**ARTICLE 39:** Le médecin exerçant les fonctions de chef du service d'hygiène, les ingénieurs sanitaires et les inspecteurs sanitaires peuvent, en cas de flagrant délit, faire procéder à l'arrestation des délinquants et les conduire devant le Procureur de la République ou toute autre autorité judiciaire compétente.

Les autres agents visés à l'article 37 conduisent tout individu surpris en flagrant délit devant le personnel d'hygiène compétent ou l'officier de police judiciaire le plus proche qui dresse un procès-verbal et instrumente

dans les conditions prévues par le Code de procédure pénale. Ils ont le droit de requérir la force publique dans l'accomplissement de leur mission.

**ARTICLE 40:** Le produit des amendes et transactions prononcées en application du présent code sera réparti dans des conditions déterminées par décret.

### **Section 2: Recherche et constatation des infractions d'hygiène**

**ARTICLE 41:** Les infractions en matière d'hygiène sont constatées par procès-verbaux établis par les officiers de police judiciaire, les personnels d'hygiène et les agents commissionnés du service d'hygiène assermentés.

**ARTICLE 42:** Les agents d'hygiène, revêtus de leur uniforme ou munis des signes distinctifs de leurs fonctions, peuvent s'introduire dans les maisons, cours et enclos, installations industrielles pour constater les infractions sur l'hygiène. Ces visites domiciliaires doivent se faire au plus tôt à six heures du matin et au plus tard à vingt et une heures.

Elles pourront se faire cependant à toute heure par les agents, avec l'assentiment exprès de la personne dont le domicile est visité.

**ARTICLE 43:** Les infractions en matière d'hygiène sont prouvées soit par procès-verbal, soit, à défaut ou en cas d'insuffisance des procès-verbaux, par témoins.

Les procès-verbaux dressés par les agents font foi jusqu'à inscription de faux des constatations matérielles qu'ils relatent. Ils ne font foi que jusqu'à preuve du contraire de l'exactitude et de la sincérité des aveux et déclarations qu'ils rapportent.

**ARTICLE 44:** Le prévenu qui désire s'inscrire en faux contre un procès-verbal est tenu de le faire au moins huit jours avant l'audience indiquée par la citation. Il fera en même temps le dépôt des moyens de faux et indiquera les témoins qu'il veut faire entendre.

Le prévenu contre lequel a été rendu un jugement par défaut est admis à faire sa déclaration d'inscription de faux pendant le délai qui lui est accordé pour se présenter à l'audience sur son opposition.

### **Section 3: Actions et poursuites**

**ARTICLE 45:** Les actions et poursuites sont exercées directement par le ministre chargé de la Santé ou son représentant, devant les juridictions compétentes sans préjudice du droit qui appartient au ministère public.

Le ministre chargé de la Santé ou son représentant exposera l'affaire devant le tribunal et sera entendu à l'appui de ses conclusions. Il siégera à la suite du Procureur de la République et de ses substituts. Les dispositions du droit commun sur l'instruction des flagrants délits devant les juridictions correctionnelles sont applicables dans les cas prévus à l'article 39 ci-dessus.

**ARTICLE 46:** Les jugements en matière d'hygiène sont notifiés au ministère chargé de la Santé ou à son représentant. Celui-ci peut, concurremment avec le ministère public, interjeter appel des jugements en premier ressort. Sur l'appel de l'une ou de l'autre des parties, le ministre chargé de la Santé ou son représentant peut être invité à exposer l'affaire devant la cour d'appel et à déposer ses conclusions.

**ARTICLE 47:** L'action publique en matière d'infraction à la réglementation d'hygiène se prescrit par trois ans en matière de délit et par un an en matière de contravention, lorsque les contrevenants sont désignés dans les procès-verbaux, et par deux ans dans le cas contraire. Ce délai court à partir du moment où l'infraction a été constatée par procès-verbal.

**ARTICLE 48:** Tous les personnels d'hygiène pourront faire pour toutes les affaires relatives à la police d'hygiène tout exploit et autre acte de justice que les huissiers ont coutume de faire. Ils pourront toutefois recourir au ministère d'huissiers.

**ARTICLE 49:** Sous réserve de modifications apportées par le présent chapitre, les dispositions réglant la procédure en matière répressive devant les tribunaux sont applicables à la poursuite des délits et contraventions d'hygiène. Les infractions en matière d'hygiène relèvent des juridictions territorialement compétentes.

### **Section 4: Transaction**

**ARTICLE 50:** Le ministre chargé de la Santé ou son représentant est autorisé à transiger au nom de l'Etat avant le jugement, pour les infractions visées aux articles 80, 82, 83, 84. L'action publique est éteinte par la transaction.

### **Section 5: Action administrative**

**ARTICLE 51:** Est sanctionné par les mesures administratives lorsque l'Etat est seul en cause le non-respect des articles 12, 13 et 14.

**ARTICLE 52:** Les dispositions des articles 464 et suivants du Code de procédure pénale ainsi que la loi n° 63-210 du 4 décembre 1963 relative aux amendes forfaires sont applicables aux infractions prévues aux

articles 87 à 90.

## CHAPITRE II INFRACTIONS ET PÉNALTÉS

### Section première INFRACTIONS

#### Sub-Section 1: Les infractions relatives à l'hygiène et la propreté des habitations

**ARTICLE 53:** Dans chaque immeuble, les ordures ménagères doivent être conservées dans les poubelles réglementaires ou dans des containers. Tout dépôt d'ordure à l'intérieur, comme à l'extérieur des habitations, non conforme à la réglementation en vigueur, est interdit.

**ARTICLE 54:** Sont interdits:

- a) Le mélange des matières fécales ou urinaires aux ordures ménagères.
- b) Tout branchement d'égout sur collecteur d'eau pluviale.
- c) La culture des plantes dites à larves dans les agglomérations urbaines.
- d) La conservation dans les habitations des objets ou récipients de toute nature, boîtes vides, canaris, épaves de voiture susceptibles de constituer des gîtes à larves de moustiques.
- e) L'élevage des moutons et volailles à l'intérieur des habitations.
- f) Toute installation d'urinoir et de latrine dans les habitations non conforme aux normes prescrites par la réglementation en vigueur.

**ARTICLE 55:** Les terrains, clos ou non, les cours des habitations doivent être tenus en bon état de propreté constante par balayage ou désherbage.

#### Sub-Section 2: Infractions relatives à l'hygiène des voies publiques

**ARTICLE 56:** Il est interdit:

- de déposer sur la voie publique,
- de jeter dans les mares, fleuves, rivières, lacs, étangs, mers ou sur les rives,
- d'enfouir, d'une façon générale à moins de 35 mètres

des habitations, des puits, des sources ou dans les périmètres de protection des sources ainsi que des ouvrages de captage et d'adduction d'eau, les cadavres d'animaux et les ordures ménagères.

**ARTICLE 57:** Il est formellement interdit de jeter ou de déposer des détritiques sur les trottoirs, chaussées, squares et jardins publics.

**ARTICLE 58:** Il est interdit de jeter les eaux usées, de déposer des urines et des excréments sur la voie publique.

**ARTICLE 59:** Il est interdit de laver les voitures sur les voies et dans les lieux publics ainsi que de laver le linge et les ustensiles ménagers aux bornes fontaines.

**ARTICLE 60:** Il est interdit de déposer sur la voie publique ainsi qu'à ciel ouvert les ferrailles et les épaves de toutes sortes.

**ARTICLE 61:** Il est interdit de verser ou de déposer des ordures ou des déchets de cuisine dans les canaux d'assainissement ou dans les bouches à eaux grasses.

**ARTICLE 62:** Dans les communes ou dans les communautés rurales où le balayage n'est pas assuré par un service de nettoie-ment, les propriétaires riverains des voies livrées à la circulation publique sont tenus de balayer, chacun au-devant de sa façade, sur une largeur égale à celle de la moitié de ladite voie.

Lorsque le balayage est assuré par les soins de la collectivité, les riverains ont la responsabilité de la propreté du terrain qui les concerne.

#### Sub-Section 3: Infractions relatives à l'hygiène des plages

**ARTICLE 63:** Il est interdit d'abandonner sur les plages tout objet susceptible d'altérer la propreté des lieux, notamment des boîtes de conserve, des poissons ou des détritiques.

**ARTICLE 64:** L'accès des plages est interdit aux chiens, aux chats et à tous autres animaux.

**ARTICLE 65:** La circulation des animaux, des voitures à chevaux, des automobiles, motocyclettes et bicyclettes est formellement interdite sur les plages.

#### Sub-Section 4: Infractions relatives à l'hygiène des installations industrielles

**ARTICLE 66:** Les locaux et alentours des établissements industriels et commerciaux ne doivent pas être insalubres. L'élimination des eaux résiduaires doit se faire selon la réglementation en vigueur et spécifique à chaque industrie.

**ARTICLE 67:** Les feux de combustion, les appareils incinérateurs et les usines d'incinération ne doivent dégager ni poussière ni fumée gênante pouvant polluer l'atmosphère.

**ARTICLE 68:** Les tuyaux des cheminées des boulangeries auront au moins, en section horizontale, une surface de 30 dm<sup>3</sup>. Ils s'élèveront de 2 mètres au moins au dessus du faite le plus élevé dans un rayon de 100 mètres.

Les cheminées d'usine devront s'élever à 10 mètres au moins au-dessus des toitures voisines et dans un rayon de 100 m. Elles doivent être munies, en cas de besoin, d'un dispositif fumivore.

**ARTICLE 69:** Il est interdit de mélanger aux ordures les déchets anatomiques ou contagieux, les produits pharmaceutiques et tous autres produits toxiques ainsi que les déchets et issues d'abattoirs.

**ARTICLE 70:** Les hôpitaux et les formations sanitaires publiques ou privées sont tenus de détruire par voie d'incinération les déchets anatomiques ou contagieux.

**ARTICLE 71:** Le personnel des usines et autres entreprises industrielles doit être soumis à des visites médicales périodiques.

**ARTICLE 72:** Le personnel travaillant dans les industries alimentaires doit observer, en plus des visites périodiques, une hygiène individuelle corporelle et vestimentaire permanente selon la nature de l'industrie et conformément à la réglementation en vigueur.

**ARTICLE 73:** L'utilisation éventuelle des ordures ménagères à des fins agricoles ou autres est formellement interdite.

#### **Sub-Section 5: Infractions relatives à l'hygiène de l'eau**

**ARTICLE 74:** Les ouvrages ainsi que les réservoirs de distribution d'eau potable doivent être protégés contre les contaminations extérieures.

**ARTICLE 75:** Tout concessionnaire de distribution d'eau potable est tenu, dans les conditions fixées par décret, de faire vérifier la qualité de l'eau qui fait l'objet de cette distribution.

**ARTICLE 76:** Est interdite, pour la préparation et la conservation de toutes denrées et marchandises destinées à l'alimentation humaine, l'utilisation d'eau non potable.

#### **Sub-Section 6: Infractions relatives à l'hygiène des denrées alimentaires**

**ARTICLE 77:** Les ateliers et laboratoires de préparation des aliments ainsi que les magasins de vente des denrées alimentaires ne doivent pas être insalubres. Ils doivent être aménagés et entretenus de manière à soustraire ces denrées à toute contamination, altération ou souillure.

**ARTICLE 78:** La manipulation des denrées alimentaires est interdite aux personnes susceptibles de les contaminer, notamment celles qui sont atteintes d'infections cutanées, muqueuses respiratoires ou intestinales.

**ARTICLE 79:** Il est interdit d'utiliser, dans la fabrication des boissons, glaces, crèmes glacées, pâtisseries, des matières aromatisantes et des colorants non admis pour la préparation des denrées alimentaires.

**ARTICLE 80:** Les bouteilles de conditionnement des boissons sodas et limonades, eaux gazeuses, doivent être dans un état de propreté excluant toute contamination.

**ARTICLE 81:** Il est interdit de vendre des fruits n'ayant pas atteint un degré de développement et de maturité convenable ou des fruits traités au carbure de calcium.

**ARTICLE 82:** La viande et les produits dérivés exposés à la vente doivent être protégés contre les poussières, les mouches et toutes autres pollutions.

#### **Sub-Section 7: Infractions relatives à l'hygiène des restaurants et des locaux similaires**

**ARTICLE 83:** Les locaux et les abords des restaurants et autres établissements similaires doivent être toujours tenus en bon état d'entretien et de salubrité.

**ARTICLE 84:** Dans les restaurants et locaux similaires:

- L'utilisation de l'eau non potable est interdite;
- Les mets servis doivent être protégés contre toute pollution;
- Le personnel employé doit servir dans les conditions de propreté et de salubrité requises par la réglementation.

#### **Sub-Section 8: Protection des agents d'hygiène dans l'exercice de leur fonction**

**ARTICLE 85:** Il est formellement interdit de s'opposer aux visites des agents verbalisateurs dans les maisons, conformément à la loi.

**ARTICLE 86:** Il est interdit de s'opposer à la désinfection, à la désinsectisation et à la dératisation domiciliaires.

**Section 2: Pénalités**

**ARTICLE 87:** Seront punies d'une amende de 300 à 600 UM, les infractions aux dispositions des articles 53, 54, 55, 57, 58, 59, 61 et 62.

**ARTICLE 88:** Seront punies d'une amende de 1 000 à 2 000 UM, les infractions aux dispositions des articles 56, 60, 63, 64, 65, 81 et 82.

**ARTICLE 89:** Seront punies d'une amende de 5 000 à 20 000 UM et d'un emprisonnement de 5 à 8 jours ou de l'une de ces deux peines seulement, les infractions aux articles 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78 et 93.

**ARTICLE 90:** Seront punies d'une amende de 20 000 UM à 100 000 UM et d'un emprisonnement de 2 à 5 ans ou de l'une de ces deux peines seulement, les infractions aux dispositions des articles 79, 80, 84, 85 et 86.

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**TITRE III**

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**DISPOSITIONS GENERALES**

**ARTICLE 92:** La présente ordonnance sera publiée suivant la procédure d'urgence et exécutée comme loi de l'Etat.

**Fait à Nouakchott, le 10 septembre 1984.**

**Pour le Comité militaire de salut national,**

**Le Président: Lieutenant-Colonel Mohamed Khounaould HADALLA**

**Ordonnance n° 85-071 du 8 avril 1985 autorisant la ratification de l'accord-cadre de pêche entre le gouvernement de la République Islamique de Mauritanie et le gouvernement de la République Tunisienne.**

Le Comité militaire de salut national a délibéré et adopté;

Le Président du Comité militaire de salut national, chef de l'Etat, promulgue l'ordonnance dont la teneur suit:

**ARTICLE PREMIER:** Le Président du Comité militaire de salut national, chef de l'Etat, est autorisé à ratifier l'accord-cadre de pêche signé à Tunis, le 28 avril

1984, entre le gouvernement de la République islamique de Mauritanie et le gouvernement de la République tunisienne.

**ARTICLE 2:** La présente ordonnance sera publiée suivant la procédure d'urgence et exécutée comme loi de l'Etat.

Colonel Maaouya ould SID' AHMED TAYA



# MOZAMBIQUE

## Lei n.º 16/91 de 3 de Agosto

( SUPLEMENTO 2. Sábado, 3 de Agosto de 1991).

A importância dos recursos hídricos em todos os sectores da vida tem originado um aumento cada vez maior de necessidades da sua utilização.

A água é utilizada para diversos fins consoante as necessidades e as quantidades que cada utente entender. Para que o uso da água pelos múltiplos interessados não prejudique as necessidades de alguns, torna-se indispensável criar mecanismos conducentes à sua distribuição ou fornecimento na medida das necessidades de cada um.

A presente Lei de Aguas estabelece os recursos hídricos que pertencem ao domínio público, os princípios de gestão de águas, a necessidade de inventariação de todos os recursos hídricos existentes no país, o regime geral da sua utilização, as prioridades a ter em conta, os direitos gerais dos utentes e as correspondentes obrigações, entre outros.

O direito de uso das águas do domínio público será reconhecido em regime de uso livre, em determinados casos, e por meio de autorizações de uso ou de concessões de aproveitamento, em casos especialmente regulados.

A Lei de águas surge como instrumento fundamental para a realização e satisfação de interesses do povo moçambicano.

Nestes termos, ao abrigo do disposto no n.º 1 do artigo 135 da Constituição da República, a Assembleia da República determina:

### CAPITULO I DISPOSIÇÕES PRELIMINARES

#### ARTIGO I: (Propriedade das águas)

1. As águas interiores, as superficiais e os respectivos leitos, as subterrâneas, quer brotem naturalmente ou não, são propriedade do Estado, constituindo domínio público hídrico.

2. Constituem ainda domínio público hídrico, as obras, equipamentos hidráulicos e suas dependências realizadas pelo Estado ou por sua conta com o objectivo de utilidade pública.

3. O domínio público hídrico é inalienável e imprescritível e o direito ao uso e aproveitamento será concedido de modo a garantir a sua preservação e gestão em benefício do interesse nacional.

#### ARTIGO 2: (Objectivo)

1. A presente lei tem como objectivo definir em relação às águas interiores:

- a) O domínio público hídrico do Estado e o política geral da sua gestão;
- b) O regime jurídico geral das actividades de protecção e conservação, inventário, uso e aproveitamento, controlo e fiscalização dos recursos hídricos;
- c) As competências atribuídas ao Governo em relação ao domínio público hídrico.

2. As águas minerais naturais, minero-medicinais e térmicas são reguladas por legislação específica.

3. A protecção, utilização e exploração dos recursos pesqueiros nas águas interiores serão reguladas por legislação própria, bem como a navegação e a flutuação.

4. A pesquisa e aproveitamento de recursos minerais nos leitos, margens e zonas inundáveis ficarão sujeitos à legislação própria.

#### ARTIGO 3: (Dos leitos)

1. O leito das águas interiores é limitado pela linha de margem. Linha de margem é a definida pelas águas quando alcançam o seu maior nível ordinário. No leito compreendem-se os mouchões, lodeiros e areais nele formados por deposição aluvial.

2. Competirá às administrações regionais de águas

determinar a linha de margem legal dos depósitos e cursos de água do país e proceder águas determinar a linha de margem legal dos depósitos e cursos de águas. Caber-lhes-á igualmente adoptar as medidas necessárias á protecção dos leitos e das linhas de margem.

3. O uso e aproveitamento dos leitos ficam sujeitos ao regime de licenciamento e concessão desta lei.

**ARTIGO 4: (Das margens)**

1. Margem é a faixa de terreno contígua ou sobranceira à linha que limita o leito das águas. Em toda a sua extensão longitudinal, as margens estão sujeitas ao regime de protecção parcial definido na Lei de Terras.

2. Competirá às administrações regionais de águas, sem prejuízo do disposto na Lei de Terras, zelar pela preservação, conservação e defesa das zonas de protecção parcial definidas no número anterior.

**ARTIGO 5: (Zonas Inundáveis)**

1. Zonas inundáveis são as que podem ser alagadas durante as cheias extraordinárias dos depósitos e dos cursos de água naturais, contínuos ou descontínuos, e como tal forem definidas no cadastro.

2. Os terrenos abrangidos pelas zonas inundáveis mantêm a qualificação jurídica e a titularidade que tiverem podendo, no entanto, ser declarados zonas de protecção parcial ou sujeitos a outras restrições para garantir a segurança das pessoas e bens.

**ARTIGO 6: (Águas subterrâneas)**

Entende-se por águas subterrâneas, para efeitos desta lei, as que, encontrando-se debaixo da superfície da terra, são ou podem ser afloradas por acção do homem. As medidas para a sua protecção, uso e aproveitamento poderão incluir as partes sólidas e líquidas dos aquíferos e as zonas de protecção que sejam necessárias.

**CAPITULO II**

**DA POLITICA GERAL DE GESTÃO DE ÁGUAS**

**SECÇÃO I**

**PRINCÍPIOS E ORIENTAÇÕES**

**ARTIGO 7: (Princípios de gestão de águas)**

1. A acção do Estado no sector de gestão das águas será realizada pelo Ministério da Construção e Águas com recurso ao Conselho Nacional de Águas e inspira-se nos princípios seguintes:

- a) Unidade e coerência de gestão das bacias hidrográficas do país, isto é, do conjunto de cursos de água que confluem para um mesmo curso de água principal e das áreas por eles drenadas bem como dos aquíferos subterrâneos;
- b) Coordenação institucional e participação das populações nas principais decisões relativas à política de gestão das águas;
- c) Compatibilização da política de gestão de água com a política geral de ordenamento do território e de conservação do equilíbrio ambiental.

2. As obras hidráulicas não poderão ser aprovadas sem prévia análise dos seus efeitos e impactos sociais, económicos e ambientais.

3. Os estudos sobre os efeitos referidos no número anterior constituirão encargo dos donos das obras de grande envergadura. Por regulamento definir-se-á o critério de classificação das obras para efeito de imputação do preço dos estudos.

**ARTIGO 8: (Orientações da política de gestão de águas)**

Ao Estado competirá implementar, progressivamente nas regiões definidas como de intervenção prioritária, uma política de gestão de águas orientada para a realização dos seguintes objectivos:

- a) Melhor uso das águas disponíveis para todos os fins através da sua utilização racional e planificada, com vista a satisfazer as necessidades das populações e de desenvolvimento da economia nacional;
- b) Abastecimento contínuo e suficiente das populações em água potável, para a satisfação das necessidades domésticas e de higiene;
- c) Promoção, enquadramento e regulamentação da utilização da água para fins agrícolas, industriais e hidroeléctricos;
- d) Melhor aproveitamento das águas do domínio público, nomeadamente, através da luta contra o desperdício, possibilidade de usar as águas para fins múltiplos através da sua reciclagem, controlo das perdas para o mar, realização de obras e de equipamentos de retenção e armazenamento de águas et de regularização dos caudais;
- e) Promoção, segundo as necessidades e as prioridades da acção governamental, de acções de investigação, de pesquisa e da captação destinada a aumentar o volume global dos recursos hídricos disponíveis;

- f) Melhoria do saneamento, luta contra a poluição e contra a deterioração das águas pela intrusão de salinidade;
- g) Prevenção e combate contra os efeitos nocivos das águas, nomeadamente, nos sectores da luta contra a erosão dos solos e o controlo das cheias;
- (h) Procura de equilíbrios para o conjunto dos utentes nos casos de utilizações múltiplas e conflituosas das águas do domínio público;
- i) Salvaguarda dos interesses da promoção da navegação fluvial;
- j) Melhoria da gestão das infraestruturas hidráulicas;
- k) Promoção das companhias de formação, educação e divulgação, tanto junto das populações, como dos agentes da administração, em relação aos principais problemas de gestão das águas;
- l) Elaboração progressiva de legislação destinada a regulamentar a utilização, o aproveitamento e a protecção dos recursos hídricos;
- m) Assegurar o equilíbrio geral entre o conjunto dos recursos hídricos disponíveis e o consumo global.

**ARTIGO 9: (Inventário dos recursos e necessidades de água)**

1. Caberá ao Ministério da Construção e Águas proceder ao inventário geral dos recursos hídricos nos seus aspectos de quantidade e qualidade e à sua actualização periódica, de forma a apoiar o planeamento e a gestão integrada dos recursos hídricos e a realização de obras hidráulicas.
2. O inventário geral compreenderá o inventário de recursos hídricos, quer os disponíveis quer os potenciais, tanto superficiais como subterrâneos, bem como das necessidades presentes e futuras e os balanços de recursos e necessidades de água.
3. O Governo definirá, segundo as necessidades, as modalidades de realização dos inventários assim como as funções a desempenhar pelos órgãos locais do aparelho de Estado.

**ARTIGO 10: (Cadastro de águas)**

1. É criado o Cadastro Nacional de Águas abrangendo todo o território nacional e a ser implementado progressiva e prioritariamente para as principais bacias hidrográficas.

2. Caberá especialmente ao Cadastro Nacional de Águas:

- a) O registo das concessões e licenças de uso e aproveitamento da água, suas características e posteriores modificações, bem como as autorizações de descarga de efluentes, inclusive as concedidas ao abrigo de legislação anterior, quando reconhecidas nos termos dos artigos 69 e 70 da presente lei;
- b) O registo dos usos comuns tradicionalmente reconhecidos ao abrigo do disposto no artigo 71 da presente lei.

3. A organização e funcionamento do Cadastro Nacional de Águas serão regulados por diploma ministerial.

**ARTIGO 11: (Obrigatoriedade do registo)**

1. As concessões, as licenças de uso e aproveitamento de água e as autorizações de descarga de efluentes estão sujeitos a registo.
2. O registo é obrigatório, competindo ao beneficiário requerê-lo no prazo de três meses a contar da data em que o direito ao uso e aproveitamento tiver sido outorgado ou reconhecido.
3. Os direitos ao uso e aproveitamento de água sujeito a registo obrigatório só produzem efeitos em relação a terceiros depois de efectuado o registo.

**ARTIGO 12: (Factos constantes do registo)**

A inscrição no registo deverá conter, sem prejuízo do que vier a ser estabelecido em regulamento próprio, as seguintes indicações;

- a) Nome, domicílio e número de bilhete de identidade do beneficiário ou beneficiários;
- b) Tipo e localização do uso e aproveitamento, volumes de água a utilizar, métodos, equipamentos e obras realizadas para o aproveitamento;
- c) Servidões constituídas;
- d) Obrigações dos beneficiários;
- e) Tratamento definido para os efluentes.

**ARTIGO 13: (Esquema Geral de Aproveitamento dos Recursos Hídricos)**

1. O Esquema Geral de Aproveitamento dos Recursos Hídricos visa, nomeadamente:

- a) Melhorar a satisfação das necessidades de água mediante o correcto aproveitamento das disponibilidades e da racionalização do seu uso;
- b) Equilibrar e harmonizar o desenvolvimento nacional, regional e sectorial;
- c) A defesa do meio ambiente, garantindo que os usos e aproveitamento de água se realizem sem prejuízo do caudal mínimo e do caudal ecológico e respeitando, na medida do possível, o regime natural dos depósitos e cursos de água;
- d) A protecção da qualidade da água.

2. Competirá ao Conselho de Ministros aprovar o Esquema Geral de Aproveitamento dos Recursos Hídricos e seus ajustamentos periódicos, a efectuar de acordo com as necessidades.

## SECÇÃO II COORDENAÇÃO INSTITUCIONAL

### ARTIGO 14: Cooperação internacional)

1. A participação da República de Moçambique em organizações internacionais do domínio da água visará os seguintes objectivos:

- a) Adopção de medidas coordenadas de gestão dos cursos de água de uma mesma bacia hidrográfica, tendo em conta os interesses de todos os Estados interessados;
- b) Repartição das águas de interesse comum e seu aproveitamento conjunto;
- c) Preparação ou realização conjunta de programas de investigação, projectos e construção de infraestruturas;
- d) Controlo da qualidade da água, da poluição e da erosão dos solos;
- e) Troca de informações sobre questões de interesse comum.

2. Competirá ao Ministro da Construção e Águas promover as necessárias acções de cooperação internacional com os Estados limítrofes ou da região, com vista a garantir a melhor gestão das bacias hidrográficas de interesse comum e a salvaguardar os interesses nacionais, bem como assegurar a participação da República de Moçambique nos trabalhos dos organismos de cooperação que vierem a ser criados.

3. Caberá ao Conselho de Ministros adoptar as medidas necessárias para assegurar a execução das recomendações e decisões tomadas nessas organizações.

### ARTIGO 15: (iniciativas descentralizadoras)

1. O Ministério da Construção e Águas encorajará as iniciativas dos seus órgãos, das populações, das empresas públicas e privadas no domínio de gestão de águas que sejam compatíveis com as orientações da política geral do Estado.

2. Será também encorajada a realização, por parte dessas entidades e nos termos a definir em diploma regulamentar, de actividades e operações de pesquisa, captação, equipamento e aprovisionamento de águas. Caberá ainda ao Ministério da Construção e Águas assegurar a fiscalização técnica dos projectos e da sua execução.

### ARTIGO 16: (Cooperação intersectorial)

Na implementação das orientações gerais da política de gestão de águas e sem prejuízo das suas competências próprias, o Ministério da Construção e Águas promoverá a necessária articulação com os outros Ministérios interessados na gestão das águas, nomeadamente da Agricultura, Negócios Estrangeiros, Cooperação, Indústria e Energia, Recursos Minerais, Administração Estatal e da Saúde. Comissão Nacional do Plano e com os conselhos executivos.

### ARTIGO 17: (Conselho Nacional de Águas)

1. É criado o Conselho Nacional de Águas, órgão consultivo do Conselho de Ministros e de coordenação inter-ministerial encarregado de se pronunciar sobre aspectos relevantes da política geral de gestão de águas e zelar pelo seu cumprimento.

2. Ao Conselho Nacional de Águas, para além das funções consultivas, compete nomeadamente:

- a) Propor os objectivos da política hídrica do Governo no domínio social, económico e ambiental;
- b) Identificar as limitações institucionais, de recursos humanos, financeiros e económicos que afectem a prossecução dos objectivos da política hídrica e propor as soluções adequadas;
- c) Manter o Conselho de Ministros informado sobre os aspectos críticos e recorrentes que afectem o desenvolvimento e conservação dos recursos hídricos, propondo as medidas mais apropriadas;

- d) Propor programas, projectos e medidas necessárias ao desenvolvimento e conservação dos recursos hídricos;
- e) Detectar os factores macroeconómicos e macroinstitucionais que afectem o desenvolvimento e conservação dos recursos hídricos do país e propor as soluções adequadas;
- f) Emitir parecer sobre projectos e programas hídricos antes que sejam submetidos a financiamento internacional ou destinadas verbas do orçamento do Estado;
- g) Solicitar, aos organismos públicos e privados, as informações ou esclarecimentos necessários ao desempenho das suas atribuições;
- h) Recomendar a adopção de medidas específicas ou o desenvolvimento de acções necessárias por parte dos órgãos centrais e locais do Estado e demais organismos com competência territorial ou funcional na área dos recursos hídricos.

3. O Conselho Nacional de Águas poderá propor aos ministérios e a outros organismos públicos, linhas de estudo e investigação para o desenvolvimento de inovações técnicas no que respeita à obtenção, emprego, conservação, recuperação, tratamento integral e economia de água.

4. A sua composição, estrutura orgânica e funcionamento serão regulados por decreto do Conselho de Ministros.

#### **ARTIGO 18: (Administrações regionais de águas)**

1. A gestão dos recursos hídricos será realizada por administrações regionais de águas organizadas na base de bacias hidrográficas e fundamentalmente vocacionadas para a administração dos recursos hídricos da região.

2. As administrações regionais de águas são instituições públicas dotadas de personalidade jurídica e autonomia administrativa, patrimonial e financeira, tuteladas pelo Ministério da Construção e Águas, através da Direcção Nacional de Águas. O seu âmbito territorial poderá compreender uma ou várias bacias hidrográficas.

3. Compete-lhes nomeadamente:

- (a) Participar na preparação, implementação e revisão do plano de ocupação hidrológica da bacia;
- (b) A administração e controlo do domínio público

hídrico e a criação e manutenção do cadastro de águas e do registo dos aproveitamentos privativos, bem como o lançamento e cobrança de taxas de uso e aproveitamento da água;

- (c) O licenciamento e a concessão de uso e aproveitamento das águas do domínio público, a autorização de despejos, a imposição de servidões administrativas, bem como a inspecção e fiscalização do cumprimento dos requisitos a que os mesmos estão sujeitos;
  - (d) A aprovação das obras hidráulicas a realizar e a sua fiscalização;
  - (e) Declarar a caducidade de autorizações, licenças e concessões sua extinção ou revogação;
  - (f) A projecção, a construção e a exploração das obras realizadas com os seus próprios meios, bem como o das que lhe forem atribuídas;
  - (g) A prestação de serviços técnicos relacionados com as suas atribuições e o assessoramento aos órgãos locais do Estado, às entidades públicas e privadas e aos particulares;
  - (h) Colher e manter actualizados os dados hidrológicos necessários à gestão das bacias hidrográficas;
  - (i) Conciliar conflitos decorrentes do uso e aproveitamento da água;
  - (j) Proceder ao policiamento das águas, aplicar sanções, ordenar a demolição de obras, a eliminação de usos e aproveitamentos não autorizados e o encerramento de fontes de contaminação.
4. Os estatutos das administrações regionais de águas serão aprovados por diploma ministerial.

#### **ARTIGO 19: (Órgãos das administrações regionais de águas)**

1. As administrações regionais de águas, para além dos órgãos que vierem a ser estatutariamente definidos, comportam um conselho de gestão integrado por representantes dos Ministérios da Construção e Águas, Agricultura Indústria e Energia, Recursos Minerais, dos órgãos locais do Estado e das organizações de utentes.

2. Ao conselho de gestão, sem prejuízo do que vier ser estabelecido, competirá nomeadamente apreciar o programa de actividades, de obras e o orçamento.

**ARTIGO 20: (Associações de utentes)**

1. Os utentes dos recursos hídricos poderão voluntariamente constituir-se em associações, designadamente em associações de regantes.

2. Às administrações regionais de águas caberá promover a constituição de associações de utentes, podendo o uso e aproveitamento de certos recursos ser condicionado à sua criação.

**CAPITULO III  
UTILIZAÇÃO DAS ÁGUAS**

**SECÇÃO I  
REGIME GERAL**

**ARTIGO 21: (Usos comuns e privativos)**

1. As águas do domínio público, quanto ao uso e aproveitamento, classificam-se em águas de uso comum e águas de uso privativo. O uso e aproveitamento privativo das águas pode resultar da lei, de licença ou de concessão.

2. São usos comuns os que visam, sem o emprego de sifão ou de meios mecanizados, satisfazer necessidades domésticas, pessoais e familiares do utente, incluindo o abastecimento de gado e a rega em pequena escala.

3. São usos e aproveitamentos privativos resultantes da lei os que podem ser directamente realizados pelos titulares do direito ao uso e aproveitamento da terra, salvo disposição em contrário.

4. Aos usos e aproveitamentos privativos resultantes de licença ou concessão terão acesso quaisquer pessoas, singulares ou colectivas, públicas ou privadas, nacionais ou estrangeiras devidamente autorizadas a actuar em território nacional, nos termos desta lei e desde que não ponham em cause o equilíbrio ecológico e o meio ambiente.

**ARTIGO 22: (Liberdade de uso)**

1. Os usos comuns das águas são gratuitos e livres, isto é, realizam-se sem necessidade de prévio licenciamento ou concessão. Por regulamento poderão ser especificadas as condições a que, em geral ou localmente, o uso comum deverá obedecer, nomeadamente, em caso de penúria excepcional.

2. Os usos comuns realizam-se de acordo com o regime tradicional de aproveitamento e sem alterar a qualidade

da água e significativamente o seu caudal. Não poderão ser desviadas dos seus leitos nem alteradas as margens.

**SECÇÃO II  
USOS RESULTANTES DE LEI**

**ARTIGO 23: (Usos estabelecidos por lei)**

1. Os titulares do direito ao uso e aproveitamento da terra, para satisfação das suas necessidades domésticas e das necessidades normais e previsíveis da agricultura, podem usar, independentemente de licenciamento e sem afectar os usos comuns preexistentes quando tradicionalmente estabelecidos e os direitos de terceiros:

- a) As águas dos depósitos, isto é, dos lagos, lagoas e pântanos existentes no respectivo talhão;
- b) As águas das nascentes que não transpuserem, correndo livremente, os limites do respectivo talhão ou não se lançarem numa corrente;
- c) As águas subterrâneas não incluídas em zonas de protecção, desde que não perturbem o seu regime, mas deteriorem a sua qualidade;
- d) As águas pluviais.

2. Os utentes dos talhões que circundam lagos, lagoas e pântanos podem usar as respectivas águas nas condições estabelecidas no número anterior, salvo se pelo seu volume e importância requererem licença ou concessão de acordo com o estabelecido no cadastro. Exigência idêntica poder-se-á impor ao uso previsto no número 1.

3. A acumulação artificial de águas das chuvas, por parte dos utentes da terra, e para além dos limites a definir em regulamento, ficará condicionada ao regime de aproveitamento privativo.

**ARTIGO 24: (Requisição)**

1. Em casos de força maior, designadamente secas, cheias ou outras calamidades naturais e enquanto as mesmas perdurarem, poderão as autoridades administrativas impor que se faça, em benefício da população, o uso comum das águas referidas no artigo anterior.

2. Caberá às autoridades administrativas definir as vias de acesso, calendário de utilização e demais condições.

3. O utente do talhão terá direito de ser indemnizado pelos prejuízos causados.

**SECÇÃO III**  
**APROVEITAMENTOS RESULTANTES DE**  
**LICENÇA OU CONCESSÃO**

**ARTIGO 25: (Aproveitamento privativo)**

As águas do domínio público, salvo o disposto no artigo 23, podem ser objecto de aproveitamento privativo - mediante licenciamento ou concessão nos termos desta lei e seus regulamentos.

**ARTIGO 26****(Prioridade dos aproveitamentos privativos)**

1. O abastecimento de água à população, para consumo humano e para satisfação das necessidades sanitárias, tem prioridade sobre os demais usos privativos.

2. Não são autorizados usos privativos de água em prejuízo das quantidades necessárias à protecção do ambiente.

3. Os conflitos decorrentes da falta de água para satisfação de objectivos distintos serão resolvidos em função da rentabilidade sócio -económica dos respectivos aproveitamentos.

**ARTIGO 27: (Dos pedidos de licenciamento e concessão)**

1. Os pedidos de licenciamento ou de concessão somente poderão ser indeferidos quando se verificar alguma das circunstâncias seguintes:

- a) Não haver água disponível ou as necessidades a satisfazer não se justificarem;
- b) A satisfação das necessidades comprometer a protecção quantitativa ou qualitativa da água, salvo se a utilidade do aproveitamento, a dimensão do seu impacto, a impossibilidade ou a inviabilidade económica de aproveitamentos alternativos impuserem o contrário;
- c) Fôrem incompatíveis com os aproveitamentos constantes de planos aprovados ou se trate de aproveitamentos que devam ser realizados por entidades públicas;
- d) Dos aproveitamentos pedidos resultarem prejuízos para terceiros cujos direitos devam ser respeitados.

2. Do deferimento do pedido cabe recurso, por parte de terceiros, com fundamento no disposto na alínea d) do número anterior

**ARTIGO 28: (Direitos dos utentes)**

1. O direito ao aproveitamento privativo confere ao seu titular a possibilidade de, no prazo estipulado, fazer a utilização que lhe for determinada, podendo, para tanto, realizar as obras adequadas e, nos termos que vierem a ser estabelecidos, ocupar temporariamente terrenos vizinhos e constituir as servidões necessárias.

2. Esse direito é atribuído com ressalva dos usos comuns preexistentes e dos direitos de terceiros.

3. A possibilidade de utilização poderá ser revista, verificando-se insuficiência de equipamento de captação e adução, diminuição imprevisível do caudal ou volume de água diminuição ou erro de cálculo na avaliação do caudal.

4. A modificação das características do licenciamento ou concessão só poderá ser feita mediante prévia e expressa autorização da entidade outorgante.

**ARTIGO 29: (Transmissão do direito ao uso e aproveitamento)**

1. As águas concedidas para fins agrícolas ou industriais transmitem-se juntamente com o direito ao uso e aproveitamento da terra onde essas explorações se acham implantadas e nas mesmas condições.

2. Sem prejuízo do disposto no número anterior, o direito ao uso e aproveitamento privativo das águas transmite-se, entre vivos, mediante autorização expressa do Ministro da Construção e Águas e, por morte do titular, a favor cônjuge e herdeiros nos termos da lei civil.

3. A transmissão do direito ao uso e aproveitamento de água não envolve alongamento do prazo da licença ou concessão.

**ARTIGO 30: (Obrigações gerais dos utentes)**

São obrigações gerais dos utentes:

- a) Respeitar as condições estabelecidas no acto constitutivo do direito;
- b) Utilizar a água da maneira racional e económica, dando-lhe unicamente o destino definido;
- c) Proceder ao pagamento pontual das tarifas e dos encargos financeiros estipulados;
- d) Participar nas tarefas de interesse comum, nomeadamente, as destinadas a evitar a deterioração da quantidade e qualidade de água e do solo;

- e) Fornecer as informações solicitadas, cumprir as orientações transmitidas pelas entidades competentes e sujeitar-se às inspecções necessárias;
- f) Garantir a minimização do impacto ambiental e, em especial, zelar pela qualidade da água;
- g) Respeitar os direitos dos outros utentes legítimos das águas.

**ARTIGO 31: (Abuso do direito)**

É abusivo e consequentemente ilegítimo, o exercício do direito ao uso e aproveitamento da água que exceder manifestamente os limites impostos pelo fim social ou económico desse direito, pela boa fé e pelos bons costumes, nomeadamente, devido a desperdício ou mau uso da água, qualquer que seja o título de que se arrogue.

**SUBSECÇÃO I  
LICENCIAMENTO**

**ARTIGO 32: (Licenças)**

1. O aproveitamento privativo da água dependerá do licenciamento, quando praticado através de obras de carácter não permanente que não alterem as margens ou leitões das correntes, lagos, lagoas ou pântanos.
2. Depende ainda do licenciamento:
  - a) A prospecção, captação e o aproveitamento de águas subterrâneas incluídas nas zonas de protecção;
  - b) A instalação de depósitos, a implantação de culturas ou plantações e o abate de árvores nos leitões e margens das correntes naturais contínuas ou descontínuas e dos lagos, lagoas e pântanos;
  - c) A extracção de materiais inertes, designadamente areia e cascalho, dos leitões e margens das correntes naturais contínuas ou descontínuas e de lagos, lagoas e pântanos.

**ARTIGO 33: (Natureza do direito reconhecido pelo licenciamento)**

1. O direito ao aproveitamento privativo da água mediante licenciamento é atribuído por período de cinco anos susceptível de renovação.
2. As licenças são precárias e revogáveis, não podendo servir de fundamento para oposição aos pedidos de concessão. Os respectivos titulares não terão direito a que quer indemnização pelos prejuízos que dessas concessões possam advir-lhes.

**ARTIGO 34: (Revogação do licenciamento)**

1. As licenças extinguem-se no termo do prazo ou da suas renovações e são revogáveis, designadamente com os fundamentos seguintes:

- a) Não cumprimento das obrigações essenciais das no licenciamento, abuso do exercício do direito ou violação repetida dos direitos de terceiros;
- b) Interesse público em destinar a água a outros aproveitamentos privativos;
- c) Força maior, nomeadamente secas, cheias ou outras calamidades naturais de efeitos durados

2. Os fundamentos previstos nas alíneas b) e c) do número anterior só determinam a revogação da licença quando as necessidades não puderem ser satisfeitas a simples requisição de parte dos caudais concedida.

3. A requisição de parte dos caudais, bem como a revogação da licença implicam para o Estado o dever indemnizar, quando determinadas por força do disposto na alínea b) n.º 1.

**SUBSECÇÃO II  
CONCESSÕES**

**ARTIGO 35: (Concessão)**

O aproveitamento privativo da água fica sujeito ao regime de concessão em todos os casos não previstos no artigo 32.

**ARTIGO 36: (Natureza do direito reconhecido pelas concessões)**

1. As concessões são outorgadas temporariamente por um período até cinquenta anos passível de renovação. O prazo poderá ser prorrogado quando houver necessidade de realizar obras cujo custo não possa ser amortizado, dentro do período que falta decorrer.
2. A outorga da concessão implica a autorização de utilizar, de acordo com os projectos aprovados, os terrenos necessários à execução das obras e conveniente exploração da concessão, mediante o pagamento das taxas e indemnizações que forem devidas.
3. Os direitos emergentes da concessão e do conjunto das coisas sobre as quais esses direitos se exercem não podem ser onerados sem autorização da entidade que a tiver concedido.
4. Extinta a concessão, reverterem para o Estado todas as instalações e valores que a integram, excepto verificando-se o esgotamento do recurso.



**ARTIGO 37: (Pedido de concessão)**

O pedido de concessão é acompanhado da memória justificativa com as razões económicas e técnicas do empreendimento

**ARTIGO 38: Revisão da concessão)**

1. A concessão poderá ser revista:
  - a) Quando se tiverem modificado os pressupostos determinantes da sua atribuição;
  - b) Em caso de força maior e a pedido do concessionário;
  - c) Quando houver necessidade de adequar aos planos de ordenamento de águas.
2. Fazendo-se a revisão ao abrigo do disposto na alínea c) do número anterior, o concessionário tem direito a ser indemnizado de acordo com o regime das expropriações por utilidade pública.
3. As despesas, incluindo as provenientes da substituição da totalidade ou de parte dos caudais atribuídos por outros de origem diversa, poderão ser repercutidas sobre os novos beneficiários.

**ARTIGO 39: (Extinção)**

A concessão extingue-se:

- a) no termo do prazo de vigência ou das suas renovações;
- b) por acordo entre as partes ou por rescisão do seu titular;
- c) desaparecendo a necessidade de aproveitamento de água ou o esgotamento do recurso, isto é, a irreversível queda acentuada do caudal ou a degradação das suas características;
- d) Pela revogação e pelo resgate.

**ARTIGO 40: (Causas de revogação)**

1. À entidade que tiver outorgado a concessão caberá revogá-la quando se verificar alguma das seguintes circunstâncias:
  - a) Não cumprimento das obrigações essenciais ou dos prazos previstos na concessão;
  - b) Abuso do exercício do direito ao uso e aproveitamento de água ou repetida violação dos direitos de terceiros;

- c) Interrupção permanente da exploração da concessão durante três anos consecutivos por motivos imputáveis ao seu titular;
- d) Impedimento ao exercício da fiscalização por parte do Estado;
- e) Inquinação das águas restituídas para além dos valores fixados.

2. O despacho revogatório é susceptível de impugnação e o recurso tem efeito suspensivo, salvo quando desse efeito puderem resultar graves prejuízos.

**ARTIGO 41: (Resgate)**

1. A entidade que tiver outorgado a concessão poderá proceder a seu resgate quando houver necessidade de disponibilizar as águas concedidas, nomeadamente em benefício de aproveitamento mais rentável nos termos do artigo 26.
2. O resgate será feito mediante indemnização e depois de haver decorrido sobre o início de concessão certo prazo, a fixar caso a caso, e compreendido entre um terço e metade da sua duração.
3. O resgate será notificado ao concessionário com a antecedência de um ano o, após a notificação, não poderá aquele alterar, sem prévia autorização, os contratos compreendidos nos objectivos da concessão e anteriormente celebrados.

### SUBSECÇÃO III ENCARGOS FINANCEIROS

**ARTIGO 42: (Taxas)**

1. Os beneficiários de direitos de água, os utentes de facto e os utentes de serviços públicos de águas ficarão sujeitos ao pagamento de taxas que poderão ter como objecto, para além do disposto na alínea a) do artigo 44, o fomento de práticas adequadas à correcta utilização e conservação da água e à prevenção da contaminação ou à redução do seu nível.
2. Os créditos por dívidas de taxas gozam do privilégio imobiliário sobre os prédios, edifícios ou instalações onde se usem as águas e serão cobrados coercivamente pelo processo das execuções fiscais.
3. As taxas serão fixadas por decreto mediante proposta do Conselho Nacional de Águas e constituirão receitas próprias das administrações regionais de águas.

**ARTIGO 43: (Montante das taxas)**

1. O montante das taxas será estabelecido de acordo com o volume medido ou estimado de água requerida em função do tipo e dimensão da actividade exercida e da quantidade prevista de uso consumptivo, da natureza do utente e do tipo e volume do contaminante vertido.
2. Como incentivo a determinadas actividades, poderão ser estabelecidas taxas preferenciais ou isenções.

**ARTIGO 44: (Taxa de utilização de infraestructuras)**

1. Os beneficiários de infraestructuras hidráulicas ou de saneamento básico construídas por entidades públicas estão sujeitos ao pagamento de uma taxa que será fixada por diploma ministerial sob proposta do Conselho Nacional de Águas, tendo em atenção, entre outros factores que repute pertinentes, os seguintes:
  - a) Os encargos suportados com a construção, exploração e conservação das obras;
  - b) O número total de beneficiários;
  - c) Capacidade contributiva média dos mesmos.
2. O montante da taxa será reduzido quando as obras e instalações estiverem totalmente amortizadas.
3. Salvo disposição em contrário, as taxas de utilização de infraestructuras constituirão receitas próprias das administrações regionais de águas, sendo aplicável o disposto no n.º 2 do artigo 42.

**SECÇÃO IV  
REGIMES ESPECIAIS**

**ARTIGO 45: (Abastecimento de água potável)**

1. Para os efeitos desta Lei, por água potável entende-se a destinada à alimentação, à preparação de alimentos e dos productos destinados à alimentação, à higiene pessoal, ao uso doméstico e ao fabrico de bebidas gasosas, águas minerais e gelo.
2. Não poderão ser concedidos, nem mantidos aproveitamentos privativos da água em detrimento do direito à água potável por parte da população.
3. Os titulares de direitos e aproveitamentos privativos terão de permitir que a população vizinha se abasteça de água potável, mediante a constituição das respectivas servidões administrativas, quando, sem grandes dificuldades, não poder obtê-la de outro modo.

4. O abastecimento em água potável fica sujeito à observância das normas estabelecidas nos artigos 56 e 57 para assegurar a qualidade da água.

**ARTIGO 46: (Irrigação)**

1. Os utentes de água para rega deverão proceder ao aproveitamento intensivo e à valorização máxima dos recursos hídricos.
2. Aos beneficiários do sistema de regadio compete adoptar as medidas adequadas economicamente justificáveis para reduzir as perdas de água, nomeadamente por infiltração, evaporação e por fugas. Cabe-lhes ainda providenciar para que se pratique o regime mais aconselhável de humidade de solos.
3. Caberá às entidades que superintendem nos sistemas de regadio propor a regulamentação que, obedecendo aos princípios consagrados nesta lei e seus regulamentos, atenda às especificidades de cada sistema.

**ARTIGO 47: (Pesca e piscicultura)**

1. A necessidade de manutenção e reprodução de espécies piscícolas ou de outras riquezas aquáticas de aproveitamento industrial poderá impor, em benefício da economia pesqueira, restrições ao aproveitamento privativo da água.
2. A transferência de água do domínio público para fins piscícolas fica sujeita ao regime das concessões.

**ARTIGO 48: (Indústria e energia)**

1. As águas do domínio público, mediante concessão e para além da produção de energia, poderão ser aproveitadas para tratamento de minérios, desmonte de cascalbotratamento de fibras vegetais e quaisquer outros fins industriais.
2. do diploma de concessão constará a localização das obras hidráulicas, das centrais ou das fábricas e oficina a construir, o volume de água concedido e a indústria indústrias a explorar.
3. Quando a própria exploração industrial ou de energia estiver sujeita ao regime de concessão, dever-se harmonizar as durações, prazos e demais requisitos duas concessões.
4. Caberá aos utentes respeitar o prescrito nesta Lei e respectivos regulamentos sobre a utilização racional protecção das águas.

**ARTIGO 49: (Obrigações do concessionário de produção de energia)**

Os concessionários de aproveitamentos hidroelétricos ficarão, especialmente, obrigados a:

- a) Deixar correr permanentemente para jusante os barragens os caudais que, de acordo com o plano de operação aprovado, forem julgados necessários para salvaguardar o interesse público ou os legítimos interesses de terceiros
- b) Ceder, sem direito a qualquer indemnização a água necessária para a rega das zonas abrangidas por planos de obras de desenvolvimento hidroagrícola e para abastecimento dos centros urbanos;
- c) Tomar as providências de protecção à piscicultura que forem determinadas superiormente;
- d) Organizar diagramas de exploração da central hidroeléctrica e de utilização de água represa na albufeira e fazer as observações hidro meteorológicas que forem determinadas pela Direcção Nacional de Águas, a qual poderá montar e manter em funcionamento, à custa do concessionário, os aparelhos e demais instalações que julgar convenientes para esse fim.

**ARTIGO 50****(Navegação e transporte)**

1. A navegação e o transporte nos cursos de águas lagos do domínio público, bem como a construção de embarcadouros, rampas e demais instalações complementares da navegação são regidos por legislação própria.

2. O serviço regular de transporte nessas águas só poderá ser autorizado depois de colhido parecer da respectiva administração regional de águas.

**CAPITULO IV  
PROTECÇÃO QUALITATIVA DAS ÁGUAS**

**SECÇÃO I  
PREVENÇÃO E CONTROLO DA  
CONTAMINAÇÃO DAS ÁGUAS**

**ARTIGO 51: (Contaminação)**

Contaminação da água, para os efeitos desta Lei consiste na acção e no efeito de introduzir matérias, formadas energia ou na criação de condições que, directa ou indirectamente, impliquem uma alteração prejudicial ao

su qualidade em relação aos usos posteriores ou à sua... ecológica.

**ARTIGO 52: (Objectivos de protecção)**

A protecção do domínio público hídrico contra a contaminação visa essencialmente:

- a) Conseguir e manter um adequado nível de qualidade da água;
- b) Impedir a acumulação, no subsolo, de compostos tóxicos ou perigosos susceptíveis de contaminar as águas subterrâneas;
- c) Evitar qualquer outra acção que possa ser causa da sua degradação.

**ARTIGO 53: (Actividades interditas)**

Sem prejuízo do disposto no artigo 54 é, em geral, interdito:

- a) Efectuar directa ou indirectamente despejos que contaminem as águas;
- b) Acumular resíduos sólidos, despojos ou quaisquer substâncias que contaminem ou criem perigo de contaminação das águas;
- c) Actuar sobre o meio físico ou biológico afecto à água de modo a degradá-lo criando perigo da sua degradação;
- d) Exercer, nas zonas de protecção estabelecidas nos planos de ordenamento de águas, quaisquer actividades que envolvam ou possam envolver perigo de contaminação ou degradação do domínio público hídrico.

**ARTIGO 54: (Prevenção e controlo)**

1. Toda a actividade susceptível de provocar a contaminação ou degradação do domínio público hídrico e em particular o despejo de águas residuais, dejectos ou outras substâncias nas águas do domínio público fica dependente de autorização especial a conceder pelas administrações regionais de águas e do pagamento de uma taxa.

2. Por regulamento serão estabelecidos padrões da qualidade de efluentes, dos corpos hídricos receptores, sistemas tecnológicos e métodos para tratamentos conjuntos e individuais de águas, podendo ser suspensas as actividades contaminadoras ou encerrados estabelecimentos enquanto não forem implementadas essas medidas.

3. Serão fixados, também por regulamento, os limites

qualitativos e quantitativos a partir dos quais as operações de despejo ficam dependentes de autorização do Ministro da Construção e Águas, a conceder depois de ouvidas as entidades interessadas.

4. As concessões e licenças de despejo estão sujeitas a modificações e restrições em função das necessidades públicas, ambientais e ecológicas. No respeitante à contaminação não são reconhecidos direitos adquiridos e, quando necessário, serão fixados prazos para a progressiva adequação das características dos despejos.

#### ARTIGO 55: (Responsabilidade do poluidor)

Quem para além dos limites consentidos provocar a contaminação ou degradação do domínio hídrico, independentemente da sanção aplicável, constitui-se na obrigação de, à sua custa, reconstituir a situação que existiria se não se tivesse verificado o evento que obriga à reparação.

### SECCÃO II

#### Água potável

#### ARTIGO 56

##### (Controlo de qualidade)

1. Às pessoas singulares ou colectivas encarregadas de fornecer água para consumo caberá assegurar que as instalações utilizadas e a água fornecida respeitem os requisitos a definir por diploma ministerial.

2. Caberá ao Ministro da Saúde proceder á fiscalização e controlo da qualidade de água potável e definir, nomeadamente:

- a) As modalidades de realização dos controlos das obras e instalações de captação, tratamento, armazenamento, transporte e distribuição de águas;
- b) Os parâmetros bacteriológicos, físicos e químicos da água potável e as modalidades de realização dos controlos ou análises, assim como os métodos e produtos empregues no tratamento e correcção das águas;
- c) As medidas de protecção especiais que deverão ser adoptadas em situações excepcionais;
- d) O controlo sanitário a que ficarão sujeitos os trabalhadores afectos ao sector de tratamento, transporte e distribuição de água para consumo.

#### ARTIGO 57: (Zonas de protecção)

1. Os locais onde se instalem captações de água para

consumo das cidades ou de outros centros urbanos, as margens dos lagos artificiais, bem como as respectivas áreas adjacentes ficarão sujeitos ao regime das zonas de protecção definido na Lei de Terras e seu Regulamento. Ao mesmo regime ficarão sujeitas as zonas adjacentes das nascentes de água e dos poços.

2. o diploma legal que instituir a zona de protecção definirá os limites em que tal protecção se deve exercer e enumerará as restrições e condicionamentos de uso e aproveitamento da terra que devam ser observados.

3. Nas referidas zonas de protecção e para além das restrições e condicionamentos ditados pelas especificidades de cada caso, fica interdito:

- a) Construir habitações ou edificios cuja utilização possa conduzir à degradação da qualidade da água;
- b) Instalar estabelecimentos industriais ou comerciais, matadouros ou cercas de gado;
- c) Instalar sepulturas ou fazer escavações;
- d) Instalar entulheiras ou escomboreiras resultantes da actividade mineira;
- e) Introduzir animais, depositar ou enterrar lixo ou imundícies de qualquer tipo;
- f) Instalar canalizações e reservatórios de hidrocarbonetos ou de águas usadas de qualquer tipo;
- g) Estabelecer terrenos de cultura e espalhar estrume, fertilizantes ou qualquer outro produto destinado a fertilização dos solos ou à protecção das culturas.

### CAPITULO V

#### EFEITOS NOCIVOS DAS ÁGUAS

### SECÇÃO I

#### PROTECÇÃO DOS SOLOS

#### ARTIGO 58: (Protecção dos solos)

1. Fora das zonas de protecção da natureza e sem prejuízo do disposto noutros diplomas legais, nos terrenos inclinados próximos de fontes, de cursos de água ou onde se previna ou combata a erosão, fica dependente de prévia autorização das administrações regionais de águas, a execução de trabalhos, instalação de equipamento ou o de-senvolvimento de quaisquer actividades susceptíveis de alterar a existência, o caudal ou reservas de fontes, lagos, lagoas ou cursos de água.

2. A autorização só será concedida depois de ouvidas as

entidades interessadas, designadamente as que superintendem nas actividades agrícolas e florestais, no ordenamento do território e nos recursos minerais.

## SECÇÃO II SANEAMENTO

### ARTIGO 59: (Saneamento)

O saneamento dos centros populacionais tem como objectivo assegurar, em condições compatíveis com as exigências da saúde pública e na salvaguarda do meio ambiente, a evacuação rápida e sem estagnação das águas pluviais e das águas residuais, domésticas e industriais.

### ARTIGO 60: (Obrigações de saneamento)

1. Os proprietários de edifícios existentes ou a construir em talhões servidos por colector público de esgotos domésticos são obrigados a ligar as suas instalações sanitárias aos referidos colectores e a assegurar, por esse processo, o escoamento das águas pluviais que não possam ser infiltradas sem inconvenientes.

2. Quando o talhão se considerar como não servido por colector público e não se fizer a sua utilização, caberá aos proprietários das edificações existentes ou a construir, assegurar que os esgotos domésticos sejam conduzidos a instalações que garantam a depuração para cada caso exigível, de acordo com as condições de eliminação final do efluente.

3. Caberá aos conselhos executivos fixar as características exigíveis do efluente.

4. Logo que for assegurado o serviço público de esgotos, passará a ser exigível o disposto no n.º 1, devendo as instalações referidas no n.º 2 ser demolidas ou entulhadas depois de cuidadosamente desinfectadas.

5. O saneamento de águas residuais de origem não doméstica, através da rede pública de esgotos, fica dependente de autorização especial.

### ARTIGO 61: (Tratamento prévio das águas residuais)

As águas residuais não poderão ser evacuadas sem tratamento prévio quando, no estado bruto, possam afectar o bom funcionamento da rede pública de saneamento ou das instalações de depuração.

## CAPITULO VI ÁGUAS SUBTERRÂNEAS

### ARTIGO 62: (Pesquisa, captação, aproveitamento)

1. A pesquisa, captação ou aproveitamento de águas subterrâneas, quer brotem ou não, ficam sujeitos ao regime dos aproveitamentos privativos estabelecidos na presente lei.

2. Os requisitos técnicos a que deve obedecer a pesquisa, captação e aproveitamento serão fixados por regulamento.

3. Os disposto no n.º 1 deste artigo não se aplica aos usos especiais regulados no artigo 23 quando realizados fora dos perímetros urbanos ou em zonas urbanas que não disponham de rede pública de distribuição de água. Existindo rede pública, poderão os conselhos executivos, atendendo às particularidades da zona urbana, estabelecer regimes especiais.

4. O estabelecido neste artigo não se aplica à pesquisa, captação e aproveitamento de água para abastecimento à população realizadas em zonas que não disponham de rede pública de distribuição de água, salvo quando por diploma ministerial se dispuser o contrário.

5. A excepção prevista no número anterior será estabelecida em função do potencial estimado das águas subterrâneas ou da sua importância.

### ARTIGO 63: (Condições especiais de aproveitamento)

O uso e aproveitamento das águas subterrâneas ficará ainda condicionado:

- a) À manutenção, nos aquíferos renováveis, do balanceamento entre a renovação da água doce e as extracções, de modo a assegurar um aproveitamento continuado nas mesmas condições de uso físico e químico;
- b) À optimização, nos aquíferos não renováveis, do seu uso no tempo, de modo a extrair deles o máximo proveito;
- c) À criação de zonas de protecção pluvial para reserva e manutenção dos aquíferos;
- d) À gestão conjunta de águas superficiais e subterrâneas.

**ARTIGO 64: (Águas das explorações mineiras)**

1. Os titulares de direitos ao uso e aproveitamento de recursos minerais poderão, observados os condicionalismos estabelecidos na presente lei, utilizar as águas que captem no decurso das operações mineiras.
2. As águas sobejas serão postas à disposição das administrações regionais de águas a quem caberá, tendo em especial atenção a sua qualidade, definir o seu destino ou condições a que deverá obedecer o desaguamento.
3. Os encargos de desaguamento da exploração mineira serão suportados pelo titular da exploração.

**CAPITULO VII  
INFRACÇÕES, SANÇÕES E FISCALIZAÇÃO**

**ARTIGO 65: (Infracções e dever de indemnizar)**

1. Sem prejuízo da instauração do procedimento criminal a que houver lugar, constituem infracções administrativas a serem punidas nos termos a regulamentar:
  - a) Os actos que causam danos aos bens do domínio hídrico;
  - b) O não cumprimento das condições impostas para o uso e aproveitamento da água, designadamente nos licenciamentos e concessões;
  - c) A derivação da água dos seus leitos e a pesquisa, captação e aproveitamento das águas subterrâneas com violação do disposto nesta lei;
  - d) A execução, sem prévia autorização, de obras, trabalhos, culturas ou plantações nos leitos e nas zonas sujeitas a restrições;
  - e) A extracção ou depósito de materiais inertes sem prévia autorização;
  - f) O não acatamento das proibições estabelecidas na presente lei ou a omissão das condições impostas.

2. A infracção do disposto na presente lei determina a obrigação de indemnizar os lesados, nos termos da responsabilidade civil.

**ARTIGO 66: (Sanções)**

1. Nos regulamentos desta lei estabelecer-se-ão as sanções correspondentes às infracções previstas.
2. As obras que forem feitas sem licença ou contrariando o que tiver sido estabelecido o que tiver sido estabelecido

e com prejuízo da conservação, regularização e regime dos cursos de águas subterrâneas ou com prejuízo de terceiros serão mandadas demolir à custa dos infractores.

**ARTIGO 67: Fiscalização o policiamento)**

Caberá ao Ministério da Construção e Águas e às administrações regionais de águas:

- a) Assegurar o bom regime e policiamento das águas e impedir a violação dos direitos de terceiros, sem prejuízo da faculdade que a estes se reconhece de recorrerem aos tribunais competentes;
- b) Inspeccionar locais, edifícios e equipamento e solicitar as informações e esclarecimentos necessários;
- c) Impor a demolição de obras, encerramento de estabelecimentos e de fontes de contaminação e a cessação de actividades não autorizadas;
- d) Fiscalizar a execução das obras, a sua conservação e segurança, bem como a exploração das licenças e concessões, obrigando os seus titulares ao cumprimento das condições impostas ao uso e aproveitamento das águas.

**CAPITULO VIII  
DISPOSIÇÕES GERAIS, FINAIS E  
TRANSITÓRIAS**

**ARTIGO 68: (Deveres dos titulares dos talhões marginais)**

1. Os titulares do direito do uso e aproveitamento de talhões banhados por correntes de águas contínuas ou descontínuas não poderão embaraçar o livre curso das águas e são obrigados a remover os obstáculos que se lhe oponham quando tiverem origem nos seus talhões, salvo tratando-se de alteração ao regime de águas, do seu retardamento ou perda, devidos à lícita aplicação.
2. A conservação do livre curso das águas compreende, nomeadamente, o dever de:
  - a) Não mudar o curso de água sem prévia autorização e, oblida esla, assegurar que o novo leito tenha dimensões adequadas, não embarace o curso das águas nem olenda direitos de terceiros;
  - b) Não executar obras ou trabalhos que alterem a largura e a disposição do leito;
  - c) Proceder no corte ou arranque, segundo as circunstâncias, das árvores e arbustos, troncos e raízes que propendam sobre o leito.

**ARTIGO 69: Direitos adquiridos)**

1. A presente lei não afexla os direitos e não extintos ao abrigo da legislação anterior nomeadamente do Decreto n.º 35 463, de 23 de Janeiro, e do seu regulamento, desde que não se tenha, entretanto, verificado nenhuma causa de caducidade, designadamente abandono por mais de três anos e não determinado por motivo de força maior ou caso fortuito.

2. O reconhecimento dos direitos adquiridos será reclamado no prazo de um ano a partir da entrada em vigor da presente lei, cabendo aos interessados prestar as informações e esclarecimentos necessários.

3. As reclamações apresentadas depois de decorrido o prazo estabelecido no número anterior serão havidas como novos pedidos de uso e aproveitamento de água, ficando sujeitos ao regime estabelecido no Capítulo III desta lei.

**ARTIGO 70: Reconhecimento de direitos adquiridos em virtude de legislação anterior)**

1. As administrações regionais de águas procederão à verificação dos direitos reivindicados com fundamento nos elementos fornecidos pelo requerente e nos demais dados que tiver podido recolher.

2. Os direitos reclamados poderão ser restringidos, para que não se verifiquem as incompatibilidades referidas no artigo 27 da presente lei.

3. Os direitos devidamente reconhecidos serão objecto de registo nos termos e condições que tiverem sido prescritos.

**ARTIGO 71: (Reconhecimento dos usos tradicionais)**

1. Serão reconhecidos e registados os usos comuns tradicionalmente estabelecidos e de facto existentes quando possam concorrer com usos privativos resultantes da lei, de licença ou concessão e se traduzam numa aplicação útil e benéfica da água.

2. Os usos que impliquem a contaminação das águas não serão reconhecidos a menos que se faça cessar a contaminação.

3. Caberá às administrações regionais de águas proceder ao reconhecimento e promover o registo dos usos comuns que se conformem com o disposto nos números anteriores.

**ARTIGO 72: Reserva de obrigações resultantes de compromissos internacionais)**

As disposições da presente lei não prejudicam as obrigações resultantes de princípios de direito internacional normalmente reconhecido, bem como as obrigações decorrentes de compromissos internacionais assumidos com Estados vizinhos, ao abrigo de acordos e tratados regularmente celebrados e ratificados.

**ARTIGO 73: (Regulamento do registo)**

O Ministro da Construção e Águas definirá, por diploma ministerial, as normas a que deve obedecer o registo dos direitos ao uso e aproveitamento da água, cabendo-lhe ainda fixar a data a partir da qual o registo se torna obrigatório.

**ARTIGO 74: (Criação das administrações regionais de águas)**

Ao Ministérios da Construção e Águas competirá promover a criação e a entrada em funcionamento das administrações regionais de águas e assegurar, entretanto, o exercício das respectivas funções.

**ARTIGO 75: (Regulamentos)**

Caberá ao Conselho de Ministros aprovar os regulamentos desta lei.

**ARTIGO 76: (Norma revogatória)**

E revogada toda a legislação que contrarie o disposto na presente lei.

Aprovada pela Assembleia da República.

O Presidente da Assembleia da República, *Marcelino dos Santos*.

Promulgada em 3 de Agosto de 1991.

Publique-se.

O Presidente da República, **JOAQUIM ALBERTO CHISSANO**.

# NIGERIA

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## Interim Guidelines and Standards for Industrial Effluent, Gaseous Emission and Noise Limitations

### 0.1 INTRODUCTION

Industrialisation is vital to a nation's socio-economic development as well as its political stature in the international committee of nations. It provides ready employment opportunities for a good percentage of the population in medium to highly developed economies. However, industries vary according to process technology, size, nature of products, characteristics and complexity of wastes discharged.

Ideally, siting of industries should strike a balance between socio-economic and environmental considerations. Availability and access to raw materials, Proximity of water sources (Appendix 1) market for products, cost of effective transportation route, major settlements and labour as well as infrastructural amenities often influence the siting of industries. In developing countries such as Nigeria, siting of industries is determined by various criteria, some of which are environmentally unacceptable thereby posing serious threat to public health. Significant in this respect is the establishment of industrial estates alongside residential areas in most State capitals and large urban centres in Nigeria.

Although industrialisation is inevitable, various devastating ecological and human disasters which have continuously occurred over the last three decades or so implicate industries as major contributors to environmental degradation and pollution problems of various magnitude. Industrial wastes and emissions, contain toxic and hazardous substances most of which can be detrimental to human health. These include heavy metals such as lead, Cadmium and mercury, and toxic organic chemicals such as pesticides, polychlorinated biphenyls (PCBs), dioxins, polyaromatic hydrocarbons (PAHs), petrochemicals and phenolic compounds. For instance, there was the case of the "Minamata disease" in Japan in the 60s caused by mercury poisoning of consumers of fish from Minamata Bay, Japan, which had received untreated effluents from a plastic factory. Then, there was the case of "Ita-Itai" poisoning from ingestion of rice irrigated with effluent containing the toxic metal cadmium. Appendix 2 is a panoramic view of global, human and eco-

logical disasters caused by industrial pollution and industrial accidents.

Rapid industrial development in developed and developing countries have increased hazardous wastes generation several fold. High level of environmental awareness and existence of regulatory environmental protection measures in the developed countries have discouraged indiscriminate disposal of those wastes in conflict with environmental laid down principles. "Not in my backyard" syndrome made burying of wastes or dumping in surface waters or open land increasingly difficult. Ironically, the available technologies in developed countries are inadequate to cope with the volume and complex nature of wastes generated. Furthermore, the cost of waste disposal was becoming highly prohibitive and unaffordable by most industries.

Realising the low-level of environmental awareness in developing countries, coupled with the non-existence of environmental protection laws, and the abject poverty of these nations, the developed countries have, within the last decade, embarked upon "Toxic Wastes Trade" or "Illegal Dumping of Toxic Wastes" in poor, debt-strapped developing countries. Nigeria has been a victim of this illegal act, when in 1988 about 3,880 tons of toxic and hazardous wastes were dumped in Koko, Bendel State by an Italian Company.

In order to stem the tide of toxic wastes dumping in third world countries, the United Nations Environment Programme (UNEP), passed the resolutions on the Transboundary Movement of Toxic and Hazardous Wastes at the 1989 Basel Convention, Appendix 3, a document to which Nigeria is a signatory.

Surface and ground water contamination, air pollution, solid wastes heaps, general environmental degradation including loss of land and aquatic resources are major environmental problems caused by industrialisation in Nigeria. Improper disposal of untreated industrial wastes has resulted in coloured, murky, odorous and unwholesome surface waters, fish kills and loss of recreational amenities. A significant amount of the population still



rely on surface waters for drinking, washing, fishing and swimming. Industry also needs water of acceptable quality for its processes.

Economic development can be compatible with environmental conservation. Hence, the present problems of environmental resources degradation need not arise within the framework of sustainable development. Failure to halt further deterioration of environmental quality might jeopardise the health of large segment of the population with serious political and socio-economic implications.

The Federal Military Government places high premium on the environment. It established the Federal Environmental Protection Agency (FEPA) by Decree 58 of 30th December, 1988 with the statutory responsibility for overall protection of the environment. The National Environmental Policy was put together and launched by the President in Abuja on 27th November, 1989. Logically, implementation of the policy should follow. Introducing these guidelines and standards is part of the implementation of the policy and environmental pollution abatement strategy contained therein.

These guidelines and standards relate to six (6) areas of environmental pollution control:

- (i) Effluent limitations
- (ii) Water quality for industrial water uses at point of in-take
- (iii) Industrial emission limitations
- (iv) Noise exposure limitations
- (v) Management of solid and hazardous wastes
- (vi) Pollution abatement in industries.

Environmental protection measures are only meaningful if the environment to be protected is adequately understood. Neither over-protection nor under-protection of the environment is desirable. Ideally, standards are set based on nationally generated environmental baseline data which are scanty in the present circumstance. An alternative approach is to adapt standards adopted by World Health Organization (WHO), and the developed nations of Europe and America. However, in transposing data between countries, socio-economic and climatic differences will be taken into account.

Nonetheless, industrial pollution cannot be abated and halted if appropriate legal framework does not exist. Existing guidelines and standards in operating in West

Germany, India, Japan, United Kingdom, USA, Brazil, Sweden, Canada, Singapore, Turkey, Poland and Russia have been consulted in drawing up these guidelines and standards. Where the guidelines were deemed relevant and appropriate for Nigerian conditions, they have been adopted, and where they were deemed inappropriate they were modified on the basis of published available data locally and elsewhere.

The "Interim Guidelines and Standards" are presented in four parts as follows:

- PART I: General Introduction, Interim guidelines and Standards for Industrial Effluent, Gaseous Emissions and Noise Limitations.
- PART II: Management of Solid and Hazardous Wastes.
- PART III: Exclusive list of Hazardous/Dangerous Chemicals.
- PART IV: Glossary of Environmental Terms.

In summary, steps can be taken for the prevention of industrial pollution and protection of the environment. To this end, the following guidelines shall become operational in Nigeria.

## 0.2 General Guidelines for Pollution Abatement in Industries

1. No industry shall release toxic substances into the air, water and land of the Nigerian environment, beyond permissible limits.
2. It is mandatory for all industries to have industrial pollution monitoring capabilities within their own set up. Preferably they should have on site pollution control unit or assign it to a Consultant/Contractor approved by the Federal Environmental Protection Agency (FEPA).
3. Records of all discharges (solid, air and liquid), treatment and disposal must be remitted to the nearest FEPA office on a monthly basis.
4. In the event of unusual disposal and treatment of the waste, such report should be filed with the nearest FEPA office within twenty-four (24) hours.
5. Any accidental discharge must be reported to the nearest FEPA office and nearest community within twenty-four (24) hours of the release.
6. All manufacturers must submit the chemicals in use to the nearest FEPA office. Details about stored chemicals and storage conditions should also be submitted. When such chemicals are sold, names

- of secondary buyer, should be made known to FEPA office.
7. FEPA offices shall serve as Pollution Response Centres for co-ordinating response activities.
  8. Each manufacturer should draw up a contingency plan against accidental release of pollutants.
  9. Each manufacturing industry should set up a machinery for combating pollution hazard and maintain equipment in the event of emergency. Towards this end, stock of pollution response equipment should be available or readily accessible.
  10. In case of pollution emergency, the nearest FEPA office shall be the "On the Scene Co-ordinator" which should co-ordinate response activities.
  11. No individual or corporate body shall engage in storage and transport of harmful toxic waste within Nigeria without a permit by FEPA as stipulated by Decree 42 of November, 1988.
  12. The collection, transport and final disposal of waste should be the responsibility/liability of the company generating the waste (i.e., from cradle to grave) which shall be liable for clean up, remediation, restoration and where necessary, compensation to all affected parties.
  13. Each State shall designate industrial layout which shall be separate from residential areas. A buffer zone shall be provided and rigidly enforced and monitored to deter illegal development.
  14. All new pollution sources that will come on stream after the enactment of these guidelines shall be encouraged to adopt in-plant waste reduction and pollution prevention strategies.
  15. No new point sources of industrial pollution shall come on stream without compliance with the provisions of these guidelines.
  16. All discharges of effluent with constituents beyond permissible limits into public drains, streams, rivers, lakes, sea or underground injection are unacceptable and are prohibited unless a permit is obtained in writing from FEPA or any organisation so designated by FEPA. All permits (notices, order, consent or demand) shall be in writing. The format of the permit is as prescribed in the appendices 4-8.
  17. Solid wastes generated by industry including, sludges and all bye-products resulting from the operation of pollution abatement equipment shall be disposed of in an environmentally safe manner as prescribed in these guidelines. Under no circumstance should any of these substances be co-disposed in any municipal landfill.
  18. For the present point and non-point sources of industrial pollution, it is hereby stated that all industries with potential for the release of gaseous, particulate, liquid or solid untreated discharges are mandated to install into their system, appropriate abatement equipment in accordance with the prescribed guidelines.
  19. The general aesthetic sanitary conditions of factories and surroundings shall be adequately maintained.
  20. Within the limits of the provisions by the National Policy on Environment, the safety of workers from exposures to hazardous conditions in the workplace, should be guaranteed.
  21. Environmental auditing of existing industries and Environmental Impact Assessment (EIA) of new industries and major developmental projects shall be mandatory.
- 0.3. Summary of the Consultation Between FEPA and Interested Parties on the Interim Guidelines and Standards.**
- These guidelines have been widely circulated among industries, government ministries and agencies at the State and Federal levels for discussion and the summary of the consultation is presented hereunder.
- 0.3.1 The Procedure**
- FEPA presented the proposed "Interim Guidelines and Standards" to the Industrial Sector for consideration at the First National Environmental Seminar on "Industry and the Nigerian Environment" held between 21st to 23rd May, 1990. The seminar accepted the document as a working paper for study and comments from various industries, government and non-governmental organizations as well as all other interested bodies. FEPA solicited public comments in writing on the proposed document within six weeks which expired on 6th July, 1990.
- 0.3.2 FEPA received Comments, Submittals from Federal Ministries, State Governments, Industries, Universities and individuals.** On July 12, 1990, the Director/Chief Executive of FEPA inaugurated a 22 member National Technical Committee comprising representatives of Federal and State Ministries, professional bodies, non-governmental organisations, universities and individuals to harmonise all the comment submittals received so

far on the proposed draft document with a view to making recommendations to FEPA for further consideration by Government. The Committee was given about three weeks to complete its task. The committee reconvened on July 30, 1990 to consider the draft of the revised Guidelines and Standards.

**0.3.3.** A summary of the major comments received and FEPA response are presented below:

*Comment 1:* The value in the Interim Guidelines and Standards were imported, inappropriate and irrelevant to the Nigerian situation.

*Response 1:* FEPA does not share this view because Appendix 9 of the proposed Interim guidelines and Standards already circulated showed that data obtained from wide spread previous studies on the physicoeconomical characteristics of effluents from selected industries in the country were reviewed and used in arriving at the values in the Interim Guidelines and Standards. Furthermore, experiences of other developing countries with similar climatic conditions and level of development as Nigeria such as India and Singapore as well as those of developed countries of Europe and North America were also considered. Guidelines and Standards from other countries that were deemed inappropriate to Nigerian conditions were modified with published available local data, and then adopted.

*Comment 2:* Small industries that are not major polluters cannot afford to wholly maintain on-site pollution units. Hence groups of contiguous industries could borrow or jointly sustain such services.

*Response:* FEPA does not disagree with this suggestion as long as compliance with the provisions of FEPA Guidelines are met by all industries.

*Comment 3:* Further clarification is required on the types of records of discharges that must be remitted by industries to nearest FEPA office monthly.

*Response:* FEPA has designed formats for presenting records of Pollutant discharges similar to the forms illustrated in Appendices 4 to 8 of the proposed document. These forms have comprehensive list of requirements on quality and quantity of discharges (gases, particulates, liquid and solid).

*Comment 4:* Is it the list of chemicals or samples of chemicals in use that should be submitted to FEPA?

*Response:* The first line, section 0.2.4 of the Proposed Interim Guidelines document should read "All manufacturers shall submit the list of chemicals in use" to the nearest FEPA office.

*Comment 5:* The collection and transportation of industrial wastes should be the responsibility/liability of the company generating the waste but the final disposal of such waste should be the responsibility or liability of the local authority (local government or state government) or the owner of the industrial estate in which the industry is sited - private or government. Any liability for wrong disposal should fairly be on the Agency and not on the waste generating industry.

*Response:* FEPA believes strongly in environmental responsibility. Every generator of waste shall take responsibility for its disposal. Section 0.2.12 of the interim document states clearly our position that-

"The collection, transport and final disposal of waste should be the responsibility/liability of the company generating the waste (that is, from cradle to grave) which shall be liable for clean up remediation, restoration and where necessary compensation to all affected parties".

FEPA intends to license waste collection organisations who shall collect and transport the wastes according to guidelines approved by FEPA. Disposal of wastes shall be at approved sites using methods approved by the FEPA. Where an industry has contractual agreement with another organisation for the safe disposal of its waste, any liability for wrong disposal shall be on the waste management company.

*Comment 6:* State governments and private estate developers should be encouraged to have properly designated and fully developed industrial estates with adequate provision for waste treatment.

*Response:* FEPA shares this view and has noted the requirement for the provision of adequate treatment facilities in every industrial estate. Accordingly, section 0.2.13 of the draft document has been amended to incorporate this suggestion.

**Comment 7:** Additional costs of establishing in-plant waste treatment and pollution control plants pre-operationally will further discourage new industrial establishments

**Response:** FEPA is of the view that industry stands to profit from pollution prevention. It is in fact cheaper for industry to incorporate in-plant waste treatment and pollution control plant pre-operationally than to retrofit.

**Comment 8:** The proposed effluent limitation for the Tannery Industry is too low. If the guideline is adopted in its present form, it is impossible for any tannery in the country to meet its requirement. Comparison with the effluent limitations of some member countries of the International Council of Tanner Syndicate that what is obtained in those countries is much higher than those proposed for Nigeria.

**Response:** A careful study of the effluent limitation for various industries in different countries usually contain two sets of values. The pretreatment Standards for Existing Sources (PSEs) for effluents to be discharged into Publicly Owned Treatment Works (POTW) or Sewers are usually less stringent. The effluent limitation for effluents to be discharged into surface waters are often more stringent in order to ensure the sustenance of the quality of receiving water bodies. The higher values referred to by the Tanners Council are applicable to effluents being discharged into POTW or Sewers and not for discharges into surface waters. The effluent limitations contained in the draft document are quite attainable for discharges into surface waters in the country, if the effluents undergo minimum conventional treatment such as primary or secondary treatment process. Presently, most industries in the country do not carry out the treatment of their waste waters before discharge into the nearest water body. Nonetheless, the additional information provided by the Tanners Council was evaluated along with other data available. Accordingly, the effluent limitation for the following parameters have been reviewed as follows:

**Comment 9:** The word "additional" should be altered to "specific" and the phrase "can be set" to read "should be set" in Group II on page 30 Table 1 of the draft document.

Parameter	Chrome Tanning mg/l	Vegetable Tanning mg/l
BOD <sub>5</sub>	Old Value 15	30
	New Value 50 (15)	100
COD	Old Value 32	25
	New Value 160 (30)	80
Suspended Solids	Old Value 9	19
	New Value 30 (10)	40
Total Chromium	New Value 2.0	Old Value 0.1
Chromium 6	0.1	
Chromium 3	2.0	

*Note:* Indicate values for discharge into streams.

**Response :** FEPA reserves the right to maintain the validity of the word "additional" and the phrase "can be set" being the true reflection of the intention of

**Comment 10:** Clarification is required of Group III on page 30 of draft document.

**Response:** The Agency's view is that item 3 on page 30 should be deleted as it is not applicable.

**Comment 11:** The issue of spent oil discharges from garages, mechanic workshop and petrol stations should be addressed in the Guidelines.

**Response:** The issues of crankcase oil has been addressed under the section of "service industries" which include garages, mechanic workshops and petrol stations on page 38 of the draft document. Furthermore, under the stipulated values for discharges from service industries oil and grease are now mandatory at a limit of 10 mg/l as indicated on Effluent limitation guidelines for industries in page 31 of the document. FEPA, moreover, does not consider the limiting value of 10 mg/l for oil and grease as too stringent especially as majority of people use the receiving water bodies for drinking, washing and bathing.

*Comment 12:* FEPA should define clearly the following terms: drains, sewers, surface water, water courses, sewage works and ocean outfall.

*Response:* The glossary of terms under the section on introduction of the Interim guidelines will now form a separate section in the revised document to incorporate most terminologies and definitions.

*Comment 13:* The guideline only dealt with industrial water uses as distinct from potable water use. There is need for FEPA to look into details on the control and management of all water uses.

*Response:* The issue of potable water quality in our country is being addressed in the First National Symposium on Water Quality Monitoring and Status in Nigeria scheduled for December 1990. Water Quality Data to be collated at the Symposium along with baseline data already gathered by FEPA shall be used to evolve Interim Potable Water Quality Standards. Meanwhile, the World Health Organisation (WHO), International Quality for Drinking Water can be used as a guide.

*Comment 14:* The Interim Guidelines did not consider emissions from mobile sources, aviation and generating sets.

*Response:* FEPA accepts this comment. The matter will be addressed later in the revised Guidelines.

*Comment 15:* The Interim Guidelines did not consider noise from religious houses, machines, etc.

*Response:* Noise from occupational exposure in factories is considered presently to be of top priority. Action in respect of noise from domestic sources, though important in the urban areas, shall be taken in future.

*Comment 16:* The issuance of operating permit for the handling, including transportation of wastes should not be an exclusive preserve of FEPA. rather the issuance or permit for intra-state movement should rest with State Governments while FEPA will issue permit for wastes across one or more States.

*Response:* FEPA reserves to itself the responsibility for the issuance of permits. For effective implementation of this scheme, FEPA is

in agreement with the delegation of issuance of permit for intra-state movement of wastes to State governments while it handles the issuance of permit for interstate movement of wastes. Furthermore, the responsibilities of FEPA according to the provisions of Decree 58 of December 1988 and Decree 42 of November 1988 are explicit on this issue.

*Comment 17:* FEPA should recommend acceptable buffer zone between industrial estates and residential estates.

*Response:* FEPA will issue guidelines to the States on modalities for delimiting buffer zones according to ecological locations.

*Comment 18:* The Pharmacy Board of the Food and Drug Administration (FDA) of the Federal Ministry of Health issues a list of approved chemicals which are renewable yearly, as such should individual companies send a list of their chemicals for clearance?

*Response:* All drugs are chemicals but not all chemicals are drug. The Pharmacy Board of FDA will continue to issue permits for the importation of chemical for drugs and pharmaceutical production. The list of such chemicals shall be forwarded by FDA to FEPA as part of FEPA Tracking System of Chemicals Imported into the country. FEPA shall in addition issue permit for the importation of all other chemicals. FEPA shall publish annually a list of all approved chemicals in the country.

*Comment 19:* FEPA should be specific on the roles and level of responsibility by the three-tiers of government: federal, state and local governments and FEPA should be seen to play the monitoring role.

*Response:* FEPA and the States. The National Policy on Environment provides for the establishment of "State Committee on the Environment" with chairmen of local governments as members and the State commissioner with responsibility for environment as chairman. The National council on Environment comprises state commissioners with responsibilities for environment as members with Honourable Minister of Works and Housing with responsibility for Environment as chairman. Environmental Guidelines and Standards set by FEPA shall be mandatory in all the States. Each

State should adopt FEPA's standards as the minimum standards. State governments with the appropriate infrastructure and capability approved by FEPA will implement FEPA policies, guidelines and standards in the States. Otherwise, FEPA will implement its own programmes and enforce regulations in States without the necessary infrastructure and capability.

*Comment 20:* Item 1 of page 50 of the draft document should be amended to include state government agencies rather than FEPA only.

This is now amended to read:

It is mandatory for all industries to have industrial pollution monitoring unit capabilities within their own set up. Preferably, they should have on-site pollution control unit or assign to a consultant/contractor registered with State government agencies and/or FEPA.'

*Response:* The view of FEPA on the provision of item I of page 50 stands unchanged based on the provisions of Decree 58 of December 1988. Accreditation of all consultants and contractors shall be with the agency. (See Section 0.2.2).

*Comment 21:* A State government remarked that some brewery industries located in the rural areas discharge their waste waters into local streams which in many cases are the only source of water supply for the rural population. Some of the receiving streams even dry up completely during the dry season. It has been observed that this practice leads to heavy pollution of these local streams and during periods of low stream flow or when the streams dry up, a stream or ponds of stinking waste water is left for the rural community, heavily polluting the environment and providing a ready source for the spread of disease. It is therefore recommended for the case where brewery effluent is discharged into small receiving water resulting in small dilution factor, that maximum effluent concentrations allowable be made more stringent than so far provided in the draft guidelines as follows:

Suspended solids	10 mg/l
BOD <sub>5</sub>	15 mg/l

*Response:* The view of FEPA is that State Governments can establish more stringent guidelines taking into consideration peculiar

ecological problems in their localities provided FEPA Guidelines and standards are accepted as the minimum.

*Comment 22:* Experience in some States shows that hospitals do generate large volumes of toxic and hazardous waste effluents. Very often these waste waters are discharged into the streams resulting in endemic diseases and occasional inexplicable epidemics among the local communities which use the stream for their domestic and other requirements. The inhabitants of these communities are thus made to become regular customers of the hospital thus completing the vicious cycle. In order to minimise this environmental health problem, which is common in most urban centres that have not achieved 100 per cent piped water supply systems, the on-going national/baseline studies should include the study of waste water effluents from large hospitals. This will enable FEPA to enforce provision of waste treatment facilities in hospitals and to determine safe standards for waste water discharges into the environment by hospitals.

*Response:* FEPA shares the views expressed and has now included guidelines for wastes management in hospitals and medical laboratories.

*Comment 23:* Sulphur dioxide, SO<sub>2</sub>, should be included under gaseous pollutant for Integrated Steel Mills and hydrocarbons as vapour pollutant under Petroleum Refining.

*Response:* FEPA notes with appreciation the discovery of the omissions made on page 33 Table 6 of the draft document. These parameters and values for the emission limitations have now been included in the respective sections. (Table 3.1).

*Comment 24:* The proposed guidelines are good, but there is the need to establish baseline data for control purposes.

*Response:* FEPA has already initiated national environmental baseline studies.

*Comment 25:* The proposed guidelines do not include radioactive waste *vis-a-vis* occupational control and safety to personnel and environment.

*Response:* FEPA has initiated consultations with ap-

propriate bodies and will come out in due course with guidelines on the management of radioactive waste. In respect of the specific view on occupational safety and health, FEPA is in full consultation and collaboration with the Federal Ministry of Health, Labour and Productivity and the Federal Radiation Protection Service, University of Ibadan respectively.

*Comment 26:* The proposed guidelines seem to be silent on the methods of analysis to be adopted in the establishment of baseline date.

*Response:* Page 21 of the draft document states explicitly that any of the recognised standard methods for environmental analysis by the United States Environmental Protection Agency (USEPA), Department of Environment (DOE) U.K., American Public Health Association (APHA), American Petroleum Institute (API) or the American Society for Testing and Materials (ASTM) is acceptable for monitoring purpose until FEPA produces its recommended methods.

*Comment 27:* There is the need to classify pollutants accordingly to their level of toxicity.

*Response:* Classification of environmental pollutants is based on several factors for example, toxicity, persistence, physico-chemical characteristics, etc. The environmental objectives and goals determined the mode of classification. However, in order to ensure that various categories of pollutants are considered, the 129 priority pollutants identified by the USEPA have been adopted by the Agency pending the availability of new scientific data locally. Furthermore, toxicity values for restricted chemicals have now been included in the revised document.

*Comment 28:* In deciding on moratorium to enable industries comply with the guidelines and standards we suggest that a difference be made between existing industries and new coming industries. While:

existing industries should strive to obtain facilities to achieve the de-pollution limits

new coming industries should be mandated to include the de-pollution programme in

the factory planning from onset.

*Response:* This view is in total agreement with FEPA's position.

*Comment 29:* Equipment purchase, operation and maintenance will be imported (not the same in developed countries) for a considerable period of time. Therefore FEPA should consider the cost of these as final responsibility of the consumer of goods.

*Response:* The cost of pollution control equipment constitutes about 1-10 per cent of the plant for a new industrial establishment. It costs much more to retrofit anti-pollution equipment into an old plant. Nonetheless, since waste is a resource in the wrong place, a lot of recyclable valuable products are discarded by industries as wastes. Consequently, the additional cost of installing anti-pollution equipment will be recovered in form of higher production output, less waste generation and greater market turnover. In the long term, the additional cost burden to the Accordingly, FEPA will encourage wastes recycling as well as local research into cheap, and efficient methods of industrial wastes treatment. Also the Agency will assist industries in the judicious choice of low wastes technologies for new industrial processes or the modernisation of old industrial plants.

## Chapter 1 INTERIM EFFLUENT LIMITATION GUIDELINES IN NIGERIA

1.1 The latest issue of the Directory of Industries in Nigeria published by the Federal Ministry of Industry indicates that over three thousand industrial establishments exist in the country. The industries operating in the country vary in process technology, size, nature of products, characteristics of the wastes discharged and the receiving environment. Presently, there are ten major Industrial Categories readily discernible in Nigeria (listed in Appendix 10) namely:

- (i) Metal and Mining
- (ii) Food, Beverages and Tobacco
- (iii) Breweries, Distilleries and Blending or Spirits
- (iv) Textiles

- (v) Tannery
- (vi) Leather products
- (vii) Woods, Wood products including furniture and fixtures
- (viii) Pulp, Paper and paper products
- (ix) Chemical and Allied
- (x) Others

Significant waste water parameters that must be continuously monitored for selected industries are indicated in Table 1.1.

1.2. Ideally, each pollution source should be detoxified with the installation of anti-pollution equipment based on the Best Practical Technology (BPT) and/or Best Available Technology (BAT). In cognisance of the high cost of imported BPT and BAT, and the non-availability of local environmental pollution technology, Uniform Effluent Standards (UES) is normally based on the pollution potential of effluent and/or the effectiveness of current treatment technology. This approach, is easy to administer, but it can result in over-protection in some areas and under-protection in others. To overcome this problem, uniform effluent limitations based on the assimilative capacity of the receiving water have been drawn up for all categories of industrial effluents in Nigeria (Table 1.2), while additional sectoral effluent limitations have been provided for individual industries with certain peculiarities, (Table 1.3).

**TABLE 1.1**  
SIGNIFICANT WASTEWATER PARAMETERS FOR SELECTED INDUSTRIAL CLASSIFICATIONS

<i>Industry</i>	<i>Group I*</i>	<i>Group II*</i>
A. Aluminium Industry	Suspended Solids Free Chlorine Fluoride Phosphorus Oil and Grease pH	Total dissolved solids Phenol Aluminium
B. Automobile Industry	Suspended solids Oil and grease BOD <sub>5</sub> Chromium Phosphorus Cyanide Copper Nickel Iron Zinc Phenols	COD Chlorides Nitrate Ammonia Sulphate Tin Lead Cadmium Total dissolved solids
C. Cane Sugar Processing Industry	BOD <sub>5</sub> pH Suspended solids Settleable solids Total coliforms Oil and Grease Toxic materials	Alkalinity Nitrogen, total Temperature Total dissolved solids Colour Turbidity Foam
D. Beverage Industry	BOD <sub>5</sub> pH Suspended solids	Nitrogen Phosphorus Temperature



<i>Industry</i>	<i>Group I*</i>	<i>Group II*</i>
	Settleable solids Total coliforms Oil and Grease Toxic materials	Total dissolved solids Colour Turbidity Foam
E. Canned and preserved fruits and vegetables Industry	BOD <sub>5</sub> COD pH	Colour Faecal coliforms Phosphorus, total Suspended solids Temperature Total Organic Carbon (TOC)
F. Confined Livestock Feeding Industry	BOD <sub>5</sub> COD	Faecal coliforms Nitrogen Total solids Phosphate pH TOC
G. Dairy Industry	BOD <sub>5</sub> COD pH Suspended solids	Chlorides Colour Nitrogen Phosphorus Temperature Total Organic Carbon Toxicity Turbidity
H. Fertilizer Industry Nitrogen Fertilizer Industry  Phosphate Fertilizer Industry	Ammonia Chloride Chromium, total Dissolved solids Nitrate Sulphate Suspended solids Urea and other Organic Nitrogen Compounds Zinc Calcium Dissolved Solids Fluoride pH Phosphorus Suspended solids Temperature	Calcium COD Gas purification chemicals Iron, total Oil and grease pH Phosphate Sodium Temperature  Acidity Aluminium Arsenic Iron Mercury Nitrogen Sulphate Uranium
I. Flatglass, Cement Lime, Gypsum and Asbestos Industries Flatglass	COD pH Phosphorus Suspended solids Temperature	BOD <sub>5</sub> Chromates Copper Chromium Iron

Industry	Group I*	Group II*
Cement, Concrete Line and Gypsum	COD pH Suspended Solids Temperature	Tin Silver Nitrates Organic and Inorganic Waterbreaking chemicals Synthetic resins Total dissolved solids Alkalinity Chromates Phosphates Zinc Sulphite
Asbestos	BOD <sub>5</sub> COD pH Suspended solids	Total dissolved solids Chromates Phosphates Zinc Sulphite Total dissolved solids
J. Grain Milling Industry	BOD <sub>5</sub> Suspended solids Temperature	COD pH TOC Total dissolved solids
K. Inorganic Chemicals Alkalines and Chlorine Industry	Acidity/Alkalinity Total Solids Total Suspended Solids Chlorides Sulphates	BOD <sub>5</sub> COD TOC  Chlorinated Benzenoids  Polynuclear Aromatics Phenol Fluoride Silicates Total Phosphorus Cyanide Mercury Chromium Lead Titanium Iron Aluminium Boron Arsenic Temperature
L. Leather Tanning and Finishing Industry	BOD <sub>5</sub> COD Chromium, total Grease pH Suspended Solids Total Solids	Alkalinity Colour Hardness Nitrogen Sodium Chloride Temperature Toxicity

<i>Industry</i>	<i>Group I*</i>	<i>Group II*</i>
M. Meat Products Industry	BOD5 pH Suspended Solids Settleable Solids Oil and Grease Total coliforms Toxic materials	Ammonia Turbidity Total dissolved solids Phosphate Colour
N. Metal Finishing	COD Oil and Grease Heavy Metals Suspended Solids Cyanide	None specified
O. Organic Chemicals Industry	BOD5 COD pH Total Suspended Solids Free-Floating Oil	TOC Organic Chloride Total Phosphorous  Heavy Metals Phenol Cyanides Total Nitrogen Other Pollutants
P. Petroleum Refining Industry	Ammonia BOD5 Chromium COD Oil, Total pH Phenol Sulphide Suspended Solids Temperature Total Dissolved Solids	Chloride Colour Copper Cyanide Iron Lead Mercaptans Nitrogen Odour Total Phosphorus Sulphate TOC Toxicity Turbidity Volatile Suspended Solids Zinc
Q. Plastic Materials and Synthetics Industry	BOD <sub>5</sub> COD pH Total Suspended Solids Oil and Grease Phenols	Total Dissolved Solids Sulphates Phosphorus  Nitrate Organic Nitrogen Ammonia Cyanides Toxic Additives and Materials Chlorinate Benzenoids and Polynuclear Aromatics

Industry	Group I*	Group II*
R. Pulp and Paper Industry	BOD <sub>5</sub> COD TOC pH Total Suspended Solids Coliforms, Total and Faecal Colour Heavy Metals Toxic Materials Turbidity Ammonia Oil and grease Phenols Sulphite	Zinc Mercaptans Nutrients (Nitrogen and Phosphorus) Total Dissolved Solids
S. Steam Generation and Steam Electric Power Generation	BOD <sub>5</sub> Chlorine Chromate Oil pH Phosphate Suspended Solids Temperature	Boron Copper Iron Non-degradable Organics Total Dissolved Solids Zinc
T. Steel Industry	Oil and grease pH Chloride Sulphate Ammonia Cyanide Phenol Suspended solids Iron Tin Temperature Chromium Zinc	None specified
U. Textile Mill Products Industry	BOD <sub>5</sub> COD pH Suspended solids Chromium Phenolics Sulphide Alkalinity	Heavy metals Colour Oil and grease Total dissolved solid Sulphides Temperatures Toxic materials

Note:

1. Group I: Consists of the most significant parameters for which effluent limits will most often be seen.
2. Group II: consists of some additional parameters for which effluent limits can be set on an individual basis.

TABLE 1.2

INTERIM EFFLUENT LIMITATION GUIDELINES IN NIGERIA  
FOR ALL CATEGORIES OR INDUSTRIES

Parameters	<i>Units in milligram per litre (mg/l)</i>	
	Limit for discharge into surface water application	Unless otherwise stated Limit for land application
<i>Temperature</i>	<i>Less than 40°C within 15 meter of outfall</i>	<i>Less than 40°C</i>
Colour (Lovibond Units)	7	-
pH	6-9	6-9
BOD <sub>5</sub> at 20°C	50	500
Total suspended solids	30	-
Total dissolved solids	2,000	2,000
Chloride (as CL)	600	600
Sulphate (as SO <sub>4</sub> 2)	500	1,000
Sulphide (as S <sup>2-</sup> )	0.2	-
Cyanide (as CN <sup>-</sup> )	0.1	-
Detergents (linear alkylate sulphonate as methylene blue active substance)	15	15
Oil and grease	10	30
Nitrate (as NO <sub>3</sub> ) NO <sub>3</sub>	20	-
Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	5	10
Arsenic (as AS)	0.1	-
Barium (as Ba)	-	5
Tin (as Sn)	-	10
Iron (as Fe)	20	-
Manganese (as Mn)	5	-
Phenolic compounds (as phenol)	0.2	-
Chlorine (free)	1.0	-
Cadmium, Cd	Less than 1	-
Chromium (trivalent and hexavalent)	Less than 1	-
Copper	Less than 1	-
Lead	Less than 1	-
Mercury	0.05	-
Nickel	Less than 1	-
Selenium	Less than 1	-
Silver	0.1	-
Zinc	Less than 1	-
Total Metals	3	-
Calcium (as Ca <sup>2+</sup> )	200	-
Magnesium (as Mg <sup>2+</sup> )	200	-
	<i>Units in milligram per litre (mg/l)</i>	
Parameters	Limit for discharge into surface water application	Unless otherwise stated Limit for land application
Boron (as B)	5	5
Alkyl mercury compounds	Not detectable	Not detectable
Polychlorinated Biphenyls (PCBs)	0.003	0.003
Pesticides (Total)	Less than 0.01	Less than 0.01
Alpha emitters, uc/ml	10-7	-
Beta emitters, uc/ml	10-6	-
Coliforms (daily average)	400 MPN/100ml	500 MPN/100ml
Suspended fibre	-	-

TABLE 1.3

NATIONAL EFFLUENT LIMITATIONS AND GASEOUS EMISSIONS  
GUIDELINES IN NIGERIA FOR SPECIFIC INDUSTRIES

<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>	
AGRICULTURAL CHEMICALS	PHOSPHATE FERTILIZER	EFFLUENT (mg/l)	
(Waste Water)	Gypsum sludge	Suspended solids	15
	Acid waste water	Phosphate (PO <sub>4</sub> <sup>3-</sup> )	3
	High fluoride	Fluorides (F)	1
	High phosphate	pH	8-9
	NITROGENOUS FERTILIZER		
	Similar problem	Free Ammonia (as NH <sub>4</sub> <sup>+</sup> )	0.1
		Arsenic (as AS)	0.1
		pH	6-9
		NO <sub>3</sub>	20
	UREA FERTILIZER		
	Similar problem	Ammonia (as N)	0.6
		pH	6-9
	PESTICIDES		
		Total Pesticides Less than	0.1
		EMISSION (ug/m <sup>3</sup> )	
(Gaseous Emissions)	Particulate matter from blending and mixing	Particulate	100
	Fluoride	9.0	
	Fluorides	Ammonia	3,600
	Ammonia vapours	Total Pesticides	100
	Pesticide vapours		
(Solid Wastes)	High volume gypsum from fertilizer manufacturer		
AUTOMOTIVE BATTERY		EFFLUENT (mg/l)	
(Waste Water)	Acid Waste Water	Total suspended solids (TSS)	28
		(Waste Water)	10
		pH	6-9
		Iron	0.20
		Cadmium	0.01
		Nickel	10.05
		Copper	0.06
		Lead	0.01
		Cobalt	0.5
		Arsenic	0.1
(Gaseous Emission)	Lead particulate		
(Solid Wastes)	Defective battery casing		
	Defective lead plates		

<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>	
<b>BREWERY</b>			
			<b>EFFLUENT (mg/l)</b>
	Alkaline effluent	Suspended solids	15
	High suspended solids	BOD <sub>5</sub>	30
(Waste Water)	High BOD	pH	6-9
	High COD	COD	80
(Solid Waste)	Spent grain		
	Defective packaging materials and labels		
	Broken bottles		
<b>DYESTUFFS AND DYE INTERMEDIATES</b>			
			<b>EFFLUENT (mg/l)</b>
	Coloured effluent		
	High suspended solids	Suspended solids	5.0
(Waste Water)	High BOD	Zinc (as Zn)	3.0
	High COD	BOD <sub>5</sub>	15
		Oil and grease	15
(Gaseous Emission)	Organic vapour		
(Solid Wastes)	Sludge		
<b>FOOD PROCESSING</b>			
			<b>EFFLUENT (mg/l)</b>
	High BOD <sub>5</sub>	BOD <sub>5</sub>	15
	Oil and grease	Suspended solids	15
(Waste Water)	High suspended solids	oil and grease	15
	Particulate matter from grain elevators, starch manufacturing, feed and flour mills	EMISSION (ug/m <sup>3</sup> )	
		Particulate	100
(Gaseous Emission)	Odours from meat packaging, fish processing, coffee roasting, starch manufacturing and rendering		
	some solid wastes		
(Solid Wastes)			
<b>INORGANIC CHEMICALS</b>			
			<b>EFFLUENT (mg/l)</b>
	Acid waste waters from acid plants	Suspended solids	15
	Gypsum sludge from soda ash plants	Chlorides	100
	Chlorides from soda ash	Sulphates	100
	Plant and electrolytic	pH	6-9
	Chlorine plant mer-cury from electrolytic chlorine plants		
		EMISSION (ug/m <sup>3</sup> )	
	Particulate matter from cement, soda ash and brick plants	Particulates	100
	Fluorides	Acetic acid	2,500
(Gaseous Emission)	Acid mist	Fluorides	100
	SO <sub>2</sub>	Hydrochloric acid	100
	Chlorine (as Cl <sub>2</sub> )	Nitric acid	100
	NO <sub>x</sub> from acid plants	Hydrogen sulphide	30
		SO <sub>2</sub>	830
		NO <sub>x</sub>	500
(Solid Wastes)	Sludges		

Industry	Problems	Guidelines for Maximum concentration allowed for discharge into inland waters
<b>IRON AND STEEL</b>		
(Waste water)	High suspended solids	pH 5.5-9.0
	High phenols	Suspended solids 15
	High ammonia	Ether solubles 10
	High cyanides	Phenol 0.020
	Spent pickle liquors	NH <sub>3</sub> as N 10
	Rolling mill oils	Cyanide (CN) 0.1
		Oil and grease 15
	Fe less than 1.0	
		EMISSIONS ug/m <sup>3</sup>
(Gaseous Emission)	Suspended particulate	Particulate 100
	Sulphur dioxide profrom boilers, sinister plant coke ovens and blast	SO <sub>x</sub> 830
	Furnace	NO <sub>x</sub> 500
	Flue dust	
	Slag	
(Solid wastes)	Sludges	
<b>METAL WORKING, PLATING AND FINISHING</b>		
(Waste Water)	Acids	Hg 0.01
	Cyanides	Cu 1.0
	Toxic metals	Ni 1.0
	Cutting and machine oils	Cr 1.0
		Zn 1.0
		Pb 0.01
		cd 0.01
		Sn 1.0
		TSS 15.0
		pH 5.5-9.5
		EMISSION (ug/m <sup>3</sup> )
(Gaseous Emission)	Acid mist	Chromic acid 30
	Alkaline mist	Cyanide 1,150
	cyanides	Hydrogen chloride 100
	fumes from anodizing, rust-proofing cleaning, stripping, etc. operations	Fluorides 806
		Nitric acid 100
(Solid Wastes)	Sludges containing metals	Phosphoric acid 100
<b>MINING AND METALLURGY</b>		
(Waste Water)	High volume of suspended Solids from milling of ores (tailings)	Suspended solids 15
	Acidic wastes	pH 5.5-9.0
	Dissolved metals from high Sulphide ores processing	Cu less than 1
	Radionu clite	Zn less than 1
	Radioactive effluent from Uranium mining tailings disposal	Ni less than 1
		Nd less than 1
		Pb less than 1
		Ra2263pCi/l



<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>	
			EMISSION (ug/m <sup>3</sup> )
	Airborne dust crushing, grinding etc.	Particulate	100
	generation of arsine, acid fumes, ammonia vapour, radon gas, and radioactivity during uranium	Silica	15
		SO <sub>2</sub>	830
		Ni	5
		Fe	10
		Cu	100
(Gaseous Emission)	Milling operations and dust during yellow cake handling	Arsine	10
	SO <sub>2</sub> generation from smelting operation	H <sub>2</sub> SO <sub>4</sub>	100
		HNO <sub>3</sub>	100
		NH <sub>3</sub>	3,600
(Solid Wastes)	Generation of waste rock and mine/mill waste.		
PETROLEUM REFINERY			EFFLUENT (mg/l)
	High waste volumes containing:	Temperature (°C)	30
	phenolics	pH	6.5-8.5
	sulphides	Oil and grease	10
(Wastes Water)	Oil and oil products (waste water)	Phenol (Total)	0.5
		Ammonia (as NH <sub>4</sub> )	0.210
		Sulphide (as H <sub>2</sub> S)	0.2
		Spent caustics	
		Total suspended solids	30
		BOD <sub>5</sub>	10
		COD	40
		Total chromium	0.3
		Chromium (vi) less than	0.1 0.05
		Lead as pb <sup>2+</sup>	0.05
		Cadmium less than	0.01
		Cyanide less than	0.01
		EMISSION (ug/m <sup>3</sup> )	
	Particulates	Particulate	500
	Sulphur dioxide (SO <sub>2</sub> )	SO <sub>2</sub>	830
(Gaseous Emission)	NO <sub>x</sub>	NO <sub>x</sub>	500
	H <sub>2</sub> S vapours	CO	5,000
	NH <sub>3</sub>	H <sub>2</sub> S	30
	Hydrocarbon vapours	Hydrocarbon	5,000
		Volatile Organic Carbon (VOC)	6,000
(Solid Wastes)	Oily chemical sludges, spent catalyst, discarded packaging materials		
PETROCHEMICALS			EFFLUENT (mg/l)
	High volume waste matter	Temperature (°C)	30
(Waste water)	Storm water	pH	6.5-8.5
	Cooling water	oil and grease	10
		Phenol	0.5

Industry	Problems	Guidelines for Maximum concentration allowed for discharge into inland waters
		Ammonia (MH <sub>4</sub> <sup>+</sup> ) 0.2
		Sulphide as H <sub>2</sub> S 0.2
		Total suspended solids 30
		BOD <sub>5</sub> 10
		COD 40
		Lead as Pb <sup>2+</sup> 0.05
Industries	Problems	Guidelines for Maximum Concentration allowed for discharge into inland waters
		Chromium (VI) <0.1
		Cadmium as Cd <sup>2+</sup> <0.1
(Gaseous Emission)	Particulates	EMISSION (ug/m)
	Carbon black dusts	Particulates 500
	SO <sub>x</sub>	Hydrocarbon 5,000
	NO <sub>x</sub>	Volatile organic carbon (VOC) 6,000
	CO	Benzene 1,500
	Hydrocarbons (HC)	Xylene 2,300
	Benzene	Toluene 2,000
	Xylene	
(Solid Wastes)	Oily chemical sludges	
	Off speck products : (carbon black : polypropy- lene chunks)	
	Spent catalyst	
	Discarded packaging Material	
PETROLEUM EXPLORATION AND PRODUCTION INDUSTRY (Waste Water)	Produced formation water	EFFLUENT (mg/l)
	Oily waste waters	Temperature (°C) 35
	Drilling fluids	pH 6.5-8.5
	Accidental spill of oil	Oil and grease 10
		Total suspended solids 30
		BOD <sub>5</sub> 10
		COD 40
		Lead as Pb <sup>2+</sup> 0.05
		Cr (VI) less than 0.1
		Zinc as Zn <sup>2+</sup> 1.0
		Copper as Cu <sup>2+</sup> 1.5
		Cadmium as Cd <sup>2+</sup> <0.1
(Gaseous Emission)	Hydrocarbon vapours	EMISSION (ug/m <sup>3</sup> )
(Solid Wastes)	drilling mud, drilling cut- tings produced sand domestic wastes oily sludges	Hydrocarbon 5,000

<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>
<b>PHARMACEUTICALS</b>		<b>EFFLUENTS (mg/l)</b>
(Waste Water)	None specified	BOD <sub>5</sub> 30 Total suspended solids 25 pH 6-9
<b>PLASTIC AND SYNTHETICS</b>		<b>EFFLUENTS (mg/l)</b>
(Waste Water)	High BOD High COD containing mercury, plasticisers and PCBs	BOD <sub>5</sub> 10 Total suspended solids 30 (TSS) 40 COD 40 Phenolics less than 0.50 Zinc less than 1.0 Chromium less than 0.01 Oil and grease 10.0 Fluoride (F) less than 1.0 Copper (Cu <sup>2+</sup> ) less than 0.05
(Gaseous Emission)	Volatile organics Hydrocarbons	
(Solid Wastes)	Waste plastic products	
<b>PULP AND PAPER</b>		<b>EFFLUENTS (mg/l)</b>
	High waste volumes containing: suspended bark and fibre from debarking and paper operations; fibres; spend liquors; wash waters from bleaching process; taste and odour producing wastes	BOD <sub>5</sub> 15 COD 100 Suspended solids 30 Bleaching agent should not be detectable Settleable matter 3.0
(Gaseous Emission)		<b>EMISSION (ug/m<sup>3</sup>)</b>
	Particulates, Sulphur dioxide, NO <sub>x</sub> from power boilers, Calcium oxide, Calcium sulphate particulate from lime kilns, Foul gases from digester blow tanks, Particulates and sulphur compounds from recovery boilers.	Particulate 100 Hydrogen sulphide (H <sub>2</sub> S) 100 Sulphur dioxide (SO <sub>2</sub> ) 830 Nitrogen oxides (NO <sub>x</sub> ) 500
(Solid Wastes)	High volumes of bark, saw- dust and clarifier sludge	
<b>RUBBER MANUFACTURING</b>		<b>EFFLUENT (mg/l)</b>
(Waste Water)	BOD Suspended solids Toxic metals	BOD <sub>5</sub> 15 Total suspended solid 10 pH 6-9 Lead (Pb) less than 1 Chromium less than 1 Zinc (Zn) less than 0.1

<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>
(Gaseous Emission)	Foul gases	Volatile Organic Carbon (VOC) <span style="float: right;">EMISSION (ug/m<sup>3</sup>)</span> 2,000
<b>SERVICE INDUSTRIES</b>		
(Waste Water)	Oily waste waters from maintenance shops fueling depots and washing platforms High BOD wastes from tank car washings	<span style="float: right;">EFFLUENT (mg/l)</span> BOD <sub>5</sub> 15 Oil and Grease 10 COD 40 Lead less than 1 Total Chromium less than 0.3 Zinc (Zn) less than 0.1
(Gaseous Emission)	Exhaust fumes from idling containing SO <sub>2</sub> , NO <sub>2</sub> and particulates. Exhaust air from maintenance shop containing particulate, welding fumes, solvents, and paint spray booths, etc.	<span style="float: right;">EMISSION (ug/m<sup>3</sup>)</span> Particulate 100 Sulphur-dioxide (SO <sub>2</sub> ) 830 Nitrogen oxides (NO <sub>x</sub> ) 500 Toulene 2,000 Xylene 2,300 VOC 6,000 Benzene 1,500 CO (hydrocarbons) 5,000
(Solid Wastes)	Rags, wood, soil impregnated with oil or oily wastes due to spills or accidents	
<b>SOAP AND DETERGENT</b>		
(Waste Water)	High pH Oil and grease	<span style="float: right;">EFFLUENT (mg/l)</span> COD 40 BOD <sub>5</sub> 15 Total suspended solids <10 Oil and grease <10 pH 6-9
(Gaseous Emission)	Particulate matter	<span style="float: right;">EMISSION (mg/m<sup>3</sup>)</span> Particulate 100
(Solid Wastes)	Sulphur Oxide packaging material	Sulphur dioxide 830
<b>SUGAR PROCESSING</b>		
(Waste water)	High BOD	<span style="float: right;">EFFLUENT (mg/l)</span> BOD <sub>5</sub> 30 Suspended solids 5 pH 6-9
(Gaseous Emission)	Bagasse dust	<span style="float: right;">EMISSION (ug/m<sup>3</sup>)</span> particulate 500
(Solid Wastes)	Press Cake Bagasse Bagasse ash	

<i>Industry</i>	<i>Problems</i>	<i>Guidelines for Maximum concentration allowed for discharge into inland waters</i>	
TANNERY (Waste Water)	High BOD	Parameter Chrome Vegetable	EFFLUENT (mg/l)
	Suspended solid waster from hide washings	BOD <sub>5</sub>	50(15)* 100 (30)
	High pH	COD	160 (40)* 80 (25)
	High Sulphide	Suspended solids	30(10)* 40 (19)*
	Solid wastes from lime	Total	
	Sulphide treatment of hides	Chromium (iii)	2.0
	Spent vegetable and chrome tanning liquors	Chromium (vi)	0.1
	Grease from rendering operations	Floating matter	Not to be visible to naked eye
		Oil and grease	10 10
		Chlorides (as Cl <sup>-</sup> )	50 50
		pH	6-9 6-9
		Sulphide	1
		Colour	None None
		Odour	None None
(Gaseous Emission)	Particulate Odour in boiler emissions	EMISSION (ug/m <sup>3</sup> )	
		Particulate 100	500
		Hydrogen sulphide	30
Solid Wastes)	Odour from plant processes Solids from screening, sludge		
TEXTILE MILLS (Waste Water)	High pH	Ph	EFFLUENT (mg/l)
	High suspended solids	BOD <sub>5</sub>	6-9
	Colour	COD	20
		Suspended solids	80
		Chromium (vi)	30
		Phenols	<0.10
		Sulphide	0.01
		Coliform 400 MPN/	0.20
		Colour	100ml
		Odour	NS None
			NS None
(Gaseous Emission)	Particulate matter	Particulate	EMISSION (ug/m <sup>3</sup> )
(Solid Wastes)	Sludge Textile Wastes		100

\*() For discharges into small streams.

**Chapter 2**  
**WATER QUALITY STANDARDS**

2.1 Water quality requirements differ for various industries and processes even within the same plant. Water treatment technology is often employed to bring raw process water to the desired quality for each industry. The cost of water treatment will be considerably minimized if less polluting effluents are discharged into water sources for industrial uses. Based on available data, Water Quality Guidelines are presented for selected industries in Tables 2.1 to 2.7 World Health Organizations (WHO) limits for domestic water use are being adopted as FEPA guidelines (Table 2.8).

**2.2 Water and Waste Water Quality Monitoring**

It is important that industries monitor their effluents in-

house while FEPA will also cross-check the effluent characteristics to ascertain the degree of compliance with the proposed guidelines. Analytical methods are conventionally prescribed for all parties to be involved in the monitoring exercises. An overview of the general analytical methods commonly used for the determination of significant parameters in Waters and Waste Waters is given in Table 2.9.

Any of the well tested standard methods for water and waste waters analysis by United States Environmental Protection Agency (USEPA), Department of Environment (DOE) U.K., American Public Health Association (APHA) or American Society for Testing and Materials (ASTM) are hereby adopted for monitoring purposes pending the development of standard methods by FPA. For reporting purposes, the analytical method(s) used shall be specified.

**TABLE 2.1**  
**WATER QUALITY GUIDELINES FOR POWER GENERATION STATION**  
**CONCENTRATION (MG/L) COOLING ONCE-THROUGH**

Parameter	Boiler Fresh	Misc. Brackish*	Feedwater	Uses
Silica	<50	<25	<0.21	-
Aluminum	NS	NS	<0.01	-
Iron	NS	NS	<0.01	<1.0
Manganese	NS	NS	<0.01	-
Calcium	<200	<420	<0.01	-
Magnesium	NS	NS	<0.01	-
Ammonia	NS	NS	<0.07	-
Bicarbonate	<600	<140	<0.5	-
Sulphate	<680	<2700	NS	-
Chloride	<600	<19000	NS	-
Dissolved solids	<1000	<35000	<0.5	1000
Copper	NS	NS	<0.01	-
Hardness	<850	<6260	<0.07	-
Zinc	NS	NS	<0.01	-
Alkalinity (as CaCO <sub>3</sub> )	500	<115	<1	-
pH unit	5.0-8.3	6.0-8.3	8.8-9.4	5.0-9.0
Organic Material Methylene blue active substances	NS	NS	<0.1	<10
Carbon tetrachloride extract	<NS	NS	NS	<10
Chemical Oxygen Demand (COD)	<75	<75	<1.0	-
Dissolved oxygen	-	-	<0.007	-
Total suspended solids	<500	<2500	<0.05	<5

Note:

- = Brackish water-dissolved solids more than 1000 mg/l
- NS = No Specification

TABLE 2.2

## WHAT WATER QUALITY GUIDELINES AT INTAKE FOR THE IRON AND STEEL INDUSTRY CONCENTRATION (MG/L) RINSE WATER

	<i>Hot-rolling quenching gas cleaning</i>	<i>Cold-rolling</i>	<i>Softened</i>	<i>Demineralised</i>
pH	5.0-9.0	5.0-9.0	6.0-9.0	0
Total suspended solids	<25	<10	NS	
Total dissolved solids	<1000	<1000	NS	
Settleable solids	<100	<5.0	NS	
Dissolved oxygen .....	(minimum for aerobic conditions) .....			
Temperature (°C)	<38	<38	38	83
Hardness	NS <sup>b</sup>	NS <sup>b</sup>	100	1.0
Alkalinity	NS	NS	NS	5.8
Sulphate	<200	<200	200	5
Chloride	<150	<150	150	0
Oil	NS	NS	NS	
Floating material	NS	NS	NS	

Note:

NS = No Specification

TABLE 2.3

## WATER QUALITY GUIDELINES AT IN-TAKE FOR THE PETROLEUM INDUSTRY

Parameter	Concentration (mg/l)
pH	6.0-9.0 (No Unit)
Colour	NS
Calcium	<75
Magnesium	<25
Iron	<1
Bicarbonate	NS
Sulphate	NS
Chloride	<200
Nitrate	NS
Fluoride	NS
Silica	NS
Hardness (as CaCO <sub>3</sub> )	<350
Total dissolved solids	<750
Total suspended solids	<10

Note:

NS = No Specification

TABLE 2.4

WATER QUALITY GUIDELINES FOR THE PULP AND PAPER INDUSTRY CONCENTRATION (MG/L)

Parameter	Fine Paper	Groundwater	Bleached	Kraft Unbleached	Chem. Pulp and Paper Bleached	Paper Unbleached
pH	-	-6-8	-	-	6-	6-8
Colour (HU)	<40	<100	<25	<100	<50	<100
Turbidity (NTU)	<10	<20	<40	<100	<10	<20
Calcium	<20	<20	-	-	<20	<20
Magnesium	<12	<12	-	-	<12	<12
Iron	<0.1	<0.1	<0.2	<1.0	<0.1	<1.0
Manganese	<0.3	<0.1	<0.1	<1.0	<0.1	<1.0
Chloride	-	25-75	<200	<200	<200	<200
Silica	<20	<100	<50	<100	<50	<50
Hardness	<100	<100	<100	<100	<100	<100
Alkalinity	40-75	<150	<75	<150	-	-
Total dissolved solids	<200	<250	<300	<500	<200	<200
Total suspended solids	<10	-	-	-	<10	<10
Temperature (°C)	-	-	-	-	<36	-
CO <sub>2</sub>	<10	<10	<10	<10	-	-
Corrosion tendency	Nil	Nil	Nil	Nil	Nil	Nil
Residual Chlorine	<2.0	-	-	-	-	-

TABLE 2.5

WATER QUALITY GUIDELINES FOR THE FOOD BEVERAGE INDUSTRY CONCENTRATION (mg/l)

Parameter	Baking	Brewing	Carbonate beverage	Confectionary	Dairy	Food canning, greezing dried frozen fruits vegetable	Food Processing (general)	Sugar Manufacturing
pH	-	<7.0	6.9	7.0	-	<8.5	-	-
Colour (HU)	10	5	10	-	NS	5	5.10	-
Turbidity (NTU)	10	10	<2	-	-	5	1.10	-
Taste, odour (units)	low	low	NS	low	NS	NS	low	-
Total suspended solids	-	-	NS	low	500	10	-	NS
Total dissolved solids	-	800	850	<100	500	500	850	-
Calcium	NS	100	-	-	-	100	-	20
Magnesium	-	30	-	-	-	10	-	-
Iron	0.2	-	01	0.2	<0.3	0.2	0.2	-
Manganese	0.2	0.1	0.05	0.2	<1.0	0.2	0.2	0.1
Copper	-	-	NS	-	-	-	-	-
Ammonium	-	-	trace	0.5	-	100	-	-
Bicarbonate	-	NS	-	-	-	-	-	-
Carbonate	-	50	5	-	-	-	-	-
Sulphate	-	100	200	-	60	250	-	20
Chloride	-	20.00	250	250	30	250	-	-
Nitrate	-	10	-	-	20	10	-	-
Fluoride	-	1	<1.0	-	-	-	-	-
Silica	-	50	NS	NS	-	50	-	-
Hardness	NS	70	<250	-	80	250	<250	100
Alkalinity	-	85	<128	-	-	<250	<250	-
Hydrogen Sulphide	0.2	0.2	0.2	0.2	-	-	-	-
Oxygen consumed	-	-	15	-	-	-	-	-
Carbon tetrachloride extract	-	-	slight	-	10	0.2	-	-
Chloroform extract Acidity	-	-	0.2	0.2	-	NS	-	-
Acidity	-	-	-	-	NS	-	-	-
Phenol	-	-	-	-	NS	-	-	NS
Nitrate	-	-	NS	NS	-	NS	-	-
Organic matter	-	-	-	-	-	-	-	trace
			trace	trace				

Note:

NS = No specification



TABLE 2.6  
WATER QUALITY GUIDELINES FOR CHEMICAL AND ALLIED INDUSTRIES  
CONCENTRATION (MGL)

Parameter	Alkalines and Chlorine	Organic Chemicals	Inorganic Chemicals	Clear Plastics	Synthetic Rubber	Drugs and Pharma- ceuticals	Soap and Deter- gents	Paints	Ferti- lizers
pH	NS	6.5-8.7	NS	6.2-8.3	NS	NS	NS	NS	NS
Colour units	NS	NS	NS	NS	<20	<5	NS	NS	NS
Turbidity units	-	-	-	<2	-	<1	-	-	-
Taste and odour (threshold)	NS	NS	NS	<2	NS	-	NS	NS	NS
Calcium	<2	<68	NS	NS	<80	NS	NS	NS	NS
Magnesium	<2	<19	NS	NS	<35	-	NS	NS	NS
Iron	<0.1	<0.1	NS	<0.2	<0.1	-	NS	NS	NS
Manganese	<0.1	<0.1	NS	<0.02	<0.1	-	NS	NS	NS
Bicarbonate	NS	<128	NS	NS	-	-	NS	NS	NS
Sulphate	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloride	NS	NS	NS	NS	NS	NS	NS	NS	NS
Nitrate	NS	NS	NS	NS	NS	-	NS	NS	NS
Silica	NS	NS	NS	NS	NS	-	NS	NS	NS
Hardness (as CaCO <sub>3</sub> )	low	<250	NS	NS	<350	-	NS	NS	NS
Alkalinity (as CaCO <sub>3</sub> )	NS	<125	NS	NS	<150	-	NS	NS	NS
Total dissolved solids	NS	NS	NS	<200	NS	-	NS	NS	NS
Total suspended solids	NS	NS	NS	NS	<5	<10	NS	NS	NS
Dissolved Chemical Oxygen Demand	NS	NS	NS	NS	NS	c	NS	NS	NS
Biochemical Oxygen Demand	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 2.7  
WATER QUALITY GUIDELINES FOR THE TEXTILE INDUSTRY  
CONCENTRATION (MG/L)

Parameter	Sizing Suspension	Scouring	Bleaching	Pulp Dyeing	Manufacture	Manufacture
Iron	0.3	0.1	0.1	0.1	0.05(Fe+Mn)	ND
Manganese	0.05	0.01	0.01	0.01	0.03	ND
Copper	0.05	0.01	0.01	0.01	5	-
Total dissolved solids	1.00	1.00	1.00	1.00	1.00	-
Total suspended solids	5	5	5	5	-	-
Hardness (as CaCo)	25	25	25	25	8	25
pH: Cotton	6.5-10.0	9.0-10.5	2.5-10.5	7.5-10.0	-	-
Synthetics	6.5-10.0	3.0-10.0	NA	6.5-7.5	-	-
Wool	6.5-10.0	3.0-5.0	2.5-5.0	3.5-6.0	-	-
Viscose Rayon	-	-	-	-	-	7.8-8.3
Colour (Relative Units)	5	5	5	5	5	-
Turbidity (NTU)	-	-	-	15	5	0.3
Aluminum	-	-	-	-	-	8
Silica	-	-	-	-	-	25
Alkalinity (as CaCO <sub>3</sub> )	-	-	-	-	50-75	50-75

Note:

ND = Not Detected

NA = Not Applicable

TABLE 2.8  
COMPARATIVE FIGURES OF LIMITS FOR SUBSTANCES AFFECTING THE ACCEPTABILITY  
OF WATER FROM DOMESTIC PURPOSES (CONCENTRATION (MG/L))

Substances	W.H.O. International Limits* European					Proposed EEC Limits
	Highest Desirable	Maximum Permissible	USSR Limits	USA Limits	Maximum Admissible Concentration	
Phenolic compound (as phenol)	0.001	0.001	0.001	-	-	0.001
Fluoride (as F)	1.0-1.7 <sup>a</sup>	0.2-7 <sup>a</sup>	0.7-1.5 <sup>b</sup>	1.4-2.4 <sup>a</sup>	-	0.7-15 <sup>a</sup>
Nitrate (as No <sub>3</sub> )	50.100	-	10 (as N)	10 (as N)	-	0.7-1.5 <sup>a</sup>
pH	-	6.5-9.2	6.5-8.2	-	6.5-8.5	9.5
Copper (as (Cu <sup>2+</sup> ))	0.5 <sup>c</sup>	1.5	1.0	-	-	0.05 <sup>c</sup>
Iron (as Fe <sup>2+</sup> )	0.1 <sup>c</sup>	1.0	0.5	-	0.1	0.05
Manganese (as Mn <sup>2+</sup> )	0.05	0.5	0.1	-	0.02	0.5
Zinc (as Zn <sup>2+</sup> )	5.0	15	5.0	-	-	0.1 <sup>c</sup>
Magnesium (as Mg <sup>2+</sup> )	50.125 <sup>d</sup>	150	-	-	50	50
Sulphate (as So <sub>4</sub> <sup>2-</sup> )	150	400	500	-	5	250
Hydrogen Sulphate (as H <sub>2</sub> S)	0.05	-	Sulphides:	-	-	nil
Chloride (as Cl)	200-600	600	350	-	5	200
Chlorine (fee)	-	-	nil	-	-	-
Anionic detergent	0.2	1.0	individual limits	-	-	0.1
Ammonia (as NH <sub>4</sub> )	0.5	-	2.0 (as N)	-	0.05	0.5
Carbon dioxide (free)	nil	-	-	-	-	-
Calcium (as Ca <sup>2+</sup> )	-	200	-	-	100	-
Mineral Oil	-	0.5	0.5	0.1	-	0.01
Mineral Oil with high Sulphur content	-	0.1	0.1	-	-	-
Turbidity (units)	-	5	1.5	1 <sup>c</sup>	5	10
Organics	0.2-0.5	-	-	0.7	0.1	-

- (a) Depending on temperature  
 (b) Varies according to climatic conditions  
 (c) Under certain circumstances higher levels  
 (d) Depending on sulphate concentration  
 (e) Carbon Chloroform Extract WHO Limits is being adopted as FEPA Guidelines.

TABLE 2.9

SOME IMPORTANT WATER QUALITY TESTS, THEIR MAJOR SIGNIFICANCE AND GENERAL MEANS OF MEASUREMENT

<i>Quality Parameter</i>	<i>Significance</i>	<i>General Method of Analysis; Expression of Results</i>
Colour (apparent)	Suspended and dissolved solids	Colorimetry method: comparison with platinum cobalt standard: unit of colour being produced by 1 mg/l platinum in the form of chroplatinate iron.
Odour	Most organic and some inorganic chemicals	Subjective perceived odour: threshold number
Turbidity	Estimate of suspended matter	Jackson candle turbidimetry (Jackson units) or Nephelometry method (Formazin units)
Dissolved oxygen	Potential for oxidation of organic matter; life support	Titrimetry or electrochemical method percent saturation or mg/l O <sub>2</sub>
Carbon dioxide	Aerobic/anaerobic decomposition of organic matter; carbonate equilibrium	Nomographic, titrimetry mg/l of CO <sub>2</sub>
Total suspended solids	Turbidity: treatment efficiency	Gravimetry; mg/l
Settleable solids	Turbidity; treatment	Gravimetry; mg/l
Total dissolved solids	Salinity: may affect ecosystems and domestic and agricultural usefulness	Gravimetry; mg/l
Total solids	General polluting potential	Gravimetry; mg/l
Calcium	Hardness: Scale formation	Titrimetry and gravimetry mg/l of CaCO <sub>3</sub>
Total Organic Carbon (TOC)	Extent of organic matter	Titrimetry and colorimetry; mg/l of carbon
Organic nitrogen	Extent of nitrogenous organic matter	<i>Colorimetry of titrimetry mg/l of organic nitrogen</i>
Ammonia nitrogen	Extent of nitrogenous organic matter (proteins) toxicity	Titrimetry: mg/l of ammonia nitrogen
Nitrate nitrogen	Extent of oxidation of NH <sub>3</sub> plant nutrient may serve as source of O <sub>2</sub> , toxic in excessive amounts (Methaemoglobinemia)	Colorimetry: mg/l of ammonia nitrogen

<i>Quality Parameter</i>	<i>Significance</i>	<i>General Method of Analysis; Expression of Results</i>
Nitrite nitrogen Phosphate	Extent of oxidation of NH <sub>3</sub> plant nutrient may serve as source of O <sub>2</sub> , toxic in excessive amounts (Methaemoglobinemia) Plant nutrient	Colorimetry: mg/l of nitrite nitrogen Colorimetry: mg/l of phosphate as PM <sub>4</sub> <sup>3-</sup>
Sulphate	Possible reduction to H <sub>2</sub> S: corrosion of concrete, possible gastrointestinal irritation	Gravimetry or colorimetry: mg/l of sulphate as SO <sub>4</sub> <sup>2-</sup>
Cyanides	Toxic potential	Colorimetry; mg/l or titrimetry: mg/l or cyanide
Phenols	Toxic potential odour; taste	Titrimetry, chromatography or colorimetry: mg/l of phenol
Synthetic detergents	Foam: toxic potential: taste	<i>Colorimetry or titrimetry: mg/l of specific detergent</i>
Pesticides	Toxic potential	Gas chromatography method: mg/l of pesticide
Iron	Taste: discolouration: turbidity; growth of (iron) bacteria	Colorimetry or atomic absorption spectroscopy: mg/l of iron
Magnesium	Hardness: taste, possible gastrointestinal irritation, scale formation	Colorimetry or atomic absorption spectroscopy: mg/l or magnesium
Hardness	Soap consumption; scale formation	Titrimetry: mg/l of CaCO <sub>3</sub>
pH value	Intensity of acid or alkali present, strength of effluents affects many chemical and biological properties	
Chloride ion	Degree of pollution, sewage; degree of salt water intrusion; taste, corrosion in her water systems	Titrimetry or colorimetry: mg/l of Cl
Stability/saturation with respect calcium carbonate	Ability to maintain oxidised condition: tendency to revert to anaerobic conditions with foul odours	Stability/saturation index
Biochemical Oxygen Demand (BOD)	Extent of biodegradable organic matter	Measurement of dissolved oxygen before and after incubation for 5 days at 20°C: mg of oxygen consumed per litre
Chemical Oxygen Demand (COD)	Organic matter susceptible to oxidation by a strong chemical oxidant	Titrimetry: mg/l of oxygen consumed from standard dichromate solution
Permanganate values	Oxidizable inorganic matter, also oxidised organic matter	Titrimetry: mg/l or oxygen consumed from a standard permanganate solution

### Chapter Three

## INTERIM GASEOUS EMISSION AND AMBIENT AIR QUALITY LIMITATIONS

### 3.1 Gaseous Emission Limitations

Guidelines for emission limits from stationary sources represent maximum allowable levels of pollutants from a site, process, stack, vent, etc. with the objective of

achieving a desired air quality. The prescribed emission limits depend on socio-economic and political considerations. Sources and types of pollutants are given in Table 3.1

Based on available data in literature, the proposed guidelines for emission limits for particulates in stationary sources as well as for specific pollutants are given in Tables 3.2 and 3.3, respectively.

TABLE 3.1  
SOURCES AND TYPES OF AIR POLLUTANTS

Type	Aerosol	Gases	Vapour
Combustion process	Dust fume	SO <sub>2</sub>	Organics, acids
Automotive engines	Fume, smoke	NO <sub>2</sub> SO <sub>2</sub>	CO, acids
Chemical process	Dust, mist fume, SpMy	Process dependent CO <sub>2</sub> SO <sub>2</sub> NH <sub>3</sub> H <sub>2</sub> S	Odour, acids, solvents organics
Fluoro and electro-metallurgical process	Dust, fume	SO <sub>2</sub> CO fluorides	Organics
Petroleum Operations	Dust, fume	SO <sub>2</sub> H <sub>2</sub> S NH <sub>3</sub> CO	Hydrocarbons, mercaptans
Quality Parameter	Significance	General Method of Analysis; Expression of Result	
Mineral processing	Dust, fume	Process dependent SO <sub>2</sub> , CO AsH <sub>3</sub> fluorides	Organics
Food and feed operations	Dust	-	Odours
Biological decay sewage and refuse	Fume, mist	CH <sub>4</sub> H <sub>2</sub> S	Odours
Wind storms	Dust	-	
Explosives (TNT)	Dust	No <sup>2</sup> HN <sup>2</sup> O (Mist) <sup>3</sup> H <sub>2</sub> SO (Mist) <sup>4</sup>	
Cement	Dust	SO <sub>2</sub> NO <sub>2</sub>	

Type	Aerosol	Gases	Vapour
Primary aluminium (bauxite)	Dust, fluoride particulates	fluoride	-
Kraft pulp	Dust	SO <sub>2</sub> CO H <sub>2</sub> S	Methyl sulphide methyl mercaptans
Chlor-alkali Integrated steel mills	- Dust, particulates, fluoride	Cl <sub>2</sub> CO, gaseous fluorides NH <sub>3</sub> SO <sub>2</sub>	Mercury
Metallurgical coke	Dust	SO <sub>2</sub> CO, NO <sub>2</sub>	Hydrocarbons
Petroleum refining	Hydrocarbons NO <sub>2</sub> NH <sub>3</sub>	SO <sub>2</sub> CO, hydrocarbons	Aldehydes,

TABLE 3.2

EMISSION LIMITS FOR PARTICULATES FROM STATIONARY SOURCES

Substance	Limits (mg/m <sup>3</sup> )
COMBUSTION OF FUELS	
Dark burning (pulp mills)	250
Blast furnace gas burning	50
Central Stations	200-500
Coal burning	100-500
Oil burning	50-250
Heavy oil burning	50-300
Solid oil burning	100-500
Incineration of refuse	150-1,000
Asphalt plants	70-5,000
Carbon black manufacture	40-60
Cement production	150-500
Coal processing	150
Coke Manufacture (metallurgical)	40-60
Electrode manufacture (metallurgical)	150
Furnaces	75-600
Kilns (cement)	75-600
Kilns (ceramics)	150-600
Kilns (lime)	300-600

TABLE 3.3

## EMISSION LIMITS FOR SPECIFIC POLLUTANTS FROM STATIONARY SOURCES

Source	Limits (mg/m <sup>3</sup> )
Acid gases	200-9,000
Aldehydes	20
Ammonia	3 kg/hour
Antimony	20-100
Arsenic	20-100
Asbestos fibre	NS
Benzenè	24.0 kg/hour
Beryllium	0.1
Cadmium	1.0-40
Carbon	50-250
Carbon dioxide	10% by volume
Carbon disulphide	100-500
Chlorine	3.0-200
Copper	20
Formaldehyde	0.5 kg/hour
Fluorine	1.0-100
Fluorine compounds	20-50
Heavy metals (Total)	10.0
Hydrocarbon	50
Hydrochloric acid	100
Hydrofluoric acid	100
Hydrogen fluoride	1.0230
Hydrogen sulphide	5-1,500
Lead	10-100
Manganese	0.1 kg/hour
Mercury	1.0-230
Nickel	20
Nickel carbonyl	0.5
Nitric acid	500-4,000
Nitrogen oxides	350-100
Organic compounds	50
Sulphur dioxide	30-3,000
Sulphur acid	5.0-1,000
Sulphur trioxide	100-200
Sulphur trioxide and sulphuric acid mist	0.8 kg/ton acid
Vinyl chloride	10-200 PPM

### 3.2 Ambient Air Standards

Since emissions from industries and other sources have impact on ambient air it is of utmost importance to prescribe guidelines for safe levels of air pollutants tolerable to humans, aquatic organisms and vegetation.

Table 3.4 indicates Guidelines for Mgerian Ambient Air limits for conventional pollutants while Table 3.5 gives levels for specific substances in the air.

### 3.3 Monitoring of Gaseous Emission and Ambient Air Limits

A summary of analytical methods for determination of air pollutants is given in Table 3.6 Standard method(s) of analysis from USEPA, DOE, EEC and SCOPE for the purpose of surveillance and monitoring studies are adopted pending the development of standard methods by FEPA.

#### Note

\*NS-None Specified emission standard for asbestos fibres is at present exceedingly difficult to define

**TABLE 3.4**  
NIGERIAN AMBIENT AIR QUALITY STANDARD

<i>Pollutants</i>	<i>Time of Average</i>	<i>Limit</i>
Particulates	Daily average of daily values 1 hour.	250 ug/m <sup>3</sup> *600 ug/m <sup>3</sup>
Sulphur oxides (Sulphur dioxide)	Daily average of hourly values 1 hour	0.01 ppm (26 ug/m <sup>3</sup> ) 0.1 ppm (26 ug/m <sup>3</sup> )
Non-methane Hydrocarbon	Daily average of 3-hourly values	160 ug/m <sup>3</sup>
Carbon monoxide	Daily average of hourly values 8-hourly average	10 ppm (11.4 ug/m <sup>3</sup> ) 20 ppm (22.8 ug/m <sup>3</sup> )
Nitrogen oxides (Nitrogen dioxide)	Daily average of hourly values (range)	0.04 ppm-0.06 ppm (75.0 ug/m <sup>3</sup> -113 ug/m <sup>3</sup> )
Photochemical oxidant	Hourly values	0.06 ppm

**TABLE 3.5**  
TOLERANCE LIMITS FOR AMBIENT AIR POLLUTANTS

<i>Pollutants</i>	<i>Long-Term mg/m<sup>3</sup></i>	<i>Limits + (hours)</i>	<i>Short-term mg/m<sup>3</sup></i>	<i>Limits + (min.)</i>
Acetic acid	0.06	24	0.2	30
Acetone	0.35	24	0.35	30
Ammonia	0.20	24	0.2	30
Aniline	0.03	24	0.05	30
Benzene	0.8	24	1.5	30
Cadmium	0.003	24	0.01	30
Chromium	0.001	24	0.0015	30
Dichloromethane	1.0	24	3.0	30
Diethylamine	0.05	24	0.08	30
Diethylether	65.00	12	155.0	30
Dimethylamine	0.005	24	0.005	30
Dimethyl disulphide	0.2	24	0.7	30
Carbon monoxide	1.0	24	5.0	30
Carbon tetrachloride	2.0	24	4.0	30

*Note:*

\*Concentration not to be exceeded for more than once a year.



<i>Pollutants</i>	<i>Long-Term mg/m<sup>3</sup></i>	<i>Limits + (hours)</i>	<i>Short-term mg/m<sup>3</sup></i>	<i>Limits + (min.)</i>
Chlorine	0.03	24	0.1	30
Chloroform	10.0	12	50.0	30
Dimethyl sulphide	0.05	24	0.08	30
Ethanol	5.0	24	5.0	30
Ethylene	5.0	24	5.0	30
Ethylene oxide	0.5	24	0.8	30
Fluorides (as F-	0.005	24	0.02	30
Fluorides	0.01	24	0.08	30
Formaldehyde	0.012	24	0.055	30
Furfural	0.05	24	0.08	30
Hexachoronhexane	0.01	24	0.08	30
Hydrochloric acid	0.006	24	0.006	30
Hydrocarbons (total)	2.0	24	5.0	30
Hydrogen cyanide	0.01	24	-	-
Hydrogen sulphide	0.008	24	0.008	30
Lead	0.005	24	0.002	30
Lead sulphide	0.001	24	-	-
Malathion	-	0.015 ppm	-	30
Intrathion	0.001	24	0.001	30
Manganese	0.01	24	0.03	30
Mercury	0.0003	24	-	-
Methanol	0.5	24	1.0	30
Methyl acetate	0.07	24	0.07	30
Methyl acrylate	0.01	24	0.08	30
Methyl methacrylate	0.1	24	0.1	30
Methyl parathion	-	-	0.008	30
Methylene chloride	20.0	12	55.0	30
Mono methylamine	0.01	24	0.01	30
Naphthalene	0.008	24	0.008	30
Nitric acid	0.006	24	0.006	30
Nitrobenzene	0.008	24	0.008	30
Nitrogen dioxide	0.085	24	0.085	30
Nitrogen monoxide	0.4	12	0.8	30
Nitrogen oxides	0.004	24	0.1	30
Oxidants	0.08	24	0.1	30
Ozone	0.1	24	0.2	30
Pentane	25.1	24	100.0	30
Phenol	0.1	24	0.8	30
Phosphoric acid	0.1	24	0.8	30
Phosphorus Pentoxide	0.5	24	0.15	30
Propanol	0.5	24	1.00	30
Propylene	5.0	24	5.0	30
Pyridine	0.08	24	0.08	30
Silica	0.02	24	5.0	30
Soot	0.05	24	0.1	30
Styrene	0.08	24	0.008	30
Sulphur Dioxide	0.05	24	0.5	30
Sulphuric Acid	0.1	24	0.5	30
Suspended Particulates	0.15	24	0.5	30
Tetrahydrofuran	0.2	24	0.2	30
Tetrachloromethane	-	-	4.0	30
Thiophene	-	-	0.6	30
Toluene	0.6	24	0.6	30
Toluene Dissocyanate	0.02	24	0.05	30
Trichloroethylene	1.0	24	0.14	30
Triethylamine	0.14	24	0.14	30
Turpentine	25.0	12	75	30
Vanadium Pentoxide	0.002	24	-	-
Vinyl Acetate	0.15	24	0.15	30
Xylene	0.2	24	0.2	30

TABLE 3.6

COMMONLY MEASURED AIR POLLUTANTS AND METHODS USED

<i>Pollutant</i>	<i>Methods</i>
Grit and dust fall	bucket, jar, British standard deposit gauge (monthly)
Suspended particulates	USA high volume filter (gravimetric; 8 hourly)
- Total	British Standard Smoke Filter
- Smoke	(Soil Index; Daily) Tape-Filter (Soiling Index: hourly)

<i>Pollutant</i>	<i>Long-term Limits</i>	<i>Short-term Limits</i>
	<i>mg/m<sup>3</sup> + (hours)</i>	<i>mg/m<sup>3</sup> + (min.)</i>
Sulphur Dioxide	West-Gaeke (specific for SO <sub>2</sub> ; daily) H <sub>2</sub> O <sub>2</sub> followed by analysis for sulphate (specific for SO <sub>2</sub> ; daily) H <sub>2</sub> O <sub>2</sub> followed by titration or determination of conductivity (not gaseous acidity; daily or continuous) Coulometric (specific for SO <sub>2</sub> ; continuous) Statmann silical gel (8-hourly)	
Sulphuric Acid Mist	Double Filtration (Daily)	
Carbon Monoxide	Non-Dispersive infra-red (continuous)	
Ozone	Chemiluminescence	
Oxidants	Neutral KI (daily)	
Methane	Flame Ionization (continuous)	
Higher Hydrocarbons	Flame Ionization (continuous)	
Nitric Oxide	Chemiluminescence - reaction with O <sub>3</sub> (continuous)	
Nitrogen Dioxide	Chemiluminescence - reduction to NO then reaction with O <sub>3</sub> (continuous)	

Continuous methods are those operating automatically

**Chapter Four**  
**NOISE EXPOSURE LIMITS**  
**FOR NIGERIA**

4. Industrial or workplace noise arises from occupational exposure of workers to noise from industrial machines or exposure of neighbourhood population to noise from factories nearby. This is quite important in the country as most industrial estates exist alongside or close to residential areas. Other sources of noise include,

aircrafts, loud music and public address systems. Exposure to industrial and other forms of noise can induce hearing loss and other pathological changes in the affected population.

Hence, it is recommended that daily noise exposure for workers should not exceed 90 decibels, dB(A) daily for a 8-hour working period. Equivalent 8-hour exposure calculations are shown in Table 4.1 Noise exposure limits for Nigeria are shown in Table 4.2.

TABLE 4.1

EQUIVALENT 8-HOUR EXPOSURE ( $L_8$ )  
CALCULATIONS

Proposed summation formula for estimating equivalent 8-hour noise exposure at the workplace is shown below.

$$D = \frac{t_1}{T_1} + \frac{t_2}{T_2} + \frac{t_3}{T_3} + \frac{t_n}{T_n}$$

where:

- D = Daily noise dose (must not exceed unity)  
 t = Actual exposure time at a given noise level  
 T = Permissible exposure time at that level in accordance with the table 4.2.  
 n = Number of discrete periods of exposure above 90 dB (A)

## NOTE:

1. Maximum Exposure corresponds to D = 1.0 control required for D > 1.0
2. Noise levels below 90 dB (A) are not included in the summation.

TABLE 4.2

## NOISE EXPOSURE LIMITS FOR NIGERIA

Duration Day, Hour	Permissible Exposure Limit dB (A)
8	90
6	92
4	95
3	97
8	90
6	92
4	95
3	97
2	100
1.5	102
0.5	110
0.25 or less	115

Note: Exposure to impulsive or impact noise should not exceed 140 dB (A) peak sound pressure level.

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APPENDIX

WATER USE IN SELECTED MAJOR MANUFACTURING INDUSTRIAL GROUPS IN NIGERIA

Code	Industrial	<i>Total Number of Companies Visited</i>			
		Companies	Employees	Industrial Water used M <sup>3</sup> /Yr	Industrial Waste Water M <sup>3</sup> /Yr
31.	Feed and Allied Products	1	2,200	936,000	102,289.5
32.	Textile Mill Products	6	3,400	780 x 10 <sup>6</sup>	729 x 10 <sup>6</sup>
34.	Paper and Allied Products	4	2,491	76,440 x 10 <sup>6</sup>	72,060 x 10 <sup>6</sup>
35.	Chemical and Allied Products	7	5,979	429,524 x 10 <sup>6</sup>	604 x 10 <sup>6</sup>
35.	Pharmaceutical Products	4	1,097	6.8 x 10 <sup>6</sup>	3.5 x 10 <sup>6</sup>
36-58.	Metal Products	7	4,122	686.4 x 10 <sup>6</sup>	565.2 x 10 <sup>6</sup>
	Miscellaneous Manufacturing Industries	3	1,370	1.07 x 10 <sup>6</sup>	870,000

APPENDIX 2

EXAMPLES OF GLOBAL HUMAN DISASTER EPISODES CAUSED BY INDUSTRIAL POLLUTION AND ACCIDENTS

<i>Country and Year</i>	<i>Nature of Disaster</i>
1. Oppau, Germany, Sept. 21, 1921	The biggest chemical explosion in Germany history occurred in a warehouse about fifty (50) miles south of Frankfurt when workers used dynamite to pry loose 4,000 tons of caked ammonium nitrate fertilizer. The blast killed 561 people and levelled houses four miles away.
2. Cleveland, Ohio, U.S.A. Oct. 20, 1944	A liquified-natural-gas tank belonging to the East Ohio Gas Company developed a structural weakness that led to a huge explosion. The blast and fire killed 131.
3. Texas City, U.S.A	The freighter 'High flyer' loaded with ammonium nitrate fertilisers exploded in the harbour. The toll: 578 dead; 2,000 seriously injured
4. Ludwigshafau, Germany, July 28, 1948	A railway car transporting dimethyl-tether, used in making acetic acid and dimethyl-sulphate, to the 1.6 Farben Chemical Plant, exploded inside the factory gates. The blast and resulting fire killed 207 people and injured 4,000.
5. Nigeria, 1960s	Many reported cases of human poisoning by Gamalin 20 at University College Hospital, Ibadan from the cocoa producing areas of the old Western Nigeria.
6. Minamata, Japan, 1953-60	Methylmercury poisoning of people eating fish polluted by mercury. Toll: 120 deaths, many victims hospitalised.
7. Niigata, Japan, 1964-65	Similar incident to No. 6 Toll: 48 deaths.
8. Vietnam, 1960s	High birth defects recorded in areas where U.S.A. forces applied 2,4,5-T herbicide for de-foliation of forests during the Vietnam war.

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9. Ghana, 1967  
Methylmercury poisoning from fish. Toll: 144 deaths.
  10. Tijuana, Mexico, 1968  
Severe intoxication of people after eating baking products contaminated with parathion pesticide.
  11. Pakistan, 1969  
Methylmercury poisoning from fish. Toll: 100 deaths.
  12. Iraq, 1971  
Methylmercury poisoning from eating rice treated chemically for planting. Toll: 1,000 deaths.
  13. Almagordo, New Mexico  
Pigs poisoned and deaths recorded from ingestion of grains treated with organomercurial fungicides. Farmers poisoned from eating contaminated pork.
  14. Flixborough on Plumberside, England Jumel, June 1, 1976  
Britain's biggest peace time explosion occurred at the Nypro (U.K.) Ltd Chemical Plant when a pipe ruptured. The plant produced caprolactum, which is woven into Nylon. Toll: 28 workers killed. Every building on the 60 acre site levelled.
  15. Pakistan, 1976  
Malathion poisoning of 7,500 public health field workers. 5 deaths reported.
  16. U.S.A., 1976  
Kepon poisoning of industrial workers.
  17. Seveso Italy, July 10, 1976  
Accidental release of poisonous Dioxin due to an explosion at the Heffmann-la Roche plant.
  18. Love Canal, Niagara Falls, 1977  
Human poisoning, high birth defects rate, from pesticides and industrial chemicals buried under ground 25 years earlier. Over 60 million dollars were spent in clean-up
  19. Akure, Ondo State, Nigeria, 1982  
20 public health field workers poisoned by malathion in Ondo State.
  20. Mexico City, Nov. 19, 1984  
Liquified gas tanks exploded at the San Juan Ixhuatepec Storage Facility operated by State-owned Petroleos Mexicanos. The resulting fire took 452 lives and injured 4,248 in Mexico's largest industrial disaster; 1,000 people are still missing
  21. Bhopal, India Dec. 4, 1984  
2,500 people killed in the Industrial city of Bhopal due to accidental release of poisonous methyl Isocyanate gas from Union Carbide's Pesticide plant due to a faulty pump. Over 50,000 people were affected and treated for various ailments. Claims running into several billion dollars were instituted against Du Pont Company by the victims
  22. Onne, Nigeria, 1988  
Accidental discharge of water containing high ammonia level into Okrika River from NAFCON, a fertiliser company, near Port Harcourt, caused massive fish kill and socio-economic problems for the artisanal fishery industry in the surrounding village. The villagers are claiming about N3 million compensation from the Company
  23. Idimangoro, Agege, Lagos; Nigeria, 1979  
Combined industrial effluent from Ikeja Industrial Estate through WEMABOD Treatment Plant which had broken down, spilled into Idimangoro area due to the blockage of one of the manholes on the effluent channel. Drinking well waters in the area were grossly polluted. The foundation of one of the houses affected by the spillage caved in. The occupants were evacuated.
-

24. Kaduna, Nigeria, 1987  
 Petroleum product spillage from the Kaduna Refinery into Rome and Rido Rivers had occurred unabated. Well waters in Rido Village as well as the Rido and Romi Rivers were grossly polluted. Compensation of more than N3 million have been paid to the villagers affected by the pollution problems caused.
25. Chernobyl, USSR, 26th April, 1986  
 Nuclear plant explosion. Radiation fall out contaminated total environment over a radius of 30-60 kilometres. Agricultural products, meat and fish were declared unfit. Evacuation of people from vicinity of plant.
26. Basel, Switzerland, 1st Nov., 1986  
 Fire accident occurred in Sandoz Company, a chemical company. Large quantities of toxic chemicals, insecticides and herbicides were washed into Rhine River by water used in quenching the fire. Massive fish kill involving several thousand tons of fish occurred over several kilometres along the River and across many countries. River Thine water was therefore declared unsafe for human use.
27. Koko, Bendel State, Nigeria June, 1988  
 3,888 tons of assorted toxic wastes from Italy were found to have been illegally dumped at the fishing Port of Koko. The Government ensured that the wastes were returned to Italy and promulgated Decree 42 of 1988 to forestall future re-occurrence. The environmental implications of this dumping episode are yet to be fully realised.

APPENDIX 3

CATEGORIES OF WASTES TO BE CONTROLLED ACCORDING TO UNEP BASEL CONVENTION FINAL ACT, 1989

**3:0. Waste Streams**

- Y1 Clinical wastes from medical care in hospitals, medical centers and clinics
- Y2 Wastes from the production and preparation of pharmaceutical products
- Y3 Waste pharmaceuticals, drugs and medicines
- Y4 Wastes from the production, formulation and use of biocides and phytopharmaceuticals
- Y5 Wastes from the manufacture, formulation and use of organic solvents
- Y6 Wastes from the production, formulation and use of organic solvents
- Y7 Wastes from heat treatment and tempering operations containing cyanides
- Y8 Waste mineral oils unfit for their originally intended use
- Y9 Waste oils/water, hydrocarbons/water mixtures, emulsions
- Y10 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs)
- Y11 Waste tarry residues arising from refining, distillation and any pyrolytic treatment
- Y12 Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish
- Y13 Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives
- Y14 Waste chemical substances arising from research and development or teaching activities which are not identified and/or the environment are not known
- Y15 Wastes of an explosive nature not subject to other legislation
- Y16 Wastes from production, formulation and use of photographic chemicals and processing materials
- Y17 Wastes resulting from surface treatment of metals and plastics
- Y18 Residues arising from industrial waste disposal operations

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**Wastes having as Constituents**

- Y19 Metal carbonyls
- Y20 Beryllium: beryllium compounds
- Y21 Hexavalent chromium compounds
- Y22 Copper compounds
- Y23 Zinc compounds
- Y24 Arsenic: arsenic compounds
- Y25 Selenium: selenium compounds
- Y26 Cadmium: cadmium compounds
- Y27 Antimony: antimony compounds
- Y28 Tellurium: tellurium compounds
- Y29 Mercury: mercury compounds
- Y30 Thallium: thallium compounds
- Y31 Lead: lead compounds
- Y32 Inorganic fluorine compounds excluding calcium fluoride
- Y33 Inorganic cyanides
- Y34 Acidic solutions or acids in solid form
- Y35 Basic solutions or bases in solid form
- Y36 Asbestos (dust and fibres)
- Y37 Organic phosphorous compounds
- Y38 Organic cyanides
- Y39 Phenols: phenol compounds including chlorophenols
- Y40 Ethers
- Y41 Halogenated organic solvents
- Y42 Organic solvents excluding halogenated solvents
- Y43 Any congener of polychlorinated dibenzo-furan
- Y44 Any congener of polychlorinated dibenzo-dioxin
- Y45 Organohalogen compounds other than substances referred to in this Section (e.g. Y39, Y41, Y42, Y43, Y44).

APPENDIX IV

FEDERAL ENVIRONMENTAL PROTECTION AGENCY  
FEPA DECREE NO. 58 OF 1988  
HARMFUL WASTES (SPECIAL PROVISION)  
DECREE NO. 42 OF 1988

APPLICATION FOR AN INDUSTRIAL WASTE DISCHARGES/DISPOSAL PERMIT

FULL NAME AND ADDRESS OF REGISTERED PLANT .....

LOCATION OF SITE .....

AUTHORITY TO OPERATE ..... PLANT IN NIGERIA

(LICENCE NUMBER .....

LOCATION OF POINT SOURCES: .....

WASTE CHARACTERISTICS-TYPE Mode/State (Liquid, gaseous, solid etc; constituents and their concentrations; volume/quantity, etc:

.....  
.....  
.....

DETAILED DESCRIPTION OF THE TREATMENT(S) AND DISPOSAL METHOD(S):

.....  
.....  
.....

(The description shall be in a form of an Environmental Evaluation Report for already operating plants and an Environmental Impact Assessment for new plants).

.....

I declared that all the foregoing information is correct to the best of my knowledge.

.....  
Name/Signature of Applicant or  
His Attorney

.....  
Date

*Note:* Guidelines on the contents of Environmental Impact Assessment and Environmental Evaluation Report are as made available by Federal Environmental Protection Agency (FEPA)



APPENDIX V

FEDERAL ENVIRONMENTAL PROTECTION AGENCY  
 FEPA DECREE NO. 58 OF 1988  
 HARMFUL WASTES (SPECIAL PROVISION)  
 DECREE NO. 42 OF 1988

P/No. ....

INDUSTRIAL WASTE DISCHARGE/DISPOSAL PERMIT

The Director/Chief Executive of the Federal Environmental Protection Agency (FEPA), hereby grant an Industrial Waste Disposal Permit, in Pursuant to an application for Registration dated ..... day of ..... 19 ..... in respect of the following:

FULL NAME AND ADDRESS OF PERMIT HOLDER .....

LOCATION OF SITE TO WHICH PERMIT RELATES .....

MODE OF DISCHARGE OF DISPOSAL TO WHICH THIS PERMIT RELATES .....

TYPE/VOLUME/QUALITY OF WASTES/WASTES/WASTESTREAM OF WHICH DISCHARGE OR DISPOSAL IS AUTHORISED .....

.....

This permit is granted subject to the following conditions:

.....  
 Name and Signature

.....  
 Date

*Note:*

1. The following conditions shall apply to:
  - 1a. Industrial SoUd Waste  
 appropriate site preparation pre-determination of
    - (i) Depth to groundwater
    - (ii) Direction of Groundwater flow
    - (iii) Groundwater of Characteristics  
 Available provisions for leachate containment
    - (iv) Available provision for leachate sampling and analysis

APPENDIX VI

FEDERAL ENVIRONMENTAL PROTECTION AGENCY  
FEPA DECREE NO. 58 OF 1988  
HARMFUL WASTES (SPECIAL PROVISION)  
DECREE NO. 42 OF 1988

ABATEMENT NOTIFICATION FOR NON COMPLIANCE  
WITH PERMIT CONDITIONS

To: .....  
.....  
.....

Whereas the Federal Environmental Protection Agency on ..... 19 .....  
granted you a waste disposal/discharge Permit relating to .....

and Whereas it appears to the Agency that the following condition(s) specified in the Permit is/are not being complied with, namely:

.....  
.....  
.....

Now the Federal Environmental Protection Agency hereby require you to comply with the said condition(s) before

Failure to do so shall result in the revocation of the Permit

.....  
Signed

.....  
Date

.....  
Designation

.....  
Name

APPENDIX VII

FEDERAL ENVIRONMENTAL PROTECTION AGENCY FEPA DECREE NO. 58 OF 1988

HARMFUL WASTES (SPECIAL PROVISION)  
DECREE NO. 42 OF 1988

NOTICE OF REVOCATION OF PERMIT TO DISCHARGE/DISPOSE OF  
INDUSTRIAL WASTES

To: .....  
.....  
.....

Whereas the Federal Environmental Protection Agency on ..... 19..... granted you a  
Waste Disposal Permit No ..... , relating to .....

AND WHEREAS it appears to the Agency that the continuation of activities to which the permit relates would cause  
pollution or danger to public health or would be so seriously detrimental to the amenities of the locality affected by the  
activities that the continuation of them ought not to be permitted and that the pollution, danger or detriment cannot be  
avoided by modifying the conditions specified in the permit;

AND WASTES a notice by the Agency dated .....  
19 ..... requiring you to comply with the following condition(s), namely;

.....  
.....

before ..... ,19 ..... was served upon  
you on ..... , 19 ..... and you have not  
complied with the said conditions within the said period: Now the Agency HEREBY GIVES  
NOTICE that the said permit to REVOKED with

.....  
Signature

.....  
Designation

APPENDIX 8

FEDERAL ENVIRONMENTAL PROTECTION AGENCY FEPA DECREE NO. 58 OF 1988

HARMFUL WASTES (SPECIAL PROVISION)  
DECREE NO. 42 OF 1988

CERTIFICATE OF SAMPLING

This is to certify that .....

*Name of Registered Plant*

discharging treated waste/storm water/solid waste into:

.....

*identify point of discharge*

from a treatment plant .....

*identify unit/code*

has collected water sample(s)/solid wastes samples from/at .....

*identify point of source*

.....

on ..... at .....

*(dated)*

*(Time)*

Sample(s) has/have been taken to

*(identify laboratory)*

for the analyses of the following parameters

- |             |              |
|-------------|--------------|
| (i) .....   | (vi) .....   |
| (ii) .....  | (vii) .....  |
| (iii) ..... | (viii) ..... |
| (iv) .....  | (ix) .....   |
| (v) .....   | (x) .....    |

Sample Preservation Method: .....

Name and Signature of Sample Collector .....

Name and Signature of FEPA Official .....

Name and Signature of Company/Officer-in-Charge .....

## APPENDIX 9

This consists of tables showing data on the physico-chemical characteristics of effluents from selected industries in Nigeria. (Source; FMWH, 1981)

## LIST OF TABLES

Table	Title
9.1	Industrial Sources of Solid Organic Wastes
9.2	Some synthetic organic chemicals that could cause serious Environmental Pollution
9.3	Waste Water from NIYAMCO (Distillery, Nigeria)
9.4	Effect of combined (NIYAMCO and NISUCO) waste water on irrigation water
9.5	Effluent from different points at the Paper Mill (Nigeria)
9.6	Effect of Paper Mill Effluent on River Nigeria
9.7	Characteristics of Waste Water from NBL (Brewery)
9.8	Characteristics of Waste Water from Guinness (Brewery)
9.9	Quality of Process Water at the Soft Drinks Bottling Factories visited, compared to quality of public water supplied in Oyo and Lagos States
9.10	Chemical characteristics of Effluents from the Soft-Drinks Bottling Factories visited compared with Industrial Effluent Standards of 1st India Effluent and Quality Parameters for some Nigeria Rivers
9.11	Effluent Quality of some Textile Mills in Nigeria (Single Grab Samples)
9.12	Water Quality of Streams polluted by Textile Waste Water
9.13	Some Quality Parameters for Water from the Well in P.C. 54 compared to WHO (1971) recommended highest desirable levels (For Drinking Water) IDIMANGORO IKEJA 1979
9.14	Effect of WEMABO Effluent on Shasha Stream, Agege, Lagos
9.15	Some Quality Parameters for Effluents Discharged through public sewers into Shasha and Iya-Alaro Stream just after leaving the Ikeja Industrial Estate.

TABLE 9.1

## INDUSTRIAL SOURCES OF SOLID ORGANIC WASTES

Compound	Remarks	1st Visit	2nd Visit
1. Tree Barks	Pulp and Paper industry - waste from debarking of trees before pulping		
2. Baggasse	Sugar industry - waste straw left after the extraction of juice from sugar cane		
3. Spent Grain	Brewery - waste grain after extraction of wort from mash		
Parameter mg. per Litre			
4. Pulp	Tapioca Starch industry - waste after extraction of starch from peeled cassava		
5. Plant Residue	Fruit canning - fruit peels, skin core, base, crown, seeds, etc. from the dressing of fruits for canning		

TABLE 9.2

SOME SYNTHETIC ORGANIC CHEMICALS THAT COULD CAUSE SERIOUS ENVIRONMENTAL POLLUTION

<i>Compound</i>	<i>Remarks</i>
1. Synthetic detergents	Slightly toxic to fishes, used as active washing component of commercial detergents.
2. Chlorinated Pesticide	Moderately toxic. Stable to biodegradation and easily bioaccumulated, used for pest control
3. Cyclic insecticides and	High toxic, used for the control of insects rodenticides and rodents
4. Polychlorinated dioxins and	Highly toxic, by-product in the production dibenzofurans of chlorinated phenols and PCBs.
5. Polychlorinated biphenyls	Toxic, very stable to biodegradation, easily bioaccumulated, varied industrial applications, e.g. in heat exchange systems, in transformers and capacitors.

TABLE 9.3

WASTE WATER FROM NIYAMCO (DISTILLERY, NIGERIA)

<i>Parameter mg. per litre</i>	<i>1st visit</i>	<i>2nd visit</i>
Temp. c	52 C	58 C
pH	4.7	4.1
Total Solids	23,390	23,415
Suspended Solids	1,102	722
Settleable Solids	397	400
Total Dissolved Solids (TDS)	22,290	22,630
Conductivity (umho/Cm)	4,200	5,300
BOD	20,944	21,450
COD <sup>5</sup>	44,350	45,220
Chloride	-	12
Phosphate	3.1	1.2
Sodium	500	240
Potassium	87.5	51.2
Calcium	2.5	1.8
Magnesium	1.3	1.2
<b>Heavy Metals</b>		
Copper	0.02	0.05
Zinc	0.03	
Lead	0.02	0.01
Manganese	0.13	0.23
Iron	1.8	3.2

Note: NIYAMCO being a Distillery discharges very concentrated and heavily polluting exhausted molasses or residuary liquors which are bio-degradable, and are responsible for the hiBh BOD and total solids.

**TABLE 9.4**  
**EFFECT OF COMBINED (NIYAMCO AND NISUCO) WASTE WATER**  
**ON IRRIGATION WATER**

<i>Parameter mg. per litre</i>	<i>Fresh irrigation water</i>	<i>Combined NISUCO NIYAMCO effluent</i>	<i>A main drain contaminated by combined effluent</i>
pH	7.2	4.1	4.0
Total Solids	80.0	4,410	1,390
Suspended Solids	1.0	994	667
Settleable Solids	1.4	678	888
Total Dissolved Solids (TDS)	79.0	3,416	723
Conductivity (umho Cml)	60.0	1,030	320
BOD	0.6	4,246	600*
CoD5	6.6	11,100	974
Chloride	-	-	-
Phosphate	0.06	3.5	2.2
<i>Parameter mg. per litre</i>			<i>Ist visit 2nd Visit</i>
Sodium	20.0	500	80
Potassium	1.2	85	31.5
Calcium	0.2	2.7	1.6
Magnesium	1.3	1.4	0.8
<b>Heavy Metals</b>			
Copper	0.01	0.10	0.07
Zinc	0.05	0.25	0.13
Lead	0.02	0.02	0.02
Manganese	0.01	0.15	0.11
Iron	1.5	1.5	1.5

*Note:* \*The major pollutant in the waste water is bio-degradable sugars. This should not normally affect yield in the irrigated field.

**TABLE 9.5**
**EFFLUENT FROM DIFFERENT POINTS AT THE PAPER MILL (NIGERIA)**

<i>Parameters (mg. per litre)</i>	<i>Line washing effluent</i>	<i>Suction flat boxes waste water</i>	<i>Overflow from water white Tank</i>	<i>Combined factory effluent (1st visit)</i>	<i>Black water tank sample</i>
pH	5.9	5.7	5.3	5.7	6.3
Total Solids	976	90	1,270	675	245
Total Dissolved Solids (TDS)	153	84	259	204	220
Settleable Solids	779	0.0	912	407	15
Suspended Solids	823	6	1,011	471	25
Alkalinity	-	7.5	5.5	7.5	12.5
Hardness	265	86	78	45	-
Calcium	5.7	3.4	2.8	1.6	7.5
Magnesium	26.5	1.5	0.5	1.4	2.5
Sodium	15	4.8	25	8.8	5.0
Potassium	7.5	2.2	50	68.0	15.0
Zinc	0.06	0.02	0.12	0.26	0.06
Lead	0.01	0.02	0.06	0.07	0.02
Copper	0.02	0.02	0.15	0.05	0.03
Iron	0.70	0.08	1.2	0.30	1.7
Manganese	0.03	0.02	0.11	0.11	0.3
Chromium	0.02	0.02	-	-	-
BOD	4.7	3.2	5.3	3.9	2.5
COD <sup>5</sup>	390	60	430	260	140

*Note:*

The major pollutant in most of the cases is settleable solids (pulp fibre). Settleable solids are low in the Black water and waste water from suction pump. Waste water from the white water tank is high in settleable solids. It is overflow of this nature which is responsible for high settleable solids in final effluent.

**TABLE 9.6**
**EFFECT OF PAPER MILL EFFLUENT ON RIVER NIGER**

<i>Parameter</i>	<i>Combined factory effluent</i>	<i>River Niger downstream of discharge point</i>	<i>River Niger about 50m from discharge Point</i>	<i>River Niger but from 100m discharge point</i>
pH	4.4	7.3	6.5	6.8
Total Solids	905	45	135	65
Total Dissolved Solids (TDS)	135	20	40	31
Settleable Solids	764	15	82	17
Conductivity (umho/Cm)	220	25	54	35
Hardness	6.5	69	91	65
Calcium	2.5	10.5	10.1	9.7
Magnesium	45.7	25.3	46.2	31.9
Potassium	17	15	15	17
Sodium	16.3	33	60	48
Manganese	0.02	0.01	0.05	0.03
Iron	0.65	0.21	0.29	0.25
Copper	1.87	0.01	0.01	0.01
Zinc	0.07	0.07	0.02	0.08
Chromium	0.02	0.01	0.01	0.01
COD	730	20	70	30
BOD <sup>5</sup>	10.2	3.2	8.5	3.6

*Note:*

The effect of the effluent on the River Niger and is localised to a short stretch near the River Band is reflected visually in colouration of the water and chemically in increased settleable solids and dissolved solids. The character of the River Bed in the affected area must have been completely altered over the years.



**TABLE 9.7**  
CHARACTERISTICS OF WASTE WATER FROM NBL (BREWERY)

Parameter mg per litre	1	2	3	4	5	6
pH	10.7	11.2	11.0	8.8	9.0	4.6
Total solids	550	315	440	3,500	3,170	2,530
Suspended solids	154	18	38	616	406	804
Settleable solids	76	1.6	23	256	122	311
Dissolved solids	396	297	402	2,884	2,764	2,219
Alkalinity	-	-	112.5	125	230	-
Hardness	-	-	-	-	-	-
Conductivity	960	1,520	1,020	810	700	1,340
Sodium	21.5	25.0	135	160	160	40
Potassium	8.0	15.2	16	120	120	28
Calcium	1.1	0.4	0.5	42.0	37.0	9.0
Magnesium	1.3	0.4	0.5	1.5	1.7	7.6
Chloride	-	-	2	1.0	1.0	-
Phosphate	-	-	0.4	1.7	1.9	-
BODs	250.4	108.7	35	2,400	2,110	1,250
COD	-	-	63	3,100	3,000	-
Zinc	0.09	0.28	0.12	0.12	0.71	1.7
Copper	0.02	0.17	0.13	0.06	0.18	0.2
Manganese	0.09	0.03	0.02	0.16	0.19	0.5

1. Brew House Effluent
2. Bottling Hall Effluent (1st Visit)
3. Bottling Hall Effluent (2nd Visit)
4. Hourly composite sample over 10 hours (1st Visit)
5. Hourly composite sample over 10 hours (2nd Visit)
6. Grab sample of combined Effluent.

*Note:*

Apart from the need for neutralization, the Bottling Hall eMuent (2 and 3) can be discharged without treatment. The final factory effluent (6) has contributions from all the possible sources and its composition is very variable. The suspended solids, for example, can go up suddenly when there is contribution from filter Press Sludge or Residual Sludge from whirlpool. Contributions from these sources are included in the composite.

**TABLE 9.8**  
CHARACTERISTICS OF WASTE WATER FROM GUINNESS (GUINNESS)

Parameter mg. per-litre	1	2	3	4	5	6
pH	6.1.	4.6	5.0	4.8	4.5	8.6
Total solids	3,496	2,100	2,820	1,800	1,950	914
Suspended solids	1,226	1,071	1,150	714	612	354
Settleable solids	30	482	272	84	207	76
Dissolved solids	2,250	1,029	1,670	1,166	1,344	560
Hardness	165	89	102	95	110	78
Alkalinity	17.8	acid	20.2	acid	acid	28.5
Conductivity	540	500	510	480	450	960
BOD	3,240	1,554	3,012	1,624	1,629	1,250
COD5	6,320	3,750	5,300	2,900	3,100	780
	(1st visit)	(2nd visit)	(2nd visit)	(2nd visit)	(2nd visit)	(2nd visit)

1. A grab sample of Final Effluent
2. 1st sudden change in appearance of Final Effluent
3. 2nd sudden change in the appearance of Final EMuent
4. 1st Composite sample over 5-hour period
5. 2nd Composite sample over 5-hour period
6. Combined Effluent

*Note:*

1 and 6 shows the variability of the combined factory effluent. Now and then, a change in the visual characteristics of the effluent is noticed (2 and 3) and the composite effluent (500 cm<sup>3</sup> hourly for 5 hours), 4 and 5, give an idea of what the average character of the effluent is. Notice the high BOD and COD and total solids. The effluent is now discharged untreated along with others through WEMABOD pipeline into Shasha stream.

TABLE 9.9

QUALITY OF PROCESS WATER AT THE SOFT DRINKS BOTTLING FACTORIES VISITED, COMPARED TO QUALITY OF PUBLIC WATER SUPPLIES IN OYO AND LAGOS STATES

	<i>Pepsi-Cola* Factory</i>	<i>Coca-Cola* Factory</i>	<i>Range of Values reported for 16 different supplies in Oyo and Lagos States</i>
pH	6.5	10.8	5.8-7.3
Appearance	Clear	Clear	Clear
Odour and taste	None	None	None
Total Solids	190	210	29-189
Dissolved Solids	190	210	29-189
Suspended Solids	None	None	None
Alkanility	27.5	37.5	16.9-34.5
Hardness	43	125	18-64.5
Calcium	15.5	50.6	-
Magnesium	1.0	7.1	-
Sodium	63	9.0	-
Potassium	20	4.0	-
Chloride	5	33	8.0-27.1
Phosphate	0.05	0.02	-
Zinc	0.04	0.05	0.06-3.7
Copper	0.01	0.03	0.05
Manganese	<0.05	0.05	0.05
Cadmium	<0.05	0.05	0.05

Note:

1. There is nothing unusual about the process water except the high pH of the water at Nigerian Bottling Company which may be due to over-dosing with lime. Level of Calcium is high for same reason.

TABLE 9.10

CHEMICAL CHARACTERISTICS OF EFFLUENTS FROM THE SOFT-DRINKS BOTTLING FACTORIES VISITED COMPARED WITH INDUSTRIAL EFFLUENT STANDARDS OF LST INDIA EFFLUENT STANDARD AND QUALITY PARAMETERS FOR SOME NIGERIAN RIVERS

<i>Parameters (mg per litre)</i>	<i>Pepsi-Cola factory</i>	<i>Coca-Cola factory</i>	<i>Ist India effluent standard</i>	<i>Quality parameter for Nigeria rivers</i>
pH	9.0	11.1	5.5-9.0	5.5-7.5
Total Solids	770	3,000	-	50-500
Dissolved solids	760	2,980	-	50-450
Settleable solids	6	14	-	20
Suspended solids	10	20	100	20
Conductivity	990	1,850	-	-
Alkalinity	322.5	350	-	-
Hardness	105	308	-	-
Calcium	39	94.8	-	1.6-4.4
Magnesium	1.3	7.6	-	-
Potassium	22	9	-	-
Sodium	124	170	-	-
Chloride	11	47	-	-
Phosphate	1.0	10.5	-	-
Zinc	0.4	0.11	1.0	0.03-11
Copper	0.01	0.05	1.0	0.1
Lead	0.05	0.05	1.0	0.1

Note:

1. Extracted from India standards for effluents discharged into surface water.
2. The main pollutant here is pH-especially since the receiving streams are small. Neutralisation to pH 7 is recommended before discharge.
3. Range for 21 rivers in South-Western Area of Nigeria discharging into River Niger and the Lagos Lagoon network.

TABLE 9. 11

## EFFLUENT QUALITY OF SOME TEXTILE MILLS IN NIGERIA (SINGLE GRAB SAMPLES)

<i>Parameter</i>	<i>Units</i>	<i>1st Factory</i>	<i>2nd Factory</i>	<i>1st Factory</i>	<i>2nd Factory</i>	<i>A Factory in</i>
pH		8.5	9.2	9.3	6.3	11.7
Conductivity	Mmho/cm	1750	2100	375	190	5800
Alkalinity	mgCaCo3/l	-	-	167	56	846
Total solids	mg/l	1815	2050	430	360	3510
Turbidity	NTU	-	-	32	22	30
COD	mg°2/l	725	150	660	227	583
Colour	-	Yellow	Yellow	Green	Yellow	Deep purple
Chloride	mg/l	-	-	285	312	222
BOD	mg°2/l	41	47	-	-	-
Nitrite	mgN/l	1.58	-	-	-	-
Ammonia	mgN/l	48	-	-	-	-
Sodium	mg/l	245	-	100	33	1000
Manganese	mg/l	0.23	-	-	-	0.2
Calcium	mg/l	69	-	4	4	12
Chromium	mg/l	0.25	-	-	-	-
Magnesium	mg/l	8.0	-	1.3	1.7	0.3

TABLE 9. 12

## WATER QUALITY OF STREAMS POLLUTED BY TEXTILE WASTE WATER

<i>Parameter</i>	<i>1st Polluted stream</i>	<i>2nd Polluted stream</i>	<i>3rd Polluted stream</i>	<i>Polluted stream in Kaduna</i>
pH	6.1	11.0	6.5	11.5
Conductivity (umhos/cm)	155	1510	550	3300
Alkalinity	-	-	-	987
Total Solids (mg/l)	1191	1550	800	2685
Total Suspended Solids	50	73	165	145
Turbidity	-	-	-	-
Colour	Green	-	-	Purple Green
COD (mg°2/l)	150	330	750	425
BOD (mg°2/l)	10.4	80	230	-
Nitrite	-	-	-	-
Ammonia	80	-	-	-
Sodium (mg/l)	122	3,800	1,100	800
Magnesium (mg/l)	30	2.5	5.1	1.3
Calcium (mg/l)	18	1.1	3.6	7.2
Chromium	0.2	-	-	-
Manganese (mg/l)	0.25	0.04	0.16	-
Iron (mg/l)	1.5	4.9	4.8	-
Chloride (mg/l)	-	-	-	235
Zinc	-	-	-	0.7
Potassium (mg/l)	-	200	300	20

*Note:*

1st Stream: A Stream in Iganmu Industrial Estate

2nd Stream: A Stream in Ikeja Industrial Estate (Iya-Alaro Stream)

3rd Stream: Another Stream in Ikeja Industrial Estate (Shasha Stream)

TABLE 9. 13

SOME QUALITY PARAMETERS FOR WATER FROM THE WELL IN IDIMANGORO, IKEJA 1976 COMPARED TO WHO (1971) RECOMMENDED HIGHEST DESIRABLE LEVELS (FOR DRINKING WATER)

<i>Parameters</i>	<i>Well Water</i>	<i>WHO recommended Levels</i>
pH	6.0	7.0-8.5
Colour	Dirty Green	Unobjectionable
Odour	Septic	Unobjectionable
Total Solids	470 mg/1	500 mg/1
Potassium	30 mg/1	-
Calcium	0.04 mg/1	75 mg/1
Sodium	500 mg/1	-
Copper	0.15 mg/1	0.05 mg/1
Lead	0.07 mg/1	0.010 mg/1 (Upper Limit)
Iron	2.9 mg/1	0.1 mg/1
Manganese	0.02 mg/1	0.05 mg/1
BOD5	60 mg <sup>o</sup> 2/1	-
COD	240 mg <sup>o</sup> 2/1	-

*Note:*

The major chemical pollutants in the well are biodegradable organic matters. The septic condition of the water was possible as a result of anaerobic decomposition of the dissolved organic matter. The dirty green colour suggested contribution from a textile factory.

TABLE 9. 14

EFFECT OF "WEMABO EFFLUENT" ON SHASHA STREAM

<i>Parameter</i>	<i>Effluent</i>	<i>Shasha stream</i>
Temperature	36°C	36°C
pH	7.2	6.5
Total Solids (mg/1)	1,110	800
Settleable Solids (mg/1)	37.5	43.6
Total Suspended solids (mg/1)	252	165
Conductivity (umhos)/cm	515	550
BOD5 (mg <sup>o</sup> 2/1)	250	230
COD (mg <sup>o</sup> 2/1)	800	750
DO (mg <sup>o</sup> 2/-)	Nil	Nil
Sodium (mg/1)	1,000	1,100
Potassium (mg/1)	300	300
Calcium (mg/1)	2.0	3.6
Magnesium (mg/1)	4.0	5.1
Copper (mg/1)	0.33	0.24
Lead (mg/1)	0.04	0.20
Manganese (mg/1)	0.01	0.16
Iron (mg/1)	2.7	4.8

*Note:*

There was no convenient point upstream of the point of discharge to sample Shasha Stream before receiving the effluent. The effluent was sampled just before discharging into the stream and the stream was sampled about 200m after receiving the discharge.

The effluent obviously contributed greatly to the poor quality of the stream water. Notice especially the high Biochemical Oxygen Demand (BOD) and the low dissolved Oxygen (DO). A stream of normally acceptable quality should have a BOD5 not greater than 6.0mg<sup>o</sup>2/1 and a DO not less than 4.0mg<sup>o</sup>2/1.

TABLE 9.15

SOME QUALITY PARAMETERS FOR EFFLUENTS DISCHARGING THROUGH PUBLIC SEWERS INTO SHASHA AND IYA ALARO STREAM JUST AFTER LEAVING THE IKEJA ESTATE

<i>Parameter</i>	<i>Sewer 1</i>	<i>Sewer 2</i>	<i>Iya-Alaro stream</i>	<i>Tolerance limits for effluent</i>
Temperature	30°C	38°C	36°C	46°C
pH	6.2	11.7	11.0	6.0-9.0
Total solids (mg/l)	445	2,725	1,150	2,500
Settleable solids (mg/l)	57	336	38	-
Total suspended solids (mg/l)	196	414	73	50
Conductivity (umhos/cm)	320	5800	1510	-
BOD <sup>5</sup> (mg <sup>o</sup> 2/l)	75	250	80	50
COD (mg <sup>o</sup> 2/l)	290	880	330	100
DO (mg <sup>o</sup> 2/l)	Nil	Nil	Nil	-
Sodium (mg/l)	367	13,500	3,800	-
Potassium (mg/l)	1.33	400	200	-
Calcium (mg/l)	3.6	1.0	1.1	200
Magnesium (mg/l)	3.2	8.1	2.5	200
Copper (mg/l)	0.04	0.44	0.12	0.1
Lead	0.05	0.07	0.06	0.1
Manganese (mg/l)	0.14	0.05	0.04	5.0
Iron (mg/l)	4.6	4.3	4.9	20

*Note:*

The values quoted in this column are the tolerance limit for industrial emuents discharged into inland surface waters recommended by the Ministry of the Environment, Singapore. Notice that the pH, BOD, COD and suspended solids in the eMuent in Sewer 2 which discharges into Iya-Alaro are very much higher than these tolerance limits.

APPENDIX 10

MAJOR CATEGORIES OF INDUSTRIES IN NIGERIA

- 10.1 Mining and Quarrying Activities**
  - 10.1.1 Metal and mining
  - 10.1.2 Dredging, sand filling and land reclamation
  - 10.1.3 Coal
  - 10.1.4 Non-metallic mineral products including clays, sand, etc.
  
- 10.2 Food, Beverages and Tobacco**
  - 10.2.1 Abattoir, meat processing
  - 10.2.2 Canned and preserved fruits and vegetables
  - 10.2.3 Canned and preserved foods
  - 10.2.4 Canning, preserving and processing of fish and sea foods
  - 10.2.5 Dairy products
  - 10.2.6 Vegetable and animal oils and feeds
  - 10.2.7 Grain/Cereal Mill products
  - 10.2.8 Bakery products
  - 10.2.9 Sugar Factories and Refineries
  - 10.2.10 Sugar Confectionery
  - 10.2.11 Animal feeds
  - 10.2.12 Soft drinks including carbonated water and mineral water
  - 10.2.13 Tobacco products
  
- 10.3 Breweries, Distilleries and Blending of Spirits**
  - 10.3.1 Breweries
  - 10.3.2 Distilleries
  - 10.3.3 Blending of Spirits
  
- 10.4 Textiles**
  - 10.4.1 Woven fabrics finishing
  - 10.4.2 Natural and synthetic fabric
  - 10.4.3 Non-fabric finishing
  - 10.4.4 Stock and yarn dyeing
  - 10.4.5 Carpet mills
  
- 10.5 Tannery Industry**
  - 10.5.1 Vegetable Tanning
  - 10.5.2 Chrome Tanning
  
- 10.6 Leather Products**
  - 10.6.1 Footwear
  - 10.6.2 Luggage
  - 10.6.3 Leather finishing
  
- 10.7 Wood, Wood Products including Furniture and Fixtures**
  - 10.7.1 Sawmills
  - 10.7.2 Wood preserving
  - 10.7.3 Particle board
  
- 10.8 Pulp, Paper and Paper Products**
  - 10.8.1 Pulp and Paper Mill
  - 10.8.2 Paper Conversion and packaging
  - 10.8.3 Printing and Publishing.
  
- 10.9 Miscellaneous**

## PART II

### GUIDELINES FOR THE MANAGEMENT OF SOLID AND HAZARDOUS WASTES

#### INTRODUCTION

**0.1.** Following the promulgation of Decree 42 of November 1988, it is imperative and worthwhile that locally generated toxic and hazardous waste fall within the limits set by the National Policy on Environment which stipulates that the appropriate governmental agencies shall:

- (a) maintain an up-to-date register of toxic, hazardous and radioactive substances;
- (b) control the generation of toxic, hazardous and radioactive wastes and ensure that those banned shall be stringently controlled;
- (c) monitor the effects and control all phases of the life-cycle of all substances likely to have an adverse impact on human health and environment;
- (d) determine and use environmentally safe and technologically sound techniques for disposal of toxic, hazardous and radioactive wastes;
- (e) set up regional framework and standards for the proposed "DUMP WATCH" against trans-boundary movement of toxic, hazardous and radioactive wastes and for the achievement of the environmentally sound management of hazardous substances.

**0.2.** Hazardous waste is potentially damaging to the environment and must be regulated. Most of it, however, comes from industries that are among the most important to the growth and maintenance of a modern industrial society.

The need for a hazardous waste management system begins when waste is generated and continues through subsequent stages to final treatment and disposal.

#### 0.3. Objectives

For effective management, there shall be co-operation between the generator of the waste and the enforcement agency, and there shall be co-ordination among various persons and corporate bodies involved in the control activities. The objectives of solid and hazardous waste management shall be to:

- (a) designate those solid wastes which are dangerous or extremely hazardous to the public health and

environment;

- (b) provide for surveillance and monitoring of dangerous and extremely hazardous wastes and substances, until they are detoxified, reclaimed, neutralised, or disposed of safely;
- (c) provide the form and rules necessary to establish a system for manifesting, tracking, reporting, monitoring, record keeping, sampling, and labelling dangerous and extremely hazardous wastes;
- (d) establish the siting, design, operation, closure, post-closure, and monitoring requirements for managing hazardous waste disposal facilities;
- (e) encourage recycling, reuse, reclamation and recovery to the maximum extent possible.

#### 0.4. Designation of Dangerous (Hazardous) Waste

In the context of this document, dangerous waste is synonymous to hazardous waste. The two expressions are used interchangeably. Code numbers have been assigned to the various categories of dangerous wastes for easy identification. Each code number has a prefix FAC (FEPA Action Committee).

- (i) The procedure for determining whether or not a solid waste is dangerous waste (D.W.) or extremely hazardous waste (EHW) is described below, and are applicable to any person who must determine whether or not his solid waste is so designated. Any person who determines by these procedures that his waste (or substances) is (are) designated DW or EHW shall be subject to all applicable requirement in these guidelines.
- (ii) Once a material has been determined to be a dangerous waste, any solid waste generated from the recycling, treatment, storage, or disposal of that dangerous waste is dangerous waste unless and until:
  - (a) It does not exhibit any of the characteristics of dangerous waste.
  - (b) Such solid waste shall include but not be limited to any sludge, spill residue, ash emissions, control dust, leachate, or precipitation run-off. Precipitation run-off will not be considered a dangerous waste if it can be shown that the run off has not been contaminated with the dangerous waste or that the run off is adequately addressed under any other FEPA guidelines.

#### 0.5. Designation Procedures

- (a) To determine whether or not a waste is designated, a person shall check his wastes against the following sections below and in the following order:
- (i) Discarded chemical products
  - (ii) Dangerous waste sources
  - (iii) Infectious dangerous waste
  - (iv) Dangerous waste mixtures
  - (v) Toxic dangerous waste
  - (vi) Persistent dangerous waste
  - (vii) Carcinogenic dangerous waste.
- (b) When a person is reporting or keeping records on a dangerous waste, he shall use all the Dangerous Waste Numbers which he knows are assignable to his waste from the dangerous waste list, characteristics, or criteria.

## CHAPTER ONE DANGEROUS WASTE LIST, CHARACTERISTICS AND CRITERIA

This chapter describes the characteristics and criteria of various types of dangerous wastes listed in Section 0.5 in the Introduction.

### 1.1. Discarded Chemical Products

**1.1.1.** A waste shall be designated as discarded chemical product if it is handled in any of the manners described in (a) to (d) of this subsection, and if it is a residue from the management of:

- (a) a commercial chemical product or manufacturing intermediate which has the generic name listed in the discarded chemical product list FAC-000-000-9903;
  - (b) an off-specification commercial chemical product or manufacturing chemical intermediate which if it had met specification would have the generic name listed in the discarded chemical product list FAC-000-000-9903;
  - (c) any containers or inner liners that have been used to hold any commercial chemical product or manufacturing chemical intermediate that has, or any off-specification commercial chemical product or manufacturing chemical intermediate which if it had met specification, would have the generic name listed on the acutely dangerous chemical product list of FAC-000-000-9903 unless the container or inner liners are empty and have been triple rinsed;
  - (d) Any residue or contaminated soil, water, or other debris resulting from the clean up of a spill of a commercial chemical product or manufacturing chemical intermediate which has, or an off specification commercial chemical product or manufacturing chemical intermediate which if it has met specification would have, the generic name listed in the discarded chemical product list FAC-000-000-9903.
- 1.1.2.** The materials or items described in (a) (b) (c) and (d) of this subsection shall be designated as dangerous waste when they are:
- (a) discarded or intended to be discarded or described as abandoned i.e. disposal of, or burned or incinerated, accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed through burning or incineration;
  - (b) burned for purposes of energy in lieu of their original intended use;
  - (c) used to produce fuel in lieu of their original intended use;
  - (d) applied to the land in lieu of their original intended use; or
  - (e) contained in product that are applied to land in lieu of their intended use.

### 1.2. Dangerous Waste Sources

The dangerous waste sources list appears in FAC-000-000-9904. Any waste which is listed or which is a residue from the management of a waste listed on the dangerous waste sources list shall be designated a dangerous waste and shall be identified as DW, except the FAC-000-000-9904 includes several footnotes describing circumstances under which it is designated EHW rather than DW.

### 1.3. Infectious Dangerous Wastes

Infectious dangerous waste shall include, but need not be limited to, each of the following types of solid waste:

- (i) culture and stock of infectious agents;



- (ii) pathological wastes;
- (iii) waste human blood and products of blood;
- (iv) sharp instruments that have been used in patient care or in medical, research, or industrial laboratories;
- (v) contaminated animal carcasses, body parts, etc;
- (vi) wastes from surgery or autopsy that were in contact with infectious agents etc;
- (vii) laboratory wastes from medical, pathological, pharmaceutical or other research, commercial or industrial laboratories.

#### 1.4. Dangerous Waste Mixtures

1.4.1. A dangerous waste mixture shall be any waste about which some or all of its constituents and concentration are known and which have not been designated as:

- (a) a discarded chemical product;
- (b) an infectious dangerous waste;
- (c) a dangerous waste source.

1.4.2. A person who has a waste mixture shall use data which is available to him, and when such data is inadequate for the purpose of this section, shall refer to FEPA Exclusive List of Registered Dangerous Substances in order to determine:

- (a) toxicity data or category for each known constituent in his waste;
- (b) whether or not each known constituent in his waste is a halogenated hydrocarbon or a polycyclic aromatic hydrocarbon with greater than three rings and less than seven rings; and
- (c) whether or not each known constituent of his waste is an International Agency for Research on Cancer (IARC) human or animal positive or suspected carcinogen.

1.4.3.(a) If a person has toxic constituent in his waste, he shall determine the toxicity category for each known toxic constituent. The toxic category for each constituent may be determined directly from FEPA Registry and checking this data against the Toxicity Category (Table 1.1.). If data is available for more than one of the four toxicity criteria (aquatic, oral, inhalation, or dermal), then Most Acutely Toxic Category shall be assigned to the constituent.

TABLE 1.1  
TOXICITY CATEGORY TABLE

Category	TLm96 (Fish) Aquatic (Fish) or LC <sub>50</sub>	Oral (Rat) LD <sub>50</sub>	Inhalation (Rat) LC <sub>50</sub> (mg/kg)	Dermal (Rabbit) LD <sub>50</sub> (mg/kg)
X	<0.01	<0.5	<0.02	<2
A	0.01-1	0.5-5	0.0-0.2	2-20
B	1-10	5-50	0.2-20	20-200
C	10-100	50-500	2-20	200-2,000
D	100-1000	500-5,000	20-200	2,000-20,000

Note: Degree of toxicity decreases from X to D with X being the Most Acutely Toxic Category.

- (b) A person whose waste mixture contains one or more toxic constituent shall determine the equivalent concentration for his waste from the following formula:

Equivalent concentration (%)

$$= \frac{X\%}{10} + \frac{A\%}{100} + \frac{B\%}{100} + \frac{C\%}{100} + \frac{D\%}{10,000}$$

Where (X,A,B,C, or D)% is the sum of all the concentration percentages for a particular toxic category.

### 1.5. Toxic Dangerous Wastes

- (1) This section indicates how to determine the toxicity of a waste and the criteria by which a toxic waste shall be designated DW or EHW. The degree of toxicity shall be categorised according to the Toxic Table 1.1. If a person has established the toxicity of his waste by means of the bioassay test methods, and has determined his waste's toxicity range, then he shall designate his waste according to the Toxic

onstrate to the Agency beyond a reasonable doubt that any remaining persistent constituents for which he does not know the concentrations would not contribute significantly to the total persistent concentration, then he may calculate the concentration of persistent constituents in his waste as follows:

- (i) A person whose waste contains one or more halogenated hydrocarbons for which the concentrations are known shall determine his total halogenated hydrocarbon concentration by summing the concentration percentages for all of his waste's significant halogenated hydrocarbons.

*Example 1:*

A person's waste contains: Carbon tetrachloride of 0.009%; DDT of 0.012%, 1,1,1-trichloroethylene of 0.02%. His total halogenated hydrocarbon concentration would be:

$$\text{Total HH Concentration (\%)} = 0.009\% + 0.012\% + 0.02\% = 0.041\%$$

TABLE 1.2

TOXIC HAZARDOUS/DANGEROUS WASTE DESIGNATION TABLE

If your Waste's toxic range falls in the ..	And your monthly or batch wast quantity as ...	Then your watste's designation is...
D Category	Greater than 100kg	DW
X,A,B, or C	182-100kg	DW
Category	Greater than 100kg	EHW

### 1.6. Persistent Hazardous/Dangerous wastes

1.6.1. This section describes the procedures for designating wastes which contain halogenated hydrocarbons (HH) and/or polycyclic aromatic hydrocarbons with more than three rings and less than seven rings (PAH). 1.6.2. A person shall determine the concentration of HH and/or PAH in his waste by either testing his waste as specified in (a) of this subsection, or by the calculation procedures described in (b) of this subsection.

- (a) *Concentration tests.*—A person shall test his waste to determine its concentration level as stated in sampling and testing methods below.
- (b) *Concentration calculations.*—If a person knows the concentrations in his waste, and if he can dem-

- (ii) A person whose waste contains one or more polycyclic aromatic hydrocarbons with more than three rings and less than seven rings for which the concentrations are known shall determine his total polycyclic aromatic hydrocarbon concentration by summing the concentration percentages for all of his waste's significant polycyclic aromatic hydrocarbons with more than three rings and less than seven rings.

*Example 2:*

A person's waste contains: Chrysene of 0.08%; 3,4-benzopyrene of 1.22%. His total polycyclic aromatic hydrocarbon concentration would be:

$$\text{Total PAH Concentration (\%)} = 0.08\% + 1.22\% = 1.3\%$$

1.6.3. *Designated criteria and quantity.*—A person whose waste contains persistent (HH or PAH) constituents shall designate his waste according to the Persistent Dangerous Waste Table, (Table 1.3), if his monthly or batch waste quantity exceeds 100kg.

(c) For designation purposes, any IARC human or animal, positive or suspected carcinogen that is so rated because of studies involving implantation of the substance into test animals as site cause for the IARC rating, shall not be carcinogenic.

TABLE 1.3

PERSISTENT HAZARDOUS/DANGEROUS WASTE TABLE

If your waste contains ...	At a Concentration level of ...	Then your wast's designation is ...
Halogenated Hydrocarbons (HH)	0.01 to 1.0%	DW
Polycyclic Aromatic Hydrocarbons (PAH)	Greater than 1.0%	EHW
	Greater than 1.0%	EHW*

\* There is no DW concentration level for PAH.

### 1.7. Carcinogenic Dangerous Wastes

1.7.1. A substance which is listed as an IARC (International Agency for Research on Cancer) human or animal positive or suspected carcinogen, shall be a carcinogenic substance which is an inorganic, respiratory carcinogen shall be a carcinogenic substance only if it occurs in a friable format (i.e. if it is in a waste which easily crumbles and forms dust which can be inhaled).

1.7.2. Any person whose waste contains one or more IARC carcinogen(s) shall designate his waste if:

- (a) The monthly or batch waste quantity exceeds 100kg; and
- (b) (i) The concentration of any one IARC positive (human or animal) carcinogen exceeds 1.0 per cent of the waste quantity. Such waste shall be designated EHW, and such designation determined by (b) (ii) or (iii) of this subsection; or
- (ii) The concentration of any one IARC positive (human or animal) carcinogen exceeds 0.01 per cent of the waste quantity. Such waste shall be designated DW; or
- (iii) The total concentration summed for all IARC positive and suspected (human or animal) carcinogens exceeds (1.0 per cent of the waste quantity). Such waste shall be designated DW.

### 1.8. Dangerous Waste Characteristics

The following characteristics shall determine the designation or otherwise of a solid Waste as a Dangerous Waste:

- (i) Ignitability
- (ii) Corrosivity
- (iii) Reactivity
- (iv) Extraction Procedure Toxicity (EPTOX)
- (v) Halogenated hydrocarbons concentration
- (vi) Polycyclic aromatic, hydrocarbon concentration (PAH)
- (vii) Static acute fish toxicity test
- (viii) Acute oral rat toxicity test
- (ix) Polychlorinated Dibenzo P-dioxins and dibenzofurans concentrations
- (x) Polychlorinated Biphenyls (PCB's).

#### 1.8.1. Sampling and Test Methods

The methods and equivalent used for obtaining repre-

sentative samples of a waste will vary with the type and form of the waste. FEPA will consider samples collected using the sampling method below, for wastes with properties similar to the indicated materials, to be representative samples of the wastes:

- (i) crushed or powdered material—ASTM Standard Method (D346-75);
- (ii) extremely viscous liquid—ASTM Standard Method (D140-70);
- (iii) flash-like material—ASTM Standard Method (D22234-76);
- (iv) soil-like material—ASTM Standard Method (D1452-65);
- (v) soil or rock-like materials—ASTM Method Standard (D420-69);
- (vi) containerised liquid waste—(COLIWASA) described in “Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods”, SW-846. USEPA (1985);
- (vii) liquid wastes in pits, ponds, lagoons and similar reservoirs—“Pond sampler” described in “Test Methods for the evaluation of solid waste, physical/chemical methods”, SW-846, USEPA (1985).

**1.8.1.1. Tests for Ignitability**

- (a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
  - (i) It is a liquid, other than an aqueous solution containing less than 24 per cent alcohol by volume and has a flash point less than 60°C as defined by Pensky-Mertens C Closed Cup Tester, using the test method specified in ASTM Standard D93-79 or D93-80, or a Setaflash closed cup tester using test method specified in ASTM Standard D3278;
  - (ii) It is not a liquid and is capable under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;
  - (iii) It is an ignitable compressed gas.
  - (iv) It is an oxidizer.
- (b) A solid waste that exhibits the characteristic of ignitability but is not designated as dangerous waste under any of the FEPA Dangerous Waste

List or FEPA Dangerous Waste Criteria shall be assigned the dangerous waste number FD 001.

**1.8.1.2. Tests for Corrosivity**

- (a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has any or more of the following properties:
  - (i) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5 as determined by a pH meter using method 5.2. in “Test Method for the Evaluation of solid waste, physical/chemical methods”;
  - (ii) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm per year at a test temperature of 55°C as determined by standard test method 01-69 as Standardised in “Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods”.
  - (iii) It is a solid or semi-solid, and when mixed with an equal weight of water results in a solution, the liquid portion of which has the property specified in (a) (i) of this subsection.
- (b) A solid waste that exhibits the characteristic of corrosivity, but is not designated as a dangerous waste under any of FEPA Exclusive List of Dangerous Substances listed in Sections 1.1 to 1.4, Dangerous Waste Criteria listed in Sections 1.5 to 1.7 shall be designated DW, and shall be assigned the dangerous waste number FD 002.

**1.8.1.3. Tests for Reactivity**

- (a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:
  - (i) It is normally unstable and readily undergoes violent change without detonating;
  - (ii) it reacts violently with water;
  - (iii) it forms potentially explosive mixtures with water;
  - (iv) when mixed with water, it generates toxic gases, vapours or fumes in a quantity sufficient to pose a danger to human health or the environment;
  - (v) it is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapours or fumes in a quantity sufficient to present a danger to human health or the environment;

- (vi) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;
- (vii) it is readily capable of deterioration or explosive decomposition or reaction at standard temperature and pressure; or
- (viii) it is a forbidden explosive (FEPA's Reserve List);
- (b) A solid waste that exhibits the characteristic of reactivity, but is not designated as a dangerous waste under any of the dangerous waste lists, or dangerous waste criteria, shall be designated dangerous waste (DW), and shall be assigned the dangerous waste number of FD 003.

#### 1.8.1.4. Tests for Extraction Procedure (EP) Toxicity

- (a) A solid waste exhibits the characteristic of Extraction Procedure (EP) toxicity if, using Extraction Procedure Tests methods, the extract from a representative sample of the waste contains any of the contaminants listed in the EP toxicity list in (c) of this subsection, at concentration equal to or greater than the respective value given in the list.

When the waste contains less than 0.5 per cent filterable solids, the waste itself, after filtering, is considered to be the extract for the purpose of this subsection.

- (b) A solid waste that exhibits the characteristic of EP toxicity, but is not designated as a dangerous waste under any of the dangerous waste lists, or dangerous criteria, has the FEPA dangerous waste number specified in the list which corresponds to the toxic contaminant causing it to be dangerous.
- (c) Two levels of concentration are established for the contaminants listed (Table 1.4). Any waste containing one or more contaminants with concentrations in EHW (Extremely Hazardous Waste) ranges shall cause that waste to be designated EHW. Any waste containing contaminants which occur at concentrations in the Dangerous Waste (DW) range only (i.e. no EHW contaminants) shall be designated DW.

#### 1.9. Generic Dangerous Waste Numbers

A waste which exhibits any of the dangerous waste characteristics listed above shall be assigned the dangerous

TABLE 1.4  
EXTRACTION PROCEDURE (EP) TOXICITY LIST

<i>Dangerous waste number</i>	<i>Contaminant</i>	<i>EHW maximum concentration in extract (mg/l)</i>	<i>DW maximum concentration in extract (mg/l)</i>
FD 004	Arsenic	>500	5-500
FD 005	Barium	>10,000	100-10,000
FD 006	Cadmium	>100	1-100
FD 007	Chromium	>500	5-500
FD 008	Lead	>500	5-500
FD 009	Mercury	>20	0.2-20
FD 010	Selenium	>100	1-100
FD 011	Silver	>500	5-500
FD 012	Endrium	>2	0.02-2
FD 013	Lindane	>40	0.4-40
FD 014	Methoxychlor	>1,000	10-1,000
FD 015	Toxaphene	>50	0.5-50
FD 016	2, 2-D	>1,000	10-1,000
FD 017	2, 4, 5-T	>100	1-100

waste number corresponding to the characteristics (s) exhibited by the waste as shown in Table 1.5.

**TABLE 1.5**

**GENERIC HAZARDOUS/DANGEROUS WASTE NUMBERS TABLE**

<i>Dangerous waste number</i>	<i>Dangerous waste criteria and designation</i>
	Toxic dangerous wastes
FWT01	EHW
FWT02	DW
	Persistent dangerous wastes
	Halogenated hydrocarbons
FWP01	EHW
FWT02	DW
	Polycyclic aromatic hydrocarbons
FWT03	EHW
	Carcinogenic dangerous wastes
FWC01	EHW
FWC02	DW

**CHAPTER TWO  
SPILLS AND DISCHARGES INTO THE ENVIRONMENT**

**2.1. Purpose and Applicability**

This section sets out the requirement for any person responsible for a spill or discharge into the environment except when such release is otherwise permitted under the provision of "FEPA Guideline". For the purposes of complying with this section, a transporter who spills or discharges dangerous waste or hazardous substance during transportation will be considered the *responsible person*. This section shall apply when any dangerous waste or hazardous substance is intentionally or accidentally spilled or discharged into the environment (unless otherwise permitted) such that public health or environment are threatened, regardless of the quantity of dangerous waste or hazardous substance.

**2.2. Notification**

Any person who is responsible for a non-permitted spill or discharge shall immediately notify the local authorities and the nearest FEPA Office/State Environmental Protection Body or other agencies described for the following situation:

- (a) for spills or discharges onto the ground or into groundwater or surface water, notify all local authorities in accordance with local contingency plan;
- (b) **for spills or discharges which result in emissions to the air, notify the Local Government Chairman, who is On the Scene Co-ordinator (OSC) in accordance with local contingency plan, who in turn will notify the nearest FEPA/State Environmental Protection Body and the Fire Department.**

**2.3. Mitigation and Control**

The person responsible for a non-permitted spill or discharge shall take appropriate immediate action to protect human health and the environment.

- (a) In addition, the Agency may require the person responsible for a spill or discharge to:
  - (i) clean up all released dangerous, harmful waste or hazardous substances or take such actions as may be required or approved by the Agency, State/Local Government officials acting within the scope of their official responsibilities. This may include complete or partial removal of released dangerous waste or hazardous substances as may be justified by the nature of the released dangerous wastes or hazardous substances, the human and environmental circumstances of their incident and protection required by FEPA Guidelines;
  - (ii) designate and treat, store or dispose of all soils, water, or other materials contaminated by the spill or discharge in accordance with FEPA guidelines;
  - (iii) if the property on which the spill or discharge occurred is not owned or controlled by the person responsible for the incident, restore the area impacted by the spill or discharge, and replenish resources (e.g. fish, plants) in a manner acceptable to FEPA;
- (b) Where immediate removal or temporary storage of spilled or discharge dangerous wastes or hazardous substances is necessary to protect human health or the environment, the Agency may direct that removal be accomplished without a manifest,

by transporters who do not have FEPA identification numbers.

## 2.4. Containers

**2.4.1. Waste Quantity.**—Containers and inner liners shall not be considered as a part of the Waste when measuring or calculating the quantity of a dangerous waste. Only the weight of the residues in non-empty or non-rinsed containers or inner liners will be considered when determining waste quantities.

**2.4.2.** A container or inner liner is "empty" when:

- (a) all wastes in it have been taken out, that can be removed using practices commonly employed to remove materials from that type of container or inner liner (e.g. pouring, pumping, aspirating, etc.) and whichever quantity is least, either less than two cm of waste remains at the bottom of the container or inner liner or the volume of waste remaining in the container or inner liner is equal to one per cent or less of the container's total capacity, or if the container's total capacity is greater than four hundred and sixteen litres the volume of waste remaining in the container or inner liner is no more than 0.3 per cent of the container's total capacity. A container which held compressed gas is empty when the pressure inside the container equals or nearly equals atmospheric pressure; and
- (b) If the container or inner liner held extremely hazardous waste, or pesticides bearing the danger or warning label, the container or inner liner has been rinsed at least three times with an appropriate cleaner or solvent. The volume of cleaner or solvent used for each rinsing shall be ten per cent or more of the container's or inner liner's capacity. In lieu of rinsing for containers that might be damaged to make unusable by rinsing with liquids (e.g. fiber or card-board container without inner liners), an empty container may be vacuumcleaned, struck with the open end of the container up, three times (e.g., on the ground, with a hammer or hand) to remove or loosen particles from the inner walls and corners, and vacuum cleaned again. Equipment used for vacuum cleaning of residues from container or inner liners must be decontaminated before discharging, in accordance with procedures approved by FEPA;
- (c) Any rinsate or vacuumed residue which results from the cleaning of containers to inner liners shall whenever possible be reused in a manner consistent with the original intended purpose of the substance in the container or inner liner. In the case of a farmer if the rinsate is a pesticide residue then the rinsate shall be managed or reused in a man-

ner consistent with the instructions on the pesticide label provided that when the label instructions specify disposal or burial, such disposal or burial must be on the farmer's own (including rented, leased or tenanted) property. Otherwise, the rinsate shall be checked against the designation requirements and, if designated, managed according to the requirements of this Section.

**2.4.3.** A person may petition the Agency to approve alternative container rinsing processes in accordance with FEPA Guidelines.

**2.5. Overpacked Containers (Labpacks):** Small containers of dangerous waste may be placed in overpacked drums (or labpacks) provided that the following conditions are met:

**2.5.1.** Hazardous waste shall be packaged in non-leaking inside containers. The inside containers shall be of a design and constructed of a material that will not react dangerously with, decomposed by, or be ignited by the contained waste. Inside containers shall be tightly and securely sealed and, to the extent possible, should be full and have as little air as possible in them to minimize voids. The inside containers shall be of the size and type specified in FEPA hazardous materials guidelines, if those guidelines specify a particular inside container for the waste;

**2.5.2.** The inside containers must be overpacked in an open head metal shipping container at no more than 416-litre capacity and surrounded by, at a minimum, a sufficient quantity of absorbent material to completely absorb all of the liquid contents of the inside packing with inside containers and absorbent material;

**2.5.3.** The absorbent material used shall not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers in accordance with FEPA guidelines.

## 2.6. Manifest System

There shall be a manifest system which will include the following requirements;

- (a) **Packaging:** The generator shall package all dangerous waste for transport in accordance with these FEPA Guidelines.
- (b) **The package shall have a Manifest Document Number.**
- (c) **Labelling:** The generator shall label each package as prescribed by FEPA.
- (d) **Marking:** The generator shall mark each package

of dangerous waste with the following, or equivalent words and information, very well displayed:

## HAZARDOUS WASTE

State and Federal law prohibits improper disposal. If found, contact the nearest FEPA Zonal office, police, or public health authority.

General's Name and Address

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Manifest Document Number

\_\_\_\_\_

The generator shall placard, or provide bold warning signs to the transporter(s) as prescribed by FEPA.

### 2.6.2. Applicability

The requirements of this section apply to owners and operators who receive dangerous waste from off-site sources.

2.6.3. A facility shall only receive dangerous waste that is accompanied by a manifest.

2.6.4. If a facility receives dangerous waste accompanied by a manifest, the owner or operator, or his agent shall:

- (a) sign and date each copy of the manifest to certify that the dangerous waste covered by the manifest was received;
- (b) note any significant discrepancies in the manifest, as described in this section on each copy of the manifest.
- (c) immediately give the transporter at least one copy of the signed manifest;
- (d) within thirty days after the delivery, send a copy of the manifest to the generator; and
- (e) retain at the facility a copy of each manifest for at least three years from the date of delivery.

2.6.5. If a facility receives, from a transporter, dangerous waste whose manifest or shipping paper contains discrepancies, it shall notify the generator as well as FEPA or its designee of such discrepancies within twenty-one days from the receipt of the dangerous waste.

### 2.6.6. Manifest Discrepancies

- (a) Manifest discrepancies are significant discrepancies between the quantity or type of dangerous waste designated on the manifest or shipping paper and that actually received.
  - (i) Significant discrepancies in quantity are variations greater than ten per cent in weight for bulk quantities (e.g. tanker, trucks, railroad tank cars, etc.), or any variations in piece count for non-bulk quantities (i.e. any missing container or package).
  - (ii) Significant discrepancies in type are obvious physical or chemical difference which can be discovered by inspection or waste analysis (e.g. waste solvent substituted for waste acid).
  - (iii) A third type of significant discrepancy include omissions of the FEPA/State identification numbers, generator certification and signature, etc. from the manifest.
- (b) Upon discovering a significant discrepancy, the owner or operator shall attempt to reconcile the discrepancies with the waste generator or transporter. If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator shall immediately notify FEPA by describing the discrepancy and attempts to reconcile it, sending a copy of the manifest or shipping paper at issue.

### 2.6.7. Non-acceptance of dangerous waste shipments

- (a) The following shall be reasons for non-accepting a dangerous waste shipment:
  - (i) the facility is not capable of properly managing the type(s) of dangerous waste in the shipment;
  - (ii) there is a significant discrepancy (as described in subsection 2.6.6) between the shipment and the wastes listed on the manifest or shipping papers; or
  - (iii) the shipment has arrived in a condition which the owner or operator believes would present an unreasonable hazard to facility operations, or to facility personnel handling the dangerous waste(s).
- (b) The owner or operator may send the shipment on the alternative facility designated on the manifest or shipping paper, or contact the generator to identify another facility capable of handling the waste and provide for its delivery to that other facility, unless, the containers are damaged to such an extent or the dangerous waste is in such a condition as to prevent a hazard to public health or the environment in the process of further transportation in



such a situation the contingency plan (Section 2.8) shall be put in operation.

## 2.7. Preparedness and Prevention

Facilities shall be designed, constructed, maintained and operated to minimise the possibility of fire, explosion or any unplanned sudden or non-sudden of dangerous waste or dangerous waste constituents to air, soil, or surface or groundwater which could threaten public health or the environment. This section describes preparations and preventive measures which help avoid or mitigate such situations.

**2.7.1. Required equipment:** All facilities shall be equipped with the following, unless it can be demonstrated to FEPA that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

- (a) an internal communication or alarm system capable of providing immediate emergency instructions to facility personnel;
- (b) a device, such as telephone or hand-held two-way radio, capable of summoning emergency assistance from local police and fire service departments or state/local On-the-Scene Co-ordinator (OSC);
- (c) portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and
- (d) water as adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

**2.7.2.** All facility communications on alarm systems, fire protection equipment, spill control equipment and decontamination equipment, where required, *shall be tested and maintained* as necessary to assure their proper operation in time of emergency.

**2.7.3. Access to communications or alarms** Personnel shall have immediate access to the signalling devices in the following situations:

- (a) whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with other employees;
- (b) even if there is only one employee on the premises while the facility is operating, he must have immediate access to a device, such as telephone or hand-held, two-way radio, capable of summoning external emergency assistance.

**2.7.4. Aisle Space** The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the Agency that aisle space is not needed for any such purposes.

## 2.7.5. Arrangements with local Organisations and Agencies

**2.7.5.1.** The owner or operator shall inform FEPA that he has made the following arrangements, as appropriate for the type of waste or substances handled at his facility **and the potential need for the services of the following organisations, unless the hazards posed by waste or substances handled at the facility would not require these arrangements:**

- (a) to familiarise police, fire services department, emergency response team and other such members of the Local Response Team (or Zonal Response Team where **applicable with the layout of the facility, properties of dangerous waste or hazardous** substances handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside facility, and possible evacuation routes;
- (b) to familiarise local hospitals with the properties of dangerous waste or hazardous substances handled at the facility and the type of injuries or illness which could result from fires, explosions, or releases at the facility;
- (c) where more than one party might respond to an emergency, to reach agreement with the others designate primary emergency authority to provide support to the primary emergency authority;
- (d) to always notify the designated OSC in the event of any emergency, who will then co-ordinate response activities by the Zonal/Local response teams.

**2.7.5.2.** Where FEPA/State or local authority decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record and the onus of proof of that refusal shall rest with the owner/operator.

## 2.8. Contingency Plan and Emergency Procedures

**2.8.1.** A contingency plan shall be developed to lessen the potential impact on public health and the environment in the event of an emergency, including a fire, explosion, or unplanned sudden or non-sudden release or dangerous waste, hazardous substances or dangerous waste constituent to air, soil, surface water, or ground water by a facility.

## 2.8.2. Contingency Plan

Each owner or operator shall have an On-Site and Off-Site Contingency Plans, at his facility for use in emergencies or sudden or non-sudden releases which threaten public health and the environment. The on site plan are as stipulated under section 2.7 on *Preparedness and Prevention* while the off site plan should be drawn up to integrate the right of community to know. The community next to a facility should be aware of the potential dangers of sudden or non-sudden discharges and activities to mitigate the emergencies.

2.8.2.1. The Contingency Plan shall contain the following:

- (a) A description of the actions which facility personnel shall take to comply with this section;
- (b) A description of the actions which shall be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported;
- (c) A description of the arrangements agreed to by local police and, fire service departments, hospitals, contractors, and zonal and state response teams to co-ordinate emergency services;
- (d) A current of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency co-ordinator in accordance with the provision of FEPA;
- (e) A list of all emergency equipment and response equipment at the facility (such as fire extinguishing systems, spill control equipment communications and decontamination equipment), where these equipment are required. This list shall be kept up to date. **In addition, the plan shall include the location and a physical description of each item on the list and a brief outline of its capabilities; and**
- (f) an evacuation plan for facility personnel where there is possibility that evacuation could be necessary. This plan shall describe the signal (s) to be used to begin evacuation, evacuation routes and alternative evacuation routes.

2.8.2.2. A copy of the contingency plan and all revisions to the plan shall be:

- (a) maintained at the facility; and
- (b) submitted to the designated OSC and all members

of the State/Local response team.

2.8.2.3. The owner or operator shall review and immediately amend the contingency plan, if necessary, wherever:

- (a) applicable regulations or the facility permit are revised;
- (b) the plan fails in an emergency;
- (c) the facility changes (in its design, construction, operation, maintenance or other circumstances) in a way that materially increases the potential for fires, explosions, or release of dangerous waste constituents, or hazardous substances, or in a way that changes the response necessary in an emergency;
- (d) the list of emergency co-ordinator changes; or
- (e) the list of emergency equipment changes.

## 2.8.3. Emergencies

2.8.3.1. *Emergency Co-ordinator*—At all times, there shall be at least one employee either on the facility premises or on call with the responsibility for co-ordinating all emergency response measures. This emergency co-ordinator shall be thoroughly familiar with all aspect of the facility's contingency plan required by FEPA guidelines, all operations and activities at the facility, the location and properties of all waste and hazardous substances handled, the location of all records within the facility and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan.

### 2.8.3.2. *Emergency Procedures*

The following procedures shall be implemented in the event of an emergency:

- (a) **whenever there is imminent or actual emergency situation, the emergency co-ordinator (or his designee in his absence) shall immediately:**
  - (i) activate internal facility alarms or communication systems where applicable to notify all facility personnel; and
  - (ii) *notify* appropriate OSC who will co-ordinate all response activities.
- (b) whenever there is a release, fire, or explosion, the emergency co-ordinator shall immediately identify the character, exact source, amount, and extent of any released materials;

- (c) concurrently, the emergency co-ordinator shall assess possible hazard to human health and the environment (considering direct, indirect, immediate, and long term effect) that may result from the release fire, or explosion;
- (d) if the emergency co-ordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, he shall submit a report of his findings to FEPA;
- (e) emergency co-ordinator's report shall include:
- (i) name and telephone number of reporter;
- (ii) name and address of facility;
- (iii) time and type of incident (e.g. release, fire);
- (iv) name and quantity of material(s) involved to the extent known;
- (v) the extent of injuries, if any; and
- (vi) the possible hazards to human health or the environment outside the facility.
- (f) the emergency co-ordinator for a facility, shall take all reasonable measures to ensure that fires, explosions, and releases do not occur, or spread to other dangerous waste, and to stop processes and operations, collect and contain released waste or hazardous substances and remove or isolate containers;
- (g) **if the facility stops operations in response to fire, explosions, or release, the emergency co-ordinator must monitor for leaks, pressure build up, gas generation, or ruptures in valves, pipes or other equipment whenever this is appropriate;**
- ruptures in valves, pipes or other equipment whenever this is appropriate;
- (h) Immediately after an emergency, the emergency co-ordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water; or any other material that results from a release, fire or explosion at the facility;
- (i) the emergency co-ordinator shall ensure that, in the affected area(s) of the facility:
- (i) no waste that may be incompatible with the released materials is treated, stored, or disposed of until clean up procedure are completed; and
- (ii) all emergency equipment listed in the contingency plan are cleaned and made fit for their intended use before operations are resumed.
- (j) The Owner or operator shall notify FEPA appropriate local authorities and the nearest community nearest, that the facility is in compliance with section (i) of this subsection before operation are resumed in the affected area(s) of the facility;
- (k) The owner or operator shall note in the operating record the time, date and details of any incident that requires implementing the emergency procedures within fifteen days after the incident, he shall submit a written report on the incident, to the FEPA office. The report shall include:
- (i) name, address and telephone number of the owner or operator;
- (ii) name address and telephone number of the facility;
- (iii) date, time, and type of incident (e.g. fire, explosion);
- (iv) name and quantity of material(s) involved.
- (v) the extent of injuries if any;
- (vi) an assessment of actual or potential hazards to human health or the environment, where this is applicable;
- (vii) estimated quantity and disposition of recovered materials that resulted from the incident;
- (viii) cause of incident; and
- (ix) description of connective action taken to prevent reoccurrence of the incident.

## 2.9. Facility Record Keeping

2.9.1. *Operating Record.*—The owner or operator of a facility shall keep a written operating record at his facility. The following information shall be recorded, as it becomes available and maintained in the operating record until closure of the facility:

- (a) a description of and the quantity of each hazardous waste received or managed on-site, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by subsection (2) of this section, record keeping instructions;
- (b) the location of each hazardous waste within the facility and the quantity of each hazardous waste

must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross references to specific manifest document numbers. Every hazardous consignment must be accompanied by a manifest;

- (c) records and results of waste analysis;
- (d) summary reports and details of all incidents that require implementing the contingency plan;
- (e) general inspection except such information need be kept only for three years;
- (f) monitoring, testing or analytical data where required for interim status facilities, and for final status facilities.

**2.9.2. Record Keeping Instructions:**

This section provides instruction for recording the portions of the operating guideline which are related in describing the types, quantities, and management of hazardous wastes at the facility. This information shall be kept in the operating record as follows:

- (a) each hazardous waste received or managed shall be described by its common name and by its hazardous waste number(s). Where a hazardous waste contains more than one process waste or waste constituent the waste description must include all applicable hazardous waste numbers. If the hazardous waste number is not listed then the waste description shall include the process which generated the waste;
- (b) the waste description shall include the waste's physical form (i.e. liquid, solid, sludge, or gas);
- (c) the weight, or volume and density, of the hazardous waste shall be recorded, using one of the units of measure specified in Table 2.1. below:

- (d) add, the date(s) and method(s) of management for each hazardous waste received or managed (e.g. treated, recycled, stored, or disposed of) shall be recorded, using the handling code(s) specified in Table 2.2.

**TABLE 2.2**

**HANDLING CODES FOR HAZARDOUS/ ANGEROUS WASTE MANAGEMENT**

- 1. Storage**
  - FS01 Container (barrel, drum, etc.)
  - FS02 Tank
  - FS03 Waste pile
  - FS04 Surface impoundment
  - FS05 Other (specify)
- 2. Treatment**
  - (a) Thermal Treatment
    - FT06 Liquid injection incinerator
    - FT07 Rotary kiln incinerator
    - FT08 Fluidized bed incinerator
    - FT09 Multiple hearth incinerator
    - FT10 Infrared furnace incinerator
    - FT11 Molten salt destructor
    - FT12 Pyrolysis
    - FT13 Wet air oxidation
    - FT14 Calcinator
    - FT15 Microwave discharge
    - FT16 Cement kiln
    - FT17 Lime kiln
    - FT18 Other (specify)
  - (b) Chemical Treatment
    - FT19 Absorption mound
    - FT20 Absorption field
    - FT21 Chemical fixation
    - FT22 Chemical oxidation
    - FT23 Chemical precipitation
    - FT24 Chemical reduction
    - FT25 Chlorination

**TABLE 2.1**

**UNIT OF MEASURE**

Unit of Measure	Symbol	Density
Kilograms	Kg	
Tonnes (1,000 Kg)	M	
Litres	L	K/L
Cubic Meters		

- FT26 Chlorinolysis
- FT27 Cyanide destruction
- FT28 Degradation
- FT29 Detoxification
- FT30 Ion exchange
- FT31 Neutralization
- FT32 Ozonation
- FT33 Photolysis
- FT34 Other (specify)

## (c) Physical Treatment

*(i) Separation of Components*

- FT35 Centrifugation
- FT36 Clarification
- FT37 Coagulation
- FT38 Decanting
- FT39 Encapsulation
- FT40 Filtration
- FT41 Flocculation
- FT42 Flotation
- FT43 Foaming
- FT44 Sedimentation
- FT45 Thickening
- FT46 Ultrafiltration
- FT47 Other (specify)

*(ii) Removal of specific Component*

- FT48 Absorption-molecular sieve
- FT49 Activated carbon
- FT50 Blending
- FT51 Catalysis
- FT52 Crystallization
- FT53 Dialysis
- FT54 Distillation
- FT55 Electrodialysis
- FT56 Electrolysis
- FT57 Evaporation
- FT58 High gradient magnetic separation
- FT59 Leaching
- FT60 Liquid ion exchange
- FT61 Liquid-liquid extraction
- FT62 Reverse osmosis
- FT63 Solvent recovery
- FT64 Stripping
- FT65 Sand filter
- FT66 Other (specify)

## (d) Biological Treatment

- FT67 Activated sludge
- FT68 Aerobic lagoon
- FT69 Aerobic tank
- FT70 Anaerobic lagoon or tank
- FT71 Composting
- FT72 Septic tank
- FT73 Spray irrigation
- FT74 Thickening filter

- FT75 Trickling filter
- FT76 Waste stabilisation pond
- FT77 Other (specify)
- FT78-79 (Reserved)

## (e) Disposal

- FD80 Underground injection
- FD81 Landfill
- FD82 Land treatment
- FD83 Ocean disposal
- FD84 Surface impoundment (to be closed as a landfill)
- FD85 Others (specify)

## 2.9.3. Availability, Retention and Disposition of Records:

- (a) All facility records, including plans, required by this section must be furnished upon request, and made available at all reasonable times for inspection, by any designated officer, employee or representative of FEPA.
- (b) The retention period for all facility records required under this section is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by FEPA.
- (c) A copy of records of waste disposal locations and quantities under this section must be submitted to the FEPA Zonal Office, the State located at, and the local land use and planning authority upon closure of the facility.

### CHAPTER THREE GROUND WATER PROTECTION

## 3.1. Applicability

- (a) Except as provide in (b) of this section, the guideline in this subsection apply to owners and operators of facilities that treat, store, or dispose of dangerous waste in surface impoundments, waste piles, land treatment units, or landfills. The owner or operator shall satisfy the requirements of this subsection for all wastes (or constituents thereof) contained in any such waste management unit at the facility that is a "regulated unit". Any waste or waste constituent migrating beyond the waste management area under section 3.6(b) of this chapter, is assumed to originate from a regulated unit unless the owner or operator can prove to the satisfaction of the Agency that such waste or waste constituent originated from another source.

(b) The owner or operator is not subject to guideline under this subsection if:

(i) he designs and operates a surface impoundment as in chapter 4 or a landfill as in chapter 7;

(ii) FEPA finds, that the treatment zone of a land treatment unit does not contain levels of dangerous constituents that are above background levels of those constituents by an amount that is statistically significant. An exemption under this subsection can only relieve an owner or operator of responsibility to meet the requirements of this section during the postclosure care period; or

(ii) FEPA finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the postclosure care period. This demonstration must be certified by a qualified geologist or geotechnical engineer.

(c) The regulations under this chapter apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the guidelines in this chapter:

(i) do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

(ii) apply during the postclosure care period if the owner or operator is conducting a detection monitoring programme under section 3.9; and

(iii) apply during the compliance period under section 3.7, if the owner or operator is conducting a compliance monitoring programme under section 3.10, or a corrective action program under section 3.11.

### 3.2. Required Programme

(a) Owners and operators subject to this section must conduct monitoring and response programmes as specified in this chapter.

### 3.3. Ground Water Protection Standard

The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that dangerous constituents entering the ground water from regulated unit do not exceed the concentration limits in the uppermost aquifer underlying the waste management area during the compliance period. To the extent practicable, FEPA will established this ground water protection standard in the facility permit at the time the permit is issued. If FEPA discovers that an estab-

lished standard is not protective enough, or if it decides that it is not practical to establish standards at the time of permit issuance, FEPA will establish the groundwater protection standard in the facility permit when dangerous constituents have entered the groundwater from a regulated unit.

### 3.4. Dangerous Constituents:

(a) FEPA shall specify in the facility permit the dangerous constituents to which the ground water protection standard of section 3.3 of this chapter, applies. Dangerous constituents are constituents identified in FAC 000-000-9905, and any other constituents not listed there which have caused a waste to be regulated under this chapter, that may be or have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in, or derived from waste contained in a regulated unit, unless FEPA has excluded them under subsection 3.4 (b)

FEPA may also specify in the permit indicator parameters (e.g. specific conductance, pH, total organic carbon (TOC), total organic halogen (TOX), or heavy metals, waste constituents or reaction products) as identified in the detection monitoring programme under subsection 3.9 (a), that provide a reliable indication of the presence of dangerous constituents in the ground water.

(b) FEPA shall exclude a constituent in FAC 000-000-9905 or other identified constituent from the list of dangerous constituents specified in the facility permit if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, FEPA will consider the following:

(i) potential adverse effects on ground water quality;

(ii) potential adverse effects on hydraulically-connected surface water quality;

(iii) any other identification of underground sources of drinking water and aquifers.

### 3.5. Concentration Limits:

(a) FEPA shall specify in the facility permit concentration limits in the ground water for dangerous constituents established under Section 3.4. The concentration of a dangerous constituents:

(i) shall not exceed the background level of that constituents in the ground water at the time that limit is specified in the permit; or

- (ii) for any of the constituents listed in Table 3.1 shall not exceed the respective value given in that table if the background level of the constituent is below the value given in Table 3.1; or
- (iii) shall not exceed an alternative limit established by FEPA under subsection 3.5 (b).

TABLE 3.1

MAXIMUM CONCENTRATION OF CONSTITUENTS FOR GROUND WATER PROTECTION

<i>Constituent</i>	<i>Maximum concentration (mg/l)</i>
Arsenic	0.05
Baroa,	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
2, 4-D0.1	0.1
2, 4, 5-TP Silvex (Tree killer)	0.01

- (b) FEPA may establish an alternative concentration limit for a dangerous constituent if it finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded, in establishing alternate concentration limits. FEPA may consider the same factors listed in subsections (4) (b) (i) (ii) and (iii).

### 3.6. Point of Compliance:

- (a) FEPA shall specify in the facility permit the point of compliance at which the ground water protection standard of section 3.3 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically down gradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units. Alternatively, the point of compliance may be any closer points identified by FEPA at the time the permit is issued, considering the risks of the facility, the

wastes and constituents managed there, the potential for waste constituents to have already migrated past the alternate compliance point, and the potential threats to ground and surface waters.

- (b) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit. The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit. If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

### 3.7. Compliance Period

- (a) FEPA shall specify in the facility permit the compliance period during which the ground water protection standard of subsection 3.3 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).
- (b) The compliance period begins when the owner or operator initiates a compliance monitoring programme meeting the requirements of subsection 3.10.
- (c) If the owner or operator is engaged in a corrective action programme at the end of the compliance period in subsection 3.7 (a), the compliance period is extended until the owner or operator can demonstrate that the ground water protection standard of section 3.3 has not been exceeded for a period of three consecutive years.

### 3.8. General Ground Water Monitoring Requirements:

The owner or operator shall comply with the requirements of this subsection for any ground water monitoring programme developed to satisfy sections 3.9, 3.10, or 3.11.

- (a) The ground water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground water samples from the uppermost aquifer that:
- (i) represent the quality of background water that has not been affected by leakage from a regulated unit; and
- (ii) represent the quality of ground water passing the point of compliance.

- (b) If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit, provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of dangerous constituents from the regulated units that have entered the ground water in the uppermost aquifer.
- (c) All monitoring wells shall be cased in a manner that maintains the integrity of the monitoring well borehole. This casing shall allow collection of representative ground water samples. Wells shall be constructed in such a manner as to prevent contamination of the samples, the sampled strata, the layers between aquifers and water bearing strata.
- (d) The ground water monitoring programme shall include at a minimum, procedures and techniques for:
  - (i) decontamination of drilling and sampling equipment;
  - (ii) sample collection;
  - (iii) sample preservation and shipment;
  - (iv) analytical procedures and quality assurance; and
  - (v) control and custody and distribution of samples.
- (e) The ground water monitoring programme shall include consistent sampling and analytical methods that ensure reliable ground water sampling, accurately measure dangerous constituents and indicator parameters in ground water samples, and provide a reliable indication of ground water quality below the waste management area.
- (f) The ground water monitoring programme shall include a determination of the ground water surface elevation each time ground water is sampled.
- (g) Where appropriate, the ground water monitoring programme shall establish background ground water quality for each of the dangerous constituents or monitoring parameters or constituents specified in the permit.
- (h) The owner or operator shall use statistical procedures in determining whether background values or concentration limits have been exceeded; as specified by FEPA in the facility permit.

### 3.9. Detection Monitoring programme

An owner or operator required to establish a detection

monitoring programme under this section shall, at a minimum, discharge the responsibilities described as follows: the owner or operator shall monitor the ground water for indicator parameters (e.g. total organic carbon (TOC), total organic halogen (TOH), or heavy metals), waste constituents, or reaction products that provide a reliable indication of the presence of dangerous constituents in ground water, FEPA shall specify the parameters or constituents to be monitored in the facility permit.

### 3.10. Compliance Monitoring Programme

An owner or operator required to establish a compliance monitoring programme under this section shall, at a minimum, discharge the responsibilities described as follows:

- (a) the owner or operator shall monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under subsection 3.3. FEPA shall specify the ground water protection standard in the facility permit;
- (b) the owner or operator shall install a ground water monitoring system at the compliance point as specified under subsection 3.6;
- (c) where a concentration limit established under 3.10 (a) is based on background water quality, FEPA shall specify the concentration limit in the permit;
- (d) the owner or operator shall determine the concentration of dangerous constituents and parameters in ground water at each monitoring well at the compliance point at least quarterly during the compliance period. The owner or operator shall express the concentration at each monitoring well in a form necessary for the determination of statistically significant increases;
- (e) the owner or operator shall determine the rate and direction of ground water flow in the upper most aquifer at least annually;
- (f) the owner or operator shall analyse samples from all monitoring wells at the compliance point for constituents identified in FAC 000-000-9905, and any other dangerous constituents not listed IN FAC 000-000-9905 but which are specified in the facility permit pursuant to subsection 3.4.(a) at least annually to determine whether additional dangerous constituents are present in the uppermost aquifer. If the owner or operator finds constituents identified in FAC 000-000-9905, and any other dangerous constituents not listed in FAC 000-000-9905 but which are specified in the facility permit pursuant to subsection 3.4.(a) at least annually to determine whether additional dangerous



constituents are present in the uppermost aquifer. If the owner or operator finds constituents identified in FAC 000-00-9905, and any other dangerous constituents not listed in FAC 000-000-9905 but which are specified in the facility permit pursuant to subsection 3.4.(a) as dangerous constituents, he shall report the concentration of these additional constituents to within seven days after completion of the analysis;

- (g) the owner or operator shall use procedures and methods for sampling and analysis that meet the requirements of subsection 3.8.(c) and (d);
- (h) the owner or operator shall determine whether there is a statistically significant increase over the concentration limits for any dangerous constituents specified in the permit each time he determines the concentration of dangerous constituents in ground water at the compliance point;
- (i) if the owner or operator determines, pursuant to subsection (h) that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, he shall:
  - (i) notify FEPA of the finding in writing within seven days. The notification shall indicate what concentration limits have been exceeded;
  - (ii) submit to FEPA an application for a permit modification to establish a corrective action programme meeting the requirements of section 3.11 of this section, within ninety days or within sixty days if an engineering feasibility study has been previously submitted to FEPA under subsection 3.9 (h). For regulated units managing EHW, time frames of sixty days and forty-five days respectively will apply.
- (j) if the owner or operator determines, pursuant to subsection (h), that the ground water protection standard is being exceeded at any monitoring well at the point of compliance, he may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a permit modification application 3.10(i) and (ii) he is not relieved of the requirement to submit a permit modification application within the time specified in this subsection;
- (k) if the owner or operator determines that the compliance monitoring programme no longer satisfies the requirements of this section, he shall, within forty-five days, submit an application for a permit

modification to make any appropriate changes to the programme;

- (l) the owner or operator shall assure FEPA that monitoring and corrective action measures necessary to achieve compliance with the ground water protection standard under subsection 3.3. are taken during the term of the permit.

### 3.11. Corrective Action Programme

An owner or operator required to establish a corrective action programme under this section shall, at a minimum, discharge the responsibilities described in this section.

- (a) The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground water protection standard under subsection 3.3. FEPA shall specify the ground water protection standard in the facility permit.
- (b) The owner or operator shall implement a corrective action programme that prevents dangerous constituents and parameters from exceeding their respective concentration limits at the compliance point by removing the dangerous waste constituents and parameters or treating them in place. The permit will specify the specific measures that will be taken.
- (c) Where the ground water protection standard is exceeded, the owner or operator shall begin corrective action within the time period specified in the facility permit issued by FEPA.
- (d) In conjunction with the corrective action programme the owner or operator shall establish and implement a ground water monitoring programme to demonstrate the effectiveness of the corrective action programme.
- (e) In addition to the other requirements of this section, the owner or operator shall conduct a corrective action programme to remove or *in-situ* dangerous constituents or parameters under section 3.4, that exceed concentration limits specified under section 3.5 in ground water between the compliance point and the down gradient facility property boundary. The permit shall specify the measures to be taken.
- (f) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he shall continue that corrective action for as long as necessary to

achieve compliance with the ground water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the ground water monitoring program under (d) of this subsection, that the ground water protection standard of subsection 3.3 has not been exceeded for a period of three consecutive years.

- (g) The owner or operator shall report in writing to on the effectiveness of the corrective action programme. The owner or operator shall submit these reports semi-annually.
- (h) If the owner or operator determines that the corrective action programme no longer satisfied the requirements of this section, he shall, within forty-five days, submit an application for a permit modification to make any appropriate changes to the programme.

## CHAPTER FOUR SURFACE IMPOUNDMENTS

### 4.1. Applicability

The regulations in this section apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of dangerous waste.

### 4.2. Design and Operating Requirements

- (a) (i) A surface impoundment shall have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with subsection 4.6 (a) (i). For impoundments that will be closed in accordance with subsection 4.6 (a) (ii) of this section, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner shall be:
  - (a) constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradi-

ents (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

- (b) placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift;
- (c) installed to cover all surrounding earth likely to be in contact with the waste or leachate; and
- (d) for EHW management, the owner or operator shall submit an engineering report with his permit application stating the basis for selecting the liner(s). The report shall be certified by a licensed professional engineer.
  - (ii) The owner or operator of a surface impoundment in which liquid EHW is managed shall:
    - (a) install a double lined system which incorporates the specifications of subsection 4.3 (a), (b) and (c); and
    - (b) shall comply with the ground water monitoring requirements.
    - (b) The owner or operator may be exempted from the requirements of subsection 4.2 (a) if FEPA finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any dangerous constituents listed in FAC 000-000-9905 or which otherwise cause his wastes to be regulated, into the ground water or surface water at any future time.
    - (c) A surface impoundment shall be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; and overfilling; and take into account the effect of wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment: and human error.
    - (d) A surface impoundments shall be designed so that any flow of waste into the impoundment can be immediately shut off in the event of overtopping or liner failure.
    - (e) A surface impoundment shall be designed to repel birds.

- (f) A surface impoundment shall have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent their failure. In ensuring structural integrity, it shall not be presumed that the liner system will function without leakage during the active life of the unit.
- (g) Earthen dikes shall be kept free from burrowing mammals which could weaken its structural integrity or create leaks through burrows.
- (h) Earthen dikes shall have a protective cover, such as grass, shale or rock to minimize wind and water erosion and to preserve their structural integrity.
- (i) FEPA shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.
- 4.3. Double-lined Surface Impoundments**
- (a) Except as provided in subsection 4.2 (a) (ii) the owner or operator of a double lined surface impoundment is not subject to this subject to this guideline if the following conditions are met:
- (i) the impoundment (including its underlying liners) shall be located entirely above the seasonal high water table;
- (ii) the impoundment shall be underlain, by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. Both liners shall meet all the specifications of subsection (2) (a) (i);
- (iii) a leak detection system shall be designed, constructed, maintained, and operated between the liners to detect any migration of liquids into the space between the liners; and
- (iv) a leachate detection, collection and removal system shall be designed and operated to remove accumulated liquids from the system as quickly as possible to avoid unnecessary buildup of hydrostatic pressure in the system.
- (b) If liquid leaks into the leak detection system, the owner or operator shall:
- (i) notify FEPA of the leak in writing within seven days after detecting the leak; and
- (ii) (a) within a period of time specified in the permit, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from a qualified engineer that, the leak has been stopped; or
- (b) begin to comply with any detection monitoring programmes specified in the permit.
- (c) FEPA shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.
- 4.4. Monitoring and Inspection**
- (a) During construction and installation, liners and cover systems (e.g. membranes, sheets, or coatings) shall be inspected for uniformity, damage, and imperfections (e.g. holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:
- (i) synthetic liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
- (ii) soil based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.
- (b) While a surface impoundment is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:
- (i) deterioration, malfunctions, or improper operation of overtopping control system;
- (ii) sudden drops in the level of the impoundment's contents;
- (iii) the presence of liquids in leak detection systems, where installed to comply with section 4.3;
- (iv) severe erosion or other signs of deterioration in dikes or other containment devices.
- (c) Prior to the issuance of a permit, and after any extended period of time (at least six months) during which the impoundment was not in service, the owner or operator shall obtain a certification from a qualified engineer that impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification shall establish, in particular, that the dike:
- (i) will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and

- (ii) will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment constructed.

4.5. Emergency repairs, contingency plans

- (a) A surface impoundment shall be removed from service in accordance with subsection 4.5 (b) if:

- (i) unexpected changes of liquid levels occur; or
- (ii) the dike leaks.

- (b) When a surface impoundment is to be removed from service as required by subsection 4.5 (a) the owner or operator shall:

- (i) immediately shut off the flow or stop the addition of wastes into the impoundment;

- (ii) immediately contain any surface leakage which has occurred or is occurring;

- (iii) immediately stop the leak;

- (iv) take any other necessary steps to stop or prevent catastrophic failure;

- (v) empty the impoundment, if a leak cannot be stopped by any other means; and

- (vi) notify the Agency of the problem in writing within seven days after detecting the problem.

- (c) As part of the contingency plan in with the owner or operator shall specify:

- (i) a procedure for complying with the requirements of (b) of this subsection; and

- (ii) a containment system evaluation and repair plan describing: testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; description of a schedule of actions to be taken in the event of a possible failure: and the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.

- (d) no surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment which was failing is required and the following steps was taken:

- (i) if the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity shall be recertified in accordance with subsection 4.4.(c);

- (ii) if the impoundment was removed from service as the result of a sudden drop in the liquid level, then

- (a) for any existing portion of the impoundment, a liner shall be installed in compliance with subsection 4.2 (a) (i) subsection 4.3; and

- (b) for any other portion of the impoundment, the repaired liner system shall be certified by a qualified engineer as meeting the design specifications approved in the permit.

- (e) A surface impoundment that has been removed from service in accordance with the requirements of this section and that is not being repaired shall be closed in accordance with the provisions of section 4.6.

4.6. Closure and post-closure care

- (a) At closure, the owner of operator shall:

- (i) remove or decontaminate all dangerous waste and dangerous waste residues, contaminated system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with dangerous waste and leachate, and manage them as dangerous waste: or

- (ii) if the surface impoundment will be closed as a landfill, except that this option is prohibited if EHW would remain in the closed unit(s);

- (a) eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;

- (b) stabilize remaining wastes to a bearing capacity sufficient to support a final cover; and

- (c) cover the surface impoundment with final cover designed and constructed to provide long term minimization of the migration of liquids through the closed impoundment function with minimum maintenance; promote drainage and minimize erosion or abrasion of the final cover; and accommodate settling and subsidence so that the cover's integrity is maintained.

- (b) If some waste residues or contaminated materials are left in place at final closure (except that no EHW may ever be left in place), the owner or op-

erator shall comply with all post-closure requirements including maintenance and monitoring throughout the post-closure care period (specified in the permit). The owner or operator may:

- (i) maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
  - (ii) maintain and monitor the leak detection system in accordance with subsection 4.3 where such a system is present between double liner systems;
  - (iii) maintain and monitor the ground water monitoring system;
  - (iv) Prevent run-on and run-off from eroding or otherwise damaging the final cover.
- (c)(i) If an owner or operator plans to close a surface impoundment in accordance with subsection 4.6 (a) (i) and the impoundment does not comply with the liner requirements of subsection 4.2 (a) (i) and is not exempted from them in accordance with subsection 4.2 (b) then:
- (a) the closure plan shall include both a plan for complying with subsection 4.6 (a) (i) and a contingent plan for complying with subsection 4.6 (a) (i) in case not all contaminated subsoils can be practicably removed at closure; and
  - (b) the owner or operator shall prepare a contingent postclosure plan for complying with subsection 4.6 (b) in case not all contaminated subsoils can be practically removed at closure; and
  - (d) During the postclosure care period, if liquids leak into a leak detection system installed under section 4.3. the owner or operator shall notify FEPA of the leak in writing within seven days after detecting the leak. The Agency will then modify the permit to require compliance with applicable requirements of or if so requested by the owner or operator, to require removal of all materials in accordance with subsection 4.6 (a) (i).

#### 4.7 Special requirements for ignitable or reactive waste

Ignitable or reactive waste shall not be placed in a surface impoundment, unless:

- (a) the waste is treated, or mixed before or immediately after placement in the impoundment so that

the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste;

- (b) the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or
- (c) the surface impoundment is used solely for emergencies.

#### 4.8 Special requirements for incompatible wastes

Incompatible wastes and materials shall not be placed in the same surface impoundments.

#### 4.9. Special requirements for dangerous wastes

- (a) The wastes with code numbers FEF020, FEF021, FEF023, FEF026 or FEF027 shall not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by FEPA pursuant these guidelines and in accordance with all other applicable requirements. The factors to be considered are:
  - (i) the volume, physical and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
  - (ii) the attenuative properties of underlying and surrounding soils or other materials;
  - (iii) the mobilizing properties of other materials so disposed with these wastes; and
  - (iv) the effectiveness of additional treatment, design, or monitoring techniques.
- (b) FEPA may determine that additional design, operating and monitoring requirements are necessary in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

## CHAPTER FIVE LAND TREATMENT

### 5.1. Applicability

The guidelines in this chapter apply to owners and operators of facilities that treat or dispose of dangerous waste in land treatment units.

5.2. Treatment programme

- (a) An owner or operator subject to this section shall establish a land treatment programme that is designed to ensure that dangerous constituents placed in, or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. FEPA shall specify in the facility permit the elements of the treatment programme.
- (b) FEPA shall specify in the facility permit the dangerous constituents that must be degraded, transformed, or immobilized as specified in this chapter. Dangerous constituents are constituents identified in FAC 000-000-9905, and any other constituents which, although not listed in FAC 000-000-9905 cause a waste to be regulated under this chapter, that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.
- (c) FEPA shall specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below, and including, the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of dangerous constituents. The maximum depth of the treatment zone shall be:
  - (i) no more than 1.5 meters below the initial soil surface; and
  - (ii) more than 3 meters above the seasonal high water table; except that the owner or operator is able to demonstrate to the satisfaction of FEPA that a distance of less than 3 meters will be adequate. However, in no case shall the distance be less than 1 meter.

5.3. Treatment demonstration

- (a) For each waste that will be applied to the treatment zone, the owner or operator shall demonstrate, prior to application of the waste, that dangerous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.
- (b) In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests, laboratory analyses in order to make the demonstration required under subsection 5.3. (a), of this subsection, he shall obtain a land treatment demonstration permit.

- (c) Any field test or laboratory analysis conducted in order to make a demonstration under subsection 5.3 (a) shall:
  - (i) accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:
    - (a) the characteristics of the waste and of dangerous constituents present;
    - (b) the climate in the area;
    - (c) the topography of the surrounding area;
    - (d) the characteristics and depth of the soil in the treatment zone; and
    - (e) the operating practices to be used at the unit;
  - (ii) be expected to show that dangerous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment, unit; and
  - (iii) be conducted in a manner that protects human health and the environment.

5.4. Design and operating requirements

FEPA shall specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

- (a) The owner or operator shall design, construct, operate, and maintain the unit to maximize the degradation, transformation, and immobilization of dangerous constituents in the treatment zone. The owner or operator must design, construct, operate, and maintain the unit in accordance with all design and operating conditions that were used in the treatment demonstration under section 5.3.
- (b) The owner or operator shall design, construct, operate, and maintain the treatment zone to minimize run-off of dangerous constituents during the active life of the land treatment unit.
- (c) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a twenty-five-year storm.
- (d) The owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume

resulting from a twenty-four-hour, twenty-five-year storm.

- (e) Collection and holding facilities (e.g. tanks or basins) associated with run-on and run-off control systems after storm shall be emptied or otherwise managed expeditiously in accordance with these guidelines.
- (f) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must control wind dispersal.
- (g) The owner or operator shall inspect the unit weekly and after storms to detect evidence of:
  - (i) deterioration, malfunctions, or improper operation of run-on and run-off control system; and
  - (ii) Improper functioning of wind dispersal control measures:

### 5.5. Food Chain Crops

FEPA may allow the growth of food chain crops in, or on the treatment zone only if the owner or operator satisfies the conditions of this section. FEPA may specify in the facility permit the specific food chain crops which may be grown.

- (a)(i) The owner or operator shall demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that dangerous constituents other than cadmium:
  - (a) will not be transferred to the food or food portions of the crop by plant uptake or direct contact, and will not otherwise be ingested by food chain animals (e.g. by grazing); or
  - (b) will not occur in greater concentrations in or on the food or food portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.
- (ii) The owner or operator shall make the demonstration required under subsection 5.5 (a) (i) of this prior to the planting of crops at the facility for all dangerous constituents that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.
- (iii) In making such a demonstration, the owner or operator may use field, trests, greenhouse studies available data, or, in the case of existing units,

operating data, and shall;

- (a) base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics (e.g., pH, cation exchange capacity), specific wastes, application rates, application methods and crops to be grown; and
- (b) describe the procedures used in conducting any tests including the sample selection criteria, sample size, analytical methods, and statistical procedures;
- (iv) if the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration, he shall obtain a permit for conducting such activities.
- (b) The owner or operator shall comply with the following conditions if cadmium is contained in wastes applied to the treatment zone.
  - (i) (a) the pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less;
  - (b) the annual application of cadmium from waste shall not exceed 0.5 kilograms per hectre (kg/ha) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops, the annual cadmium application rate must not exceed 1kg/ha;
  - (c) the cumulative application of cadmium from waste shall not exceed 5kg/ha if the waste and soil mixture has a pH of less than 6.5; and
  - (d) if the waste and soil mixture originally has or is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste shall not exceed. 5 kg/ha if soil Cation Exchange Capacity (CEC) is less than 5meq/100g; 10kg/ha if soil CEC is 5-15 meq/100; and 20kg/ha if soil CEC is greater tan 15meq/100g; or
- (ii) (a) animal feed shall be the only food chain crop produced;
- (b) the pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level shall be maintained whenever food chain crops are grown;
- (c) there shall be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan

shall describe the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses; and

- (d) future property owners shall be notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops shall not be grown except in compliance with 5.5 (b) (ii).

**5.6. Unsaturated zone monitoring**

An owner or operator subject to this section shall establish an unsaturated zone monitoring programme to discharge the responsibilities described in this section.

- (a) the owner or operator shall monitor the soil and soil-pore liquid to determine whether dangerous constituents migrate out of the treatment zone.
  - (i) FEPA specify the dangerous constituents be monitored in the facility permit. The dangerous constituents to be monitored are those specified under subsection 5.2 (b).
  - (ii) FEPA may require monitoring for principal dangerous constituents (PDCs) in lieu of the constituents specified under subsection 5.2 (b).
- (b) The owner or operator shall install an unsaturated zone monitoring system that includes soil monitoring soil cores and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system shall consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that;
  - (i) represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and
  - (ii) indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.
- (c) The owner or operator shall establish a background value for each dangerous constituent to be monitored under subsection 5.6 (a)
- (d) The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. FEPA shall specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste applica-

tion, and the soil permeability.

- (e) The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical make-up of the soil below the treatment zone. The owner or operator shall implement procedures and techniques for:
  - (i) sample collection;
  - (ii) sample preservation and shipment;
  - (iii) analytical procedures; and
  - (iv) control of custody and distribution of sample.
- (f) The owner or operator shall determine whether there is a statistically significant change over background values for any dangerous constituent to be monitored under subsection 5.6 (a) below the treatment zone each time he conducts soil monitoring and soil pore liquid monitoring.
- (g) If the owner or operator determines, pursuant to subsection 5.6 (f), that there is a statistically significant increase of dangerous constituents below the treatment zone, he shall:
  - (i) notify FEPA of his finding in writing within seven days. The notification shall indicate what constituents have shown statistically significant increases;
  - (ii) within forty-five days, submit to FEPA an application for a permit modification to amend the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone; and
  - (iii) continue to monitor in accordance with the unsaturated zone monitoring programme established under this section.
- (h) If the owner or operator determines, pursuant to subsection 5.6(f), that there is a statistically significant increase of dangerous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this subsection, he is not relieved of the requirement to submit concurrently a permit modification application within the forty-five-day period, unless the demonstration made under this subsection successfully shows that a source other



than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation.

### 5.7. Record-keeping

The owner or operator shall include dangerous waste application dates and rates in the operating record.

### 5.8. Closure and postclosure care

(a) During the closure period the owner or operator shall:

(i) continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of dangerous constituents within the treatment zone as required under sections 5.4, 5.5 and 5.6. except to the extent such measures are inconsistent with subsection 5.8 (a) (iii);

(ii) continue unsaturated zone monitoring in except that soil-pore liquid monitoring may be terminated ninety days after the last application of waste to zone; and

(iii) establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of dangerous constituents in the treatment zone. The vegetative cover must be capable of maintaining growth without extensive maintenance.

(b) When closure is completed, the owner or operator may submit to FEPA a certification by an independent qualified soil scientist, or a licensed professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(c) During the post-closure care period the owner or operator shall:

(i) continue all operations as specified in subsection 5.8 (a).

(ii) except that soil-pore liquid monitoring may be terminated one hundred and eighty days after the last application of waste to the treatment zone.

(d) The owner or operator is not subject to guidelines under subsection 8(a) (ii) and 5.8 (c) if FEPA finds that the level of dangerous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant. The owner or operator may submit such a demonstration to the FEPA at any

time during the closure or post-closure care periods. For the purpose of the section:

(i) the owner or operator shall establish background soil values and determine whether there is a statistically significant increase over those values for all dangerous constituents specified in the facility permit under subsection 5.2 (b);

(ii) in taking samples used in the determination of background and treatment zone values, the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical make-up of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively;

(iii) in determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified.

(e) The owner or operator is not subject to guideline if NEPA finds that he satisfies subsection 5.8 (d) and if unsaturated zone monitoring under section 5.6, indicates that dangerous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

### 5.9. Special requirements for ignitable or reactive waste

The owner or operator shall not apply ignitable or reactive waste to the treatment zone unless:

(a) the waste is immediately incorporated into the soil so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste;

(b) the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

### 5.10. Special requirements for incompatible wastes

The owner or operator shall not place incompatible wastes, or incompatible wastes and materials, in or on the same treatment zone, unless:

**5.11. Special requirements for extremely hazardous waste** Under no circumstances will EHW be allowed to remain in a closed land treatment unit after concluding the postclosure care period. If EHW remains at the end

of the scheduled postclosure care period specified in the permit, then FEPA shall either extend the postclosure care period, or require that all EHW be disposed of off-site or that it be treated. In deciding whether to extend postclosure care or require disposal or treatment, the Agency will take into account the likelihood that the waste will or will not continue to degrade in the land treatment unit to the extent that it is no longer EHW. For the purposes of this subsection, EHW will be considered to remain in a land treatment unit if representative samples of the treatment zone are designated as EHW. Procedures for representative sampling and testing will be specified in the permit.

#### 5.12. Special requirements for dangerous wastes

- (a) Dangerous wastes with code nos, FEF020, FEF021, FEF022, FEF023, FEF026, or FEF027 must not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by FEPA pursuant to the guidelines set out in this section and in accord with all other applicable requirements. The factors to be considered are as specified in subsection 4.9 (a).

### CHAPTER SIX WASTE PILES

#### 6.1. Applicability

- (a) The guidelines in this section apply to owners and operators of facilities that store or treat dangerous waste in piles.
- (b) They do not apply to owners or operators of waste piles that will be closed with wastes left in place. Such waste piles are subject to guidelines in Chapter Seven.
- (c) The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated is not subject to guidelines under section 6.2, provided that:
  - (i) liquids or materials containing free liquids are not placed in the pile;
  - (ii) the pile is protected from surface water run-on by the structure or in some other manner;
  - (iii) the pile is designed and operated to control dispersal of the waste by wind, by means other than wetting; and

- (iv) the pile will not generate leachate through decomposition or other reactions;
- (d) All EHW and respiratory carcinogens stored in waste piles must be protected from dispersal by precipitation or wind (e.g. covered, stored inside a building etc.)

#### 6.2. Design and operating requirements

- (a) A waste pile shall have:
  - (i) a liner that is designed, constructed installed and maintained to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner shall be as specified in section 4.2.;
  - (ii) a leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. FEPA shall specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm. The leachate collection and removal system shall conform to the specification in subsection 4.2 (a).
- (b) A liner and leachate collection and removal system shall be protected from plant growth which could adversely affect any; component of the system.
- (c) For EHW management, the owner or operator shall submit an engineering report with his permit application stating the basis for selection the liner required in subsection 6.2. (a) (i) The statement shall be certified by a licensed professional engineer.
- (d) The owner or operator may be exempted from the requirements of Subsection 6.2 (a), (b) and (c), if FEPA finds, based on demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any dangerous constituents into the ground water or surface water at any future time.

- (e) The owner or operator shall design, construct, operate and maintain a run-on control system and a run-off management system to conform with subsections 5.4 (d) (e) and (f).

### 6.3. Double-lined piles

- (a) The owner or operator of a double-lined waste pile is not subject to these guidelines if the conditions specified in subsection 4.3 (a) (i) for impoundment are satisfied.
- (b) If liquid leaks into the leak detection system the owner or operator shall comply with the guidelines specified in subsection 4.3 (b).
- (c) FEPA shall specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

### 6.4. Inspection of liners

- (a) The owner or operator of a pile is subject to the following guideline:
- (i) the pile (including its underlying liner) must be located entirely above the seasonal high water table;
- (ii) the pile must be underlain by a liner (base) that meets all the specifications of subsection 6.2 (a) (i);
- (iii) the wastes in the pile shall be removed periodically, and the liner must be inspected for deterioration, cracks, or other conditions that may result in leaks. The frequency of inspection plan shall be based on the potential for the liner (base) to crack or otherwise deteriorate under the conditions of operation;
- (iv) the liner shall be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing, or other physical damage from equipment used to place waste in or on the pile or to clean and expose the liner surface for inspection; and
- (v) the pile shall have a leachate collection and removal system above the liner that is designed, constructed, maintained and operated in accordance with subsection 6.2 (a) (ii).
- (b) If deterioration, cracking, or other condition is identified that is causing or could cause a leak, the owner and/or operator shall:
- (i) notify FEPA of the condition in writing within seven days after detecting the condition; and

- (ii) (a) repair or replace the liner (base) and obtain a certification from a qualified engineer that the liner (base) has been repaired and leakage will not occur; or

- (b) if a detection monitoring programme has already been defined in the permit begin to comply with that programme and any other applicable requirements.

### 6.5. Monitoring and Inspection

- (a) During construction or installation, liners and over systems shall be inspected for uniformity, damage, and imperfections as specified in subsection 4.4 (a) (b) for surface impoundments.

### 6.6. Containment system repairs—Contingency plans

- (a) Whenever there is any indication of a possible failure of the containment system, that system shall be inspected in accordance with the provisions of the containment system evaluation and repair plan required by subsection 6.6 (d). Indications of possible failure of the containment system include liquid detected in the leachate detection system, evidence of leakage or the potential for leakage in the base, erosion of the base, or apartment or potential deterioration of the liner(s) based on observation or test samples of the liner materials.
- (b) Whenever there is a positive indication of a failure of the containment system, the waste pile shall be removed from service. Indications of positive failure of the containment system include waste detected in the leachate detection system, or a breach (e.g., a hole, tear, crack, or separation) in the base.
- (c) If the waste pile is to be removed from service as required by subsection 6.6 (b) the owner or operator shall:
- (i) immediately stop adding wastes to the pile);
- (ii) immediately contain any leakage which has occurred or is occurring;
- (iii) immediately cause the leak to be stopped; and
- (iv) if the leak cannot be stopped by any other means remove the waste from the base.
- (d) As part of the contingency plan the owner or operator shall specify:
- (i) a procedure for complying with the requirements of subsection 6.6 (c); and

- (ii) a containment system evaluation and repair plan describing: testing and monitoring techniques; procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure; a schedule of actions to be taken in the event of a possible failure; and a description of the repair techniques and materials (and their availability) to be used in the event of leakage due to containment system failure or deterioration which does not require the waste pile to be removed from service;
- (ii) for EHW piles, the owner or operator shall submit with his permit application a statement signed by a licensed professional engineer of the basis on which the evaluation and repair plan has been established.
- (e) No waste pile that has been removed from service pursuant to subsection 6.6 (b), may be restored to service unless the containment system has been:
  - (i) repaired;
  - (ii) certified by a qualified engineer as meeting the design specifications approved in the permit.
- (f) A waste pile which has been removed from service pursuant to subsection 6.6 (b) and will not be repaired, shall be closed in accordance with section 6.9.

**6.7. Special requirements for ignitable or reactive waste**

Ignitable or reactive waste shall be treated as specified in section 4.7.

**6.8. Special requirements for incompatible wastes**

- (a) Incompatible wastes, or incompatible wastes and materials shall not be placed in the same pile.
- (b) A pile of dangerous waste that is incompatible with any waste or other material stored nearby, other containers, piles, open tanks, or surface impoundments shall be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device. Piles of incompatible wastes shall not be served by the same containment system.
- (c) Dangerous waste shall not be piled on the same base where incompatible wastes or materials were

previously piled unless the base has been decontaminated sufficiently.

**6.9. Closure and postclosure care**

At closure, the owner or operator shall comply with the requirements specified in section 4.6.

**6.10. Special requirements for dangerous wastes**

Dangerous wastes with code nos FEF020, FEF021, FEF022, FEF023, FEF026 and FEF027 shall not be placed in waste piles that are not enclosed as defined in subsection 6.1 (c) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by FEPA pursuant to these guidelines. The factors to be considered are specified in section 4.9.

**CHAPTER SEVEN  
LANDFILLS**

**7.1. Applicability**

The guidelines in this chapter apply to owners and operators of facilities that dispose of dangerous waste in landfills.

**7.2. Design and Operating Requirements**

- (a) A landfill shall have the requirements specified in subsection 4.2 (a) (i). The design, construction, maintenance and operation of a leachate collection and removal system shall conform to specification in subsections 4.2 (a) and 6.2 (a) (ii).
- (b) The owner or operator shall be exempted from the requirements as specified in subsection 6.2 (d).
- (c) The owner or operator shall design, construct, operate, and maintain a run-on control system of the landfill during peak discharge from at least a twenty-five-year storm, and a run-off management system to conform with subsections 5.4 (c) (d) (e) and (f).

**7.3. Double-lined Landfills**

- (a) The owner or operator of a double-lined landfill is not subject to these guidelines specified in subsection 4.3 (a) (for impoundments) are satisfied.

**7.4. Monitoring and Inspection** During construction or installation, liners and cover systems shall be inspected

for uniformity, damage, and imperfections as specified in sub-sections 4.4 (a) (b) (for surface impoundments).

### 7.5. Surveying and Record-keeping

The owner or operator of a landfill shall maintain the following items in the operating record:

- (a) on a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and
- (b) the contents of each cell and the approximate location of each dangerous waste type within each cell.

### 7.6. Closure and Postclosure Care

(a) At final closure of the landfill or upon closure of any cell, the owner or operator shall comply with specifications in subsection 4.6 (a) on surface impoundments:

- (i) provide long-term minimization of migration of liquids, through the closed landfill;
- (ii) function with minimum maintenance;
- (iii) promote drainage and minimize erosion or abrasion of the cover;
- (iv) accommodate settling and subsidence so that the cover's integrity is maintained; and
- (v) have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) After final closure, the owner or operator shall comply with all postclosure requirements as specified in subsection 4.6 (b). In addition, he shall continue to operate the leachate collection and removal system until leachate is no longer detected;

- (ii) protect and maintain surveyed benchmarks used in complying with section 7.5.
- (c) During the postclosure care period, if liquid leaks into a leak detection system, the owner or operator shall notify FEPA as specified in subsection 4.3 (d).

### 7.7. Special requirements for incompatible waste

Incompatible wastes, or incompatible wastes and materials shall be treated in accordance with section 5.10.

## CHAPTER EIGHT INCINERATORS

### 8.1.1. Applicability

(a) The guidelines in this chapter apply to owners and operators of facilities that incinerate solid and dangerous waste and to owners and operators who burn solid and dangerous waste in boilers or industrial furnaces in order to destroy them, for any recycling purpose shall be regulated under this chapter.

(b) FEPA may, in establishing permit conditions, exempt the facility from all requirements of this chapter except section 8.2 and section 8.8 if it finds, after an examination of the waste analysis included with Part B of the owner/operator's permit application, that the waste to be burned:

(i) (a) is either listed as a dangerous waste only because it is ignitable or, is designated only as an ignitable dangerous waste; or

(b) is designated solely because it is reactive or the characteristics described in subsection 1.8.1.3. and will not be burned when other dangerous wastes are present in the combustion zone; and

(ii) contains none of the dangerous constituents listed in FAC 000-000-9905 above significant concentration limits; and

(iii) contains none of toxic dangerous wastes, nor of persistent dangerous wastes, nor of carcinogenic dangerous wastes as listed in sections 1.5, 1.6 and 1.7 respectively.

(c) The owner or operator of an incinerator shall conduct trial burns.

### 8.2. Waste Analysis

(a) As a portion of a trial burn plan, the owner or operator shall have included an analysis of his waste feed sufficient to provide all chemical and physical information.

(b) Throughout normal operation the owner or operator shall conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under subsection 8.6 (b)).

**8.3. Designation of principal organic dangerous constituents and dangerous combustion by-products**

Principal Organic Dangerous Constituents (PODCs) and Dangerous Combustion By-products (DCBD) must be treated to the extent required by the performance's standards specified in subsection 8.4. of this section. For each waste feed to be burned, one or more PODCs and Dangerous Combustion By-products will be specified in the facility's permit from among those constituents listed in FAC 000-000-9905 and, to the extent practical, from among those constituents which contribute to the toxicity, persistence, or carcinogenicity of wastes designated under sections 1.4 or 1.5 to 1.7. This specification will be based on the degree of difficulty of incineration of the organic constituents of the waste feed and its combustion by-products and their concentration or mass, considering the results of waste analyses and trial burns. Organic constituents or by-products which represent the greatest degree of difficulty of incineration will be those most likely to be designated PODCs and DCBP's. Constituents are more likely to be so designated if they are present in large quantities or concentrations.

**8.4. Performance Standards**

An incinerator burning dangerous waste shall be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under section 8.6, it will meet the following performance standards:

- (a) (i) except as provided in subsection 8.4 (a) (ii) an incinerator burning dangerous waste must achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each PODC designated in its permit for each waste fed. DRE is determined for each PODC from the following equation:

$$DRE = \frac{w_{in} - w_{out}}{w_{in}} \times 100\%$$

Where

$w_{in}$  = Mass feed rate of one PODC in the waste stream feeding the incinerator, and  $w_{out}$  = Mass emission rate of the same PODC present in exhaust emissions prior to release to the atmosphere;

- (ii) an incinerator burning dangerous wastes FEF020, FEF021, FEF022, FEF023, FEF026, or FEF027 shall achieve DRE of 99.999 per cent for each PODCs designated in its permit. This performance must be demonstrated on PODCs that are more difficult to incinerate than tetrapentadioxins, and hexachlorodibenz-p-dioxins and dibenzofurans. DRE is determined for each PODCs from the equation in subsection 8.4 (a) (i). In addition, the owner or operator of the incinerator shall notify the FEPA

of his intent to incinerate dangerous wastes FEF020, FEF022, FEF023, FEF026, or FEF027.

- (b) Incinerators burning dangerous waste shall destroy dangerous combustion by-products designated under subsection 8.3 that the total mass emission rate of these by-products emitted from the stack is no more than 01 per cent of the total mass feed rate of PODCs fed into the incinerator.
- (c)(i) Incinerator burning dangerous waste and producing stack emissions of more than 1.8 kilograms per hour of hydrogen chloride (HC1) shall control HC1 emissions such that the rate of emission is no greater than the larger of either 1.8 kilograms per hour or one percent of the HC1 in the stack gas prior to entering any pollution control equipment.
- (ii) Incinerator burning dangerous waste shall not emit particulate matter in excess of 180 milligrams per dry standard cubic meter when corrected for the amount of oxygen in the stack gas according to the formula:

$$Pc = \frac{Pm \times 14}{21 - Y}$$

Where Pc is the corrected concentration of particulate matter, Pm is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas. This correction procedure is to be used by all dangerous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, FEPA will select an appropriate correction procedure to be specified in the facility permit.

- (d) The emission standard specified in subsection 8.3 (c) shall be met when no other more stringent standards exist. Where a state or local air pollution control authority has jurisdiction and has more stringent emission standards, an incinerator-burning dangerous wastes shall comply with the applicable air pollution control authority's emission standards (including limits based on best available control technology).
- (e) For purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 8.6), will be regarded as compliance with section 8.4. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of section 8.4, may be evidence justifying modification, revocation, or reissuance of a permit.

### 8.5. Trial burns, and permit modifications

(a) The owner or operator of a dangerous waste incinerator shall burn only wastes specified in his permit and only under operating conditions specified for those wastes under section 8.6 except:

- (i) in approved trial burns; or
- (ii) under exemptions created under section 8.1.

(b) New dangerous wastes may be burned only after operating conditions have been specified in a trial burn permit or a permit modification has been issued, as applicable. Operating requirements for new wastes shall be based on trial burn results or included with a permit application.

(c) The permit for a new dangerous waste incinerator shall establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable waste feeds and operating conditions necessary to meet the requirements of section 8.6, but sufficient to comply with the following standards:

6/7 for the period beginning with initial introduction of dangerous waste to the incinerator and ending with initiation of the trial burn, shall not exceed 1020 hours operating time for treatment of dangerous waste;

- (ii) during the trial burn, the operating requirements shall be sufficient to demonstrate compliance with the performance standards of section 8.4, and shall be in accordance with the approved trial burn plan;
- (iii) in the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the FEPA, the operating requirements shall be those most likely to ensure compliance with the performance standards of section 8.4.
- (iv) for the remaining duration of the permit, the operating requirements shall be those demonstrated, in a trial burn.

### 8.6. Operating Requirements

(a) An incinerator shall be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated in a trial burn.

(b) Each set of operating requirements shall specify the composition of the waste feed. For each such waste feed, the permit shall specify acceptable operating limits including the following conditions:

- (i) carbon monoxide (CO) level in the stack exhaust gas;
- (ii) waste feed rate;
- (iii) combustion temperature;
- (iv) an appropriate indicator of combustion gas velocity;
- (v) allowable variations in incinerator system designed or operating procedures; and
- (vi) such other operating requirements as are necessary to ensure that the performance standards of section 8.4. are met.

(c) During start-up and shut-down of an incinerator, dangerous waste (except waste exempted in accordance with subsection 8.1 (b) shall not be fed into the incinerator unless the incinerator is operating within the conditions of operation (temperature, air feed rate, etc.) specified in the permit.

(d) Fugitive emissions from the combustion zone shall be controlled by:

- (i) keeping the combustion zone totally sealed against fugitive emissions;
- (ii) maintaining a combustion zone pressure lower than atmospheric pressure; or
- (iii) providing of an alternate means for fugitive emissions control, equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(e) An incinerator shall be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under subsection 8.6 (a).

(f) An incinerator shall cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

### 8.7. Monitoring and Inspections

(a) The owner or operator shall conduct, as a minimum, the following monitoring while incinerating dangerous waste:

- (i) combustion temperature waste feed rate, and the indicator of combustion gas velocity specified in the facility permit on a continuous basis;
  - (ii) carbon monoxide (CO) on a continuous basis at a point in the incinerator down-stream of the combustion zone and prior to release to the atmosphere; and
  - (iii) as required by the FEPA sampling and analysis of the waste and exhaust emissions to verify that the operating requirements established in the permit achieve the performance standard of section 8.4.
- (b) The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) shall be completely inspected at least daily for looks, spills, fugitive emissions, and signs of tampering. All emergency waste feed cutoff controls and system alarms must be tested at least weekly to verify proper operation, unless the owner or operator demonstrates to FEPA that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, emergency cutoff and alarms system shall be tested at least monthly.
- (c) Monitoring and inspection data shall be recorded and the records shall be placed in the operating log.

### 8.8. Closure

At closure the owner or operator shall remove all dangerous waste and dangerous waste residues (including, but not limited to, ash, scrubber liquids, and from scrubber site). The remaining equipment, bases, liners, soil and debris containing, or contaminated with dangerous waste or waste residues shall be decontaminated or removed, and disposal in an environmentally safe manner.

## CHAPTER NINE HARMFUL/DANGEROUS/ HAZARDOUS/TOXIC WASTES TRACKING PROGRAMME

### 9.1. The Tracking Programme

The tracking programme shall:

- (a) provide for tracking of the collection, transportation and treatment of the wastes from generation to the disposal;
- (b) include a system for providing the generator of the waste with assurance that the waste is received

by the disposal facility;

- (c) use a uniform format for tracking;
- (d) include the following requirements:
  - (i) for segregation and/or recovery of the waste at the point of generation where practicable;
  - (ii) for placement of the waste in containers that will protect waste handlers and the public from exposures.
  - (iii) for appropriate labelling of containers of the wastes.

9.1.1. The waste that is incinerated need not be tracked after incineration except for the disposal of the ash;

### 9.2. Medical Wastes and Laboratory Waste Tracking Programme

The following types of Harmful/Dangerous/Hazardous/Medical Wastes to be tracked include, but are not limited to the following types of solid waste:

- (a) cultures and stock of infections agents and associated biological materials, including cultures from medical and pathological laboratories, cultures and stock of infectious agents, from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, and culture dishes and devices used to transfer, inoculate and mix cultures;
- (b) pathological wastes; including tissues, organs and body parts that are removed during surgery and autopsy;
- (c) wastes of after birth (placenta), human blood and products of blood including serum, plasma and other blood components;
- (d) sharp instruments that have been used in patient care or in medical, research, or industrial laboratories, including hypodermic needles, syringes, pasteur pipettes, broken glass, and scalpel blades;
- (e) contaminated animal carcasses, body parts, and cages used for animals that were exposed to infectious agents during research, production of biologicals, or testing of pharmaceuticals;
- (f) wastes from surgery or autopsy that were in contact with infectious agents, including soiled dressings, sponges, drapes, lavage-tubes, drainage sets, under-pads, and surgical gloves;



- (g) laboratory wastes from medical, pathological, pharmaceutical, or other research, commercial, or industrial laboratories that were in contact with infectious agents, including slides and cover slips, disposable gloves, laboratory coats and aprons;
- (h) dialysis wastes that were in contact with the blood of patients undergoing haemodialysis, including contaminated disposable equipment and supplies such as tubing, filters, disposable sheets, towels, gloves, aprons and laboratory coats;
- (i) discarded medical equipment and parts that were in contact with infectious agent;
- (j) biological wastes and discarded materials contaminated with blood, faecal matter, exudates or secretion from human beings or animals who are isolated to protect others from communicable diseases;
- (k) such other waste materials that result from the administration of medical care to a patient by a health care provider and is found by FEPA to pose a threat to human health or the environment; and
- (l) radioactive medical wastes.

### 9.3. Inspection

Any person who generates, stores, treats, transports, disposes of, or otherwise handles or has handled medical/hazardous, toxic or harmful wastes shall upon request of any officer, employee or representative duly designated by FEPA furnish information relating to such wastes, including any tracking forms required to be maintained according to the provision of these guidelines, conduct monitoring or testing, and permit such persons at all reasonable times, to have access to, and to copy all records relating to such waste. For such purposes, such persons are authorised to:

- (a) enter, at reasonable time, any establishment, or other place, where medical or harmful/dangerous/hazardous wastes have been generated, stored, treated or transported from;
- (b) conduct monitoring or testing; and
- (c) inspect and obtain samples from any bonafide staff or representative of the establishment of any such wastes and samples of any container or labelling for such wastes.

### 9.4. Procedure

Each inspection under this section shall be commenced and completed within a reasonable period. If the official

from FEPA obtains and samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested, a portion of each such sample in volume or weight to the portion retained if giving such an equal portion is feasible. If analysis is made of such samples, a copy of the result of such analysis shall be furnished promptly to the owner, operator or agent in charge of the premises concerned. The mechanism for implementation and enforcement shall be co-ordinated by FEPA in collaboration with relevant federal and state ministries and parastatals.

### 9.5. Enforcement

The procedure for compliance order and violations shall be as contained with the provision of **Decree 42 of November, 1988 and Decree 58 of December, 1988** in addition to any other laws for the time being in force including appropriate penalties.

## BIBLIOGRAPHY

State of Washington, U.S.A., (1988). *Dangerous Waste Regulations*. Department of Ecology, Washington, U.S.A.

## PART III

### EXCLUSIVE LISTS OF HAZARDOUS/ DANGEROUS CHEMICALS

**01. Introduction** These exclusive lists are a compilation of chemicals and substances (including waste) and discarded chemicals which are known, based on scientific evidence to be hazardous to public health and environment. These lists represent the following categories:

- (a) Hazardous/Dangerous/Chemical Product.
- (b) Hazardous/Dangerous/Waste Sources.
- (c) Infectious/Hazardous/Dangerous Wastes
- (d) Hazardous/Dangerous Waste Mixtures.

The chemicals listed here can only be imported into the country or produced locally after clearance with FEPA and other relevant agencies. FEPA may exclude from these lists any categories or items which it determines do not represent potential hazard to human health or the environment when properly treated, stored, transported, disposed of, or otherwise managed. Other chemicals could be added to these lists based on new knowledge. These exclusive lists form the basis of FEPA's tracking programme to monitor and control and management of these substances from "cradle to grave".

CHAPTER ONE

1.0. HAZARDOUS (DANGEROUS) CHEMICAL PRODUCTS (FAC 000-9903)

1.1. ACUTELY HAZARDOUS (DANGEROUS) CHEMICAL PRODUCTS LIST

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
FA081	Nitroglycerine	EHW	R ?
FB170	P-Nitrophenol	EHW	C
FB171	2-Nitropropane	EHW	C1
FB174	N-Nitrosodiethylamine	EHW	C+
FA082	N-Nitrosodimethylamine	EHW	B+
FB176	N-Nitroso-N-ethylurea	EHW	C+
FB177	N-Nitroso-N-methylurea	EHW	C+
FB178	N-Nitroso-N-methylurethane	EHW	C+
FA084	N-Nitrosomethylvinylamine	EHW	B+
FB179	N-Nitrosopiperidine	EHW	C+
FB111	N-Nitroso-N-propylamine	EHW	C+
FA050	5-Norbornene-2, 3, -dimethanol, 1, 4, 5, 6, 7, 7-hexachloro, cyclic sulphite	EHW	XH
FA085	Octamethylpyrophosphoramide	EHW	A
FA087	Osmium oxide	EHW	B
FA087	Osmium tetroxide	EHW	B
FA088	7-Oxabicyclo [2.2.1] heptane-2, 3-dicarboxylic acid	EHW	B
FB058	2H-1, 3, 2-Oxazaphosphorine, 2-[bis (2-chloro-ethyl) amino] tetrahydro-, oxide 2-	EHW	CH1+
FB115	Oxirane	EHW	X
FB041	Oxirane, 2-(chloromethyl)-	EHW	CH+1
FA089	Parathion	EHW	X
FB183	Pentachlorobenzene	EHW	H
FB184	Pentachloroethane	EHW	AH
FB185	Pentachloronitrobenzene	EHW	DH
See	FEF027 Pentachlorophenol	EHW	AH
FB188	Phenol	EHW	C
FA034	Phenol, 2-Cyclohexyl-4, 6-dinitro-	EHW	C
FA048	Phenol, 2, 4-dinitro-	EHW	B
FA047	Phenol, 2, 4-dinitro-6-methyl-, and salts	EHW	B
FA020	Phenol, 2, 4-dinitro-6 (1 methylpropyl)-	EHW	B
FA009	Phenol, 2, 4, 6-trinitro-, ammonium salt	EHW	R
FB048	Phenol, 2-chloro-	EHW	DH
FB039	Phenol, 4-chloro-3-methyl-	EHW	H
FB081	Phenol, 2, 4-dichloro-	EHW	DH
FB082	Phenol, 2, 6-dichloro-	EHW	DH
FB170	Phenol, 4-nitro-	EHW	C
See	FEF027 Phenol, pentachloro	EHW	AH
See	FEF027 Phenol, 2, 3, 4, 6-tetrachloro-	EHW	CH
See	FEF027 Phenol, 2, 4, 5-trichloro-	EHW	AH
See	FEF027 Phenol 2, 4, 6-trichloro-	EHW	AH
FA036	Phenyl dichloroarsine	EHW	BH
FA092	Phenylmercuric acetate	EHW	B
FA093	N-Phenylthiourea	EHW	A
FA094	Phorate	EHW	X
FA095	Phosgene	EHW	BH

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
FA096	Phosphine	EHW	BI
FA041	Phosphoric acid, diethyl p-nitrophenyl ester	EHW	A
FA044	Phosphorodithioic acid, O, O-dimethyl 2-[2-(methylamino)-2-oxoethyl] ester	EHW	A
FA043	Phosphorofluoridic acid, bis (1-methyl-ethyl) -ester	EHW	BH
FA094	Phosphorothiac acid, O, O-diethyl S- (ethylthio) methyl ester	EHW	X
FA097	Phosphorothioic acid, O, O-dimethyl O-[p-(dimethylamino)-sulphonyl] phenyl] ester	EHW	A
FA089	Phosphorothioic acid, O, O-diethyl O-(p-ni-trophenyl) ester	EHW	X
FA040	Phosphorothioic acid, O, O-diethyl O-pyra- ziny] ester	EHW	A
FB189	Phosphorous sulphide	EHW	BIR
FB190	Phthalic anhydride	EHW	C
FB191	2-Picoline	EHW	C
FA110	Plumbane, tetraethyl-	EHW	A
FA098	Potassium cyanide	EHW	A
FA099	Potassium silver cyanide	EHW	A
FA070	Propanal, 2-methyl-2 (methylthio)-O- [methylamino] carbonyl] oxime	EHW	B
FB194	1-Propanamine	EHW	CI
FB110	1-Propanamine, N-Propyl-	EHW	CI
FB066	Propane, 1, 2-dibromo-3-chloro-	EHW	CH+
FB149	Propanedinitrile	EHW	C
FA101	Propanenitrile	EHW	B
FA027	Propanenitrile, 3-chloro-	EHW	BH
FA079	Propanenitrile, 2-hydroxy-2-methyl-	EHW	A
FB171	Propanen, 2-nitro	EHW	CI
FB027	Propane, 2,2' oxybis [2-chloro-]	EHW	CHO
FA081	1,2,3-Propanetriol, trinitrate-	EHW	R?
FB235	1-Propanol, 2;3-dibromo-, phosphate (3 : 1)	EHW	DH
FB126	1-Propanol, 2,3-epoxy-	EHW	C+
FA017	2-Propanone, 1-bromo-	EHW	CH
FA102	Propargyl alcohol	EHW	X
FA003	2-Propenal	EHW	X
FB007	2-Propenamide	EHW	C
FB084	Propene, 1,3-dichloro-	EHW	CH
FB243	1-propene, 1,1,2,3,3,3-hexachloro-	EHW	H
FB009	2-Propenenitrile	EHW	C+I
FB152	2-Propenenitrile, 2-methyl-	EHW	BI
FB008	2-Propenoic acid	EHW	COI
FA005	2-Propen-1-ol	EHW	BI
See	FEF027 Propionic acid, 2-(2,4,5- trichlorophenoxy)-	EHW	BH
FB194	n-Propylamine	EHW	CI
FB083	Propylene dichloride	EHW	CHI
FA067	1,2-Propylenimine	EHW	B+I
FA102	2-Propyn-1-ol	EHW	X
FA008	4-Pyridinamine	EHW	B
FA075	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)- and salts	EHW	B

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
FB196	Pyridine	EHW	CI
FB179	Pyridine, hexahydro-N-nitroso-	EHW	C+
FB191	Pyridine, 2-methyl-	EHW	C
FA111	Pyrophosphoric acid, tetraethyl ester	EHW	A
FB201	Resorcinol	EHW	C
FA103	Selenourea	EHW	B
FB015	L-Serine, diazoacetate (ester)	EHW	C+
FA104	Silver cyanide	EHW	C
See	FEF027 Silvex	EHW	BH
FA105	Sodium azide	EHW	A
FA106	Sodium cyanide	EHW	A
FA107	Strontium sulphide	EHW	R
FA108	Strychnidin-10-one, and salts	EHW	B
FA018	Strychnidin-10,2,3-dimethoxy-	EHW	A
FA108	Strychnine and salts	EHW	B
FB135	Sulphur hydride	EHW	BI
FB103	Sulphuric acid, dimethyl ester	EHW	CO+
FA115	Sulphuric acid, thallim (I) salt	EHW	B
FB189	Sulphur phosphide	EHW	BIR
See	FEF027 2,4,5-T	EHW	BH+
See	FEF027 1,2,4,5-Tetrachlorobenzene	EHW	DH
FB208	1,1,1,2-Tetrachloroethane	EHW	H
FB209	1,1,2,2-Tetrachloroethane	EHW	H
FB210	Tetrachlorethylene	EHW	CH+
FB212	2,3,4,6-Tetrachlorophenol	EHW	CH
FB109	Tetraethyldithiopyrophosphate	EHW	A
FA110	Tetraethyl lead	EHW	A
FA111	Tetraethylpyrophosphate	EHW	A
FA112	Tetranitromethane	EHW	AR
FA062	Tetraphosphoric acid, hexaethyl ester	EHW	B
FA113	Thallic oxide	EHW	B
FA113	Thallium (III) oxide	EHW	B
FA114	Thallium (I) selenide	EHW	C
FA115	Thallium (I) sulphate	EHW	B
FA045	Thiofanox	EHW	B
FA049	Thioimidodicarbonic diamide	EHW	A
FB153	Thiomethanol	EHW	BI
FA014	Thiophenol	EHW	A
FA116	Thiosemicarbazide	EHW	BH+
FB219	Thiourea	EHW	C+
FA026	Thiourea, (2-chlorophenyl)-	EHW	AH
FA072	Thiourea, 1-naphthalenyl-	EHW	B
FA093	Thiourea, phenyl-	EHW	A
FB220	Toluene	EHW	CI
FB223	Toluene diisocyanate	EHW	BR
FA123	Toxaphene	EHW	XH
FB226	1, 1, 1-Trichloroethane	EHW	CH
FB227	1, 1, 2-Trichloroethane	EHW	CH
FB228	Trichloroethene	EHW	CH+
FB228	Trichloroethylene	EHW	CH+
FA118	Trichloromethanethiol	EHW	H
FB121	Trichloromonofluoromethane	EHW	H
See	FEF027 2, 4, 5-Trichlorophenol	EHW	AH

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
See	FEF027 2, 4, 6-Trichlorophenol	EHW	AH
See	FEF027 2, 4, 5-Trichlorophenoxyacetic acid	EHW	BH+
FB235	Tris (2, 3-disbromopropyl) phosphate	EHW	DH
FB236	Trypan blue	EHW	H+
FB237	Uracil, 5[bis (2-chloromethyl) amino]-	EHW	BH+
FB237	Uracil mustard	EHW	BH+
FA119	Vanadic acid, ammonium salt	EHW	B
FA120	Vanadium pentoxide	EHW	B
FA120	Vanadium (V) oxide	EHW	B
FB043	Vinyl chloride	EHW	DH+
FA001	Warfarin	EHW	A
FB239	Xylene	EHW	CI
FA121	Zinc cyanide	EHW	C
FA122	Zinc phosphide	EHW	BR

## I.II MODERATELY HAZARDOUS/DANGEROUS CHEMICAL PRODUCTS

FB187	Acetamide, N-(4-ethoxyphenyl)-	DW	D+
FB005	Acetamide, N-9H-fluoren-2-yl-	DW	?
FB112	Acetic acid, ethyl ester	DW	DI
FB214	Acetic acid, thallium (I) salt	DW	?
FB002	Acetone	DW	DI
FB004	Acetophenone	DW	D
FB005	2-Acetylaminofluorene	DW	?
FB150	Alanine, 3-[p-bis (2-chloroethyl) amino] phenyl-, L-	DW	+
FB328	2-Amino-1-methylbenzene	DW	D+
FB353	4-Amino-1-methylbenzene	DW	D
FB011	Amitrole	DW	D+
FB014	Auramine	DW	+
FB016	Benz[c] acridine	DW	+
FB016	3, 4-Benzacridine	DW	+
FB014	Benzenamine, 4, 4-carbonimidoylbis (N, N-dimethyl-	DW	+
FB223	Benzenamine, 2-methyl-hydrochloride	DW	D+
FB181	Benzenamine, 2-methyl-5-nitro	DW	D
FB028	1, 2-Benzenedicarboxylic acid, [bis (2-ethyl-hexy)] ester	DW	?
FB069	1, 2-Benzenedicarboxylic acid, dibutyl ester	DW	D
FB088	1, 2-Benzenedicarboxylic acid, diethyl ester	DW	?
FB102	1, 2-Benzenedicarboxylic acid, dimethyl ester	DW	?
FB107	1, 2-Benzenedicarboxylic acid, di-n-octyl ester	DW	?
FB203	Benzene, 1, 2-methylenedioxy-4-allyl-	DW	D+
FB141	Benzene, 1, 2-methylenedioxy-4-propenyl-	DW	D+
FB090	Benzene, 1, 2-methylenedioxy-4-propyl-	DW	D+
FB234	Benzene, 1, 3, 5-trinitro-	DW	DR
FB202	1, 2-Benzisothiazolin-3-one, 1, 1-dioxide, and salts	DW	+
FB120	Benzo[j, k] fluoreno	DW	D
FB091	(1, 1'-Biphenyl)-4' diamine, 3, 3'-dimethoxy-	DW	D+
FB244	Bis (dimethylthiocarbomoyl) disulfide	DW	D
FB028	Bis (2-ethoxythoxyl) phthalate	DW	?
FB172	1-Butanamine, N-butyl-N-nitroso-	DW	D+
FB031	1-Butanol	DW	DI

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
FB159	2-Butanone	DW	DI
FB031	n-Butyl alcohol	DW	DI
FB136	Cacodylic acid	DW	D
FB238	Carbamic acid, ethyl ester	DW	+
FB215	Carbonic acid, dithallium (I) salt	DW	?
FB051	Creocote	DW	D
FB059	Daunomycin	DW	+
FB221	Diaminotoluene	DW	?
FB069	Dibutyl phthalate	DW	D
FB192	3, 5-Dichloro-N-(1, 1-dimethyl-2-propynyl) benzamide	DW	?
FB108	1, 4-Diethylene dioxide	DW	D+
FB086	N,N-Diethylhydrazine	DW	+
FB088	Diethyl phthalate	DW	?
FB089	Diethylstilbestrol	DW	+
FB148	1, 2-Dihydro-3-6-pyridizinedione	DW	D+
FB090	Dihydrosafrole	DW	D+
FB091	3, 3'-Dimethoxybensidine	DW	D+
FB098	1, 1'-dimethylhydrazine	DW	+I
FB101	2, 4-Dimethylphenol	DW	?
FB102	Dimethyl phthalate	DW	?
FB107	Di-n-octyl phthalate	DW	?
FB108	1, 4-Dioxane	DW	D+
FB117	Ethane, 1, 1'-oxybis	DW	DI
FB218	Ethanethioamide	DW	+
FB173	Ethanol, 2, 2-(nitrosoimino) bis-	DW	+
FB004	Ethanone, 1-phenyl-	DW	D
FB112	Ethyl acetate	DW	DI
FB113	Ethyl acrylate	DW	DI
FB238	Ethyl carbamate (urethan)	DW	+
FB116	Ethylene thiourea	DW	D+
FB117	Ethyl ether	DW	DI
FB118	Ethyl methacrylate	DW	I
FB119	Ethyl methanesulphonate	DW	+
FB139	Ferric dextran	DW	+
FB120	Fluoranthene	DW	D
FB123	Formic acid	DW	DO
FB124	Furan	DW	I
FB213	Furan, tetrahydro-	DW	I
FB124	Furfuran	DW	I
FB206	D-Glucopyranose, 2-deoxy-2 (3-methyl-3-nitrosoureido)-	DW	+
FB086	Hydraxine, 1, 2-diethyl-	DW	+
FB098	Hydrazine, 1, 1-dimethyl-	DW	+I
FB134	Hydrofluoric acid	DW	DO
FB134	Hydrogen fluoride	DW	DO
FB136	Hydroxydimethylarsine oxide	DW	D
FB116	2-Imidazolidinethione	DW	D+
FB137	Indeno[1, 2, 3-cd] pyrene	DW	+
FB139	Iron dextran	DW	+
FB140	Isobutyl alcohol	DW	DI
FB141	Isosafrole	DW	D+
FB145	Lead phosphate	DW	+
FB146	Lead subacetate	DW	+

<i>Hazardous (dangerous) Waste No.</i>	<i>Substance</i>	<i>FEPA* Hazard designation</i>	<i>Reason for designation</i>
FB148	Maleic hydrazide	DW	D
FB150	Melphalan	DW	+
FB119	Methanesulphonic acid, ethyl ester	DW	+
FB123	Methanoic acid	DW	DO
FB154	Methanol	DW	DI
FB155	Methapyrilene	DW	D
FB154	Methyl alcohol	DW	DI
FB186	1-Methylbutadiene	DW	DI
FB159	Methyl ethyl ketone	DW	DI
FB161	Methyl isobutyl ketone	DW	DI
FB162	Methyl methacrylate	DW	DI
FB161	4-Methyl-2-pentanone	DW	+
FB164	Mewthylthiouracil	DW	+
FB059	5, 12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2, 3, 6-trideoxy-alpha-1-lyxo-hexopyranosyl) oxy]-7, 8, 9, 10-tetrahydro-6, 8, 11-trihydroxy-1-methoxy-	DW	+
FB172	N-Nitrosodi-n-butylamine	DW	D+
FB173	N-Nitrosodiethanolamine	DW	+
FB180	N-Nitrosopyrrolidine	DW	D+
FB181	5-Nitro-o-toluidine	DW	D
FB193	1, 2-Oxathiolane, 2, 2-dioxide	DW	+
FB182	Paraldehyde	DW	DI
FB186	1, 3-Pentadiene	DW	DI
FB187	Phenacetin	DW	D+
FB101	Phenol, 2, 4-dimethyl-	DW	D
FB137	1, 10-(1, 2-phenylene) pyrene	DW	+
FB145	Phosphoric acid, Lead salt	DW	+
FB087	Phosphorodithioic acid, O,O-diethyl-S-methyl ester	DW	?
FB192	Pronamide	DW	?
FB193	1, 3-Propaane sultone	DW	+
FB140	1-Propanol, 2-methyl-	DW	DI
FB002	2-Propanone	DW	DI
FB113	2-Propenoic acid, ethyl ester	DW	DI
FB118	2-Propenoic acid, 2-methyl-, ethyl ester	DW	I
FB162	2-Propenoic acid, 2-methyl-methyl ester	DW	DI
FB155	Pyridine, 2- [(2-dimethylamino)-2-thenylamino	DW	D
FB164	4 (IH)-Pyrimidinone, 2, 3-dihydro-6 methyl-2-thioxo-	DW	+
FB180	Pyrrole, tetrahydro-N-nitroso-	DW	D+
FB200	Reserpine	DW	?
FB202	Saccharin and salts	DW	+
FB203	Safrole	DW	D+
FB204	Seleniousacid	DW	O
FB204	Selenium dioxide	DW	O
FB205	Selenium disulude	DW	R
FB089	4, 4'-Stilbenediol, alpha, alpha'-diethyl-	DW	+
FB206	Streptozotocin	DW	+
FB205	Sulphur selenide	DW	R
FB213	Tetrahydrofuran	DW	I
FB214	Thallium (I) acetate	DW	?
FB215	Thallium (I) carbonate	DW	?
FB216	Thallium (I) chloride	DW	?
FB217	Thallium (I) nitrate	DW	?

FB218	Thioacetamide	DW	+
FB244	Thiran	DW	D
FB221	Toluenediamine	DW	?
FB328	o-Toluidine	DW	D+
FB353	p-Toluidine	DW	D
FB222	O-Toluidine hydrochloride	DW	D+
FB011	IH-1, 2, 4-Triazol-3-amine	DW	D+
FB234	sym-Trinitrobenzene	DW	DR
FB182	1, 3, 5-Trioxane, 2, 4, 5-trimethyl-	DW	DI
FB200	Yohimban-16-carboxylic acid, 11, 17-di-methoxy-18-[3,4, 5-trimethoxy-benzoyl) oxy]-, methyl ester	DW	?

**KEY**

- \*EHW = Extremely Hazardous Waste
- DW = Dangerous Waste
- X = Toxic, Category X
- A = Toxic, Category A
- B = Toxic, Category B
- C = Toxic, Category C
- D = Toxic, Category D
- H = Persistent, halogenated Hydrocarbon
- O = Corrosive
- P = Persistent, Polycyclic Aromatic Hydrocarbon
- + = IARC Animal or Human, Positive or Suspected Carcinogen
- I = Ignitable
- R = Reactive
- EP = Extraction Procedure Toxicity
- ? = Inconclusive

**CHAPTER TWO**  
**2.0 HAZARDOUS/DANGEROUS WASTE SOURCES**  
**LIST FAC,FAC 00-000-9904**

2.1 NON-SPECIFIC SOURCES - *Continued*

Dangerous Waste No.	Sources
<b>2.1.1 Generic</b>	
<b>FEF001</b>	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from the recovery of these solvents in degreasing operations. (See footnote 1, below).
<b>FEF002</b>	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride,

Dangerous Waste No.	Sources
	trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoro-methane; and the still bottoms from the recovery of these solvents. (See footnote 1, below).
<b>FEF003</b>	The following spent nonhalogenated solvents: Zylene, acetone, ethyl acetate, ethylbenzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents.
<b>FEF004</b>	The following spent nonhalogenated solvents: Cresols and crylic acid, nitrobenzene; and the still bottoms from the recovery of these solvents.
<b>FEF005</b>	The following spent nonhalogenated solvents: Toluene, methyl ethyl ketone, carbon disulphide, isobutanol, pyridine; and the still bottoms from the recovery of these solvents.



Dangerous Waste No.	Sources	Dangerous Waste No.	Sources
FEF006	Waste water treatment sludges from electroplating operations except from the following processes: (1) Sulphuric acid anodizing of aluminium; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminium or <b>Dangerous</b> zinc-aluminium plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminium plating on carbon steel; and (6) chemical etching and milling of aluminium.		or of intermediates used to produce its derivatives. (See footnote 2 below).
FEF019	Waste water treatment sludges from the chemical conversion coating of aluminium.	FEF022	Wastes (except waste water and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions. (See footnote 2, below).
FEF007	Spent cyanide plating bath solutions from electroplating operations.	FEF023	Wastes (except waste water and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (See footnote 2, below). (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2, 4 5 trichlorophenol).
FEF008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	FEF026	Wastes (except waste water and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-penta- or hexachlorobenzene under alkaline conditions. (See footnote 2, below).
FEF009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	FEF027	Discarded unused formulations containing tri-, tetra- or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (See footnote 2, below). (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2, 4 5-trichlorophenol as the sole component).
FEF010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	FEF028	Residues resulting from the incineration or thermal treatment of soil contaminated with non-specific sources wastes FEF027.
FEF011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	FEF024	Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalysed processes. (See footnote 1, below) (This listing does not include light ends, spent filters and filter aids, spent
FEF012	Quenching waste water treatment sludges from metal heat-treating operations where cyanides are used in the process.		
FEF020	Wastes (except waste water and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2, 4 5-trichlorophenol.) (See footnote 2 below).		
FEF021	Wastes (except waste water and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol,		

Dangerous Waste No.	Sources	Dangerous Waste No.	Sources
	dessiccants, waste water, waste water treatment sludges, spent catalysts, and wastes listed under specific sources, below).		
2.11	SPECIFIC SOURCES		
2.11.1	Wood Preservation		
FEK001	Bottom sediment sludge from the treatment of waste waters from wood preserving process that use creosote and/or pentachlorophenol. (See footnote 1, below).	FEK015	Still bottoms from the distillation of benzyl chloride. (See footnote 1, below).
2.11.2	Inorganic Pigments	FEK016	Heavy ends or distillation residues from the production of carbon tetrachloride. (See footnote 1, below).
FEK002	Waste water treatment sludge from the production of chrome yellow and orange pigments.	FEK017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. (See footnote 1 below).
FEK003	Waste water treatment sludge from the production of molybdate orange pigments.	FEK018	Heavy ends from the fractionation column in ethyl chloride production (see footnote 1, below).
FEK004	Waste water treatment sludge from the production of zinc yellow pigments.	FEK019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. (See footnote 1, below).
FEK005	Waste water treatment sludge from the production of chrome green pigments.	FEK020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. (See footnote 1, below).
FEK006	Waste water treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	FEK021	Anqueous spent antimony catalyst waste from fluoromethanes production. (See footnote 1, below).
FEK007	Waste water treatment sludge from the production of iron blue pigments.	FEK022	Distillation bottom tars from the production of phenol/acetone from cumene.
FEK008	Oven residue from the production of chrome oxide green pigments.	FEK023	Distillation light ends from the production of phthalic anhydride from naphthalene.
2.11.3	Organic Chemicals	FEK024	Distillation bottoms from the production of phthalic anhydride from naphthalene.
FEK009	Distillation bottoms from the production of acetaldehyde from ethylene.	FEK093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.
FEK010	Distillation side cuts from the production of acetaldehyde from ethylene.	FEK094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.
FEK011	Bottom stream from the waste water stripper in the production of acrylonitrile.	FEK025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.
FEK013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	FEK026	Stripping still tails from the production of methyl ethyl pyridines.
FEK 104	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	FEK027	Centrifuge and distillation residues from toluene diisocyanate production.
		FEK028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. (See footnote 1, below).

Dangerous Waste No.	Sources	Dangerous Waste No.	Sources
FEK029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane. (See footnote 1, below).	FEK116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. (See footnote 1, below).
FEK095	Distillation bottoms from the production of 1,1,1-trichloroethane. (See footnote 1, below).	2.11.4	Explosives
FEK096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. (See footnote 1, below).	FEK044	Waste water treatment sludges from the manufacturing and processing of explosives.
FEK030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. (See footnote 1, below).	FEK045	Spent carbon from the treatment of waste water containing explosive.
FEK083	Distillation bottoms from aniline production.	FEK046	Waste water treatment sludges from the manufacturing formulation and loading of lead based initiating compounds.
FEK103	Process residues from aniline extraction from the production of aniline.	FEK047	Pink/red water from TNT operations.
FEK104	Combined waste water streams generated from nitrobenzene/aniline production.	2.11.5	Inorganic Chemicals
FEK085	Distillation of fractionation column bottoms from the production of chlorobenzenes. (See footnote 1, below).	FEK071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.
FEK105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. (See footnote 1, below).	FEK073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production (See footnote 1, below).
FEK111	Product wash waters from the production of dinitrotoluene via nitration of toluene.	FEK106	Waste water treatment sludge from the mercury cell process in chlorine production.
FEK112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	2.11.6	Petroleum Refining
FEK113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	FEK048	Dissolved Air Flotation (DAF) float from the petroleum refining industry.
FEK114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	FEK049	Slop oil emulsion solids from the petroleum refining industry.
FEK115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	FEK050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.
		FEK051	API separator sludge from the petroleum refining industry.
		FEK052	Tank bottoms (lead) from the petroleum refining industry.
		2.11.7	Iron and Steel
		FEK061	Emission Control dust/sludge from the primary production of steel on electric furnace.

Dangerous Waste No.	Sources	Dangerous Waste No.	Sources
FEK062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).		duction of 2, 4 5-T. (See footnote 1, below).
2.11.8	Pesticides	FEK043	2, 6-Dichlorophenol waste from the production of 2, 4-D. (See footnote 1, below).
FEK031	Bye-product salts generated in the production of MSMA and cacodylic acid.	FEK099	Untreated waste water from the production of 2, 4-D. (See footnote 1, below).
FEK032	Waste water treatment sludge from the production of chlordane. (See footnote 3, below).	FEK123	Process waste water (including supernates, filtrates, and waste waters) from the production of ethylenebisdithiocarbamic acid and its salts.
FEK033	Waste water and scrub water from the chlorination of cyclopentadiene in the production of chlordane. (See footnote 3, below).	FEK124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.
FEK034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. (See footnote 3, below).	FEK125	Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.
FEK097	Vacuum stripper discharge from the chlordane. (See footnote 3, below).	FEK126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.
FEK035	Waste water treatment sludges generated in the production of creosote.	2.11.9	Secondary Lead
FEK036	Still bottoms from toluene reclamation distillation in the production of disulphoton.	FEK069	Emission control dust/sludge from the secondary lead smelting.
FEK037	Waste water treatment sludges from the production of disulphoton.	FEK100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.
FEK038	Waste water from the washing and stripping of phorate production. (See footnote 3, below).	2.11.10	Veterinary Pharmaceuticals
FEK039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. (See footnote 3, below).	FEK084	Waste water treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
FEK040	Waste water treatment sludge from the production of phorate. (See footnote 3, below).	FEK101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
FEK041	Waste water treatment sludge from the production of toxaphene. (See footnote 3, below).	FEK102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.
FEK098	Untreated process waste water from the production of toxaphene. (See footnote 3, below).	2.11.11	Ink Formulation
FEK042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the pro-		

**Dangerous  
Waste No.**
**Sources**

**FEK086** Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.

**2.11.12 Coking**

**FEK060** Ammonia still-lime sludge from coking operations.

**FEK087** Decanter tank tar sludge from coking operations.

**Notes:**

1. These wastes contain or may contain halogenated hydrocarbons. Although 1.2 states that these wastes are DW, special knowledge, requires generators who know that their waste contains greater than one per cent of these listed halogenated hydrocarbons to designate their waste EHW.
2. For wastes listed with the dangerous waste numbers FEF020, FEF021, FEF022, FEF023, FEF026, or FEF027 the quantity exclusion limit is 1 kg per month or per batch.
3. These wastes contain or may contain X Category toxic constituents. Although Section 1.2 states that these wastes are DW, special knowledge, requires generators who know that their waste contains greater than 0.1 per cent of these listed toxic constituents to designate their waste EHW.

**CHAPTER THREE  
3. OTHER SOURCES**

**FEW001** Wastes generated from the salvaging, rebuilding, or discarding of transformers or capacitors which contain polychlorinated biphenyls (PCB).

Cooling and insulating fluids; cores, including core papers, from unrinsed transformers and capacitors; transformers and capacitors which will no longer be used for their intended use, except for those transformers or

capacitors which have been rinsed; and, rinsate from the rinsing of transformers and capacitors.

*Note:* The rinsing of PCB containing items shall be conducted as following:

- (a) the item is drained of all free flowing liquid;
- (b) the item is filled with solvent and allowed to stand for at least eighteen hours;
- (c) the item is drained thoroughly and the solvent is collected. Solvents may include kerosene, xylene, toluene and other solvents in which PCB are readily soluble.

**CHAPTER FOUR  
4. HAZARDOUS/DANGEROUS WASTE  
CONSTITUENTS LIST  
(FAC 000-000-9905)**

Acetonitrile (Ethanenitrile)  
 Acetophenone (Ethanone, 1-phenyl)  
 -(alpha-Acetylbenzyl)-4-hydroxycoumarin  
 and salts (Warfarin)  
 2-Acetylaminofluorene (Acetamide, N-9H-  
 fluoren-2-yl)-  
 Acetyl chloride (Ethanoyl chloride)  
 1-Acetyl-2-thioarea (Acetamide, N-  
 (aminothioxomethyl)-  
 Acrolein (2-propenal)  
 Acrylamide (2-Propenamide)  
 Acrylonitrile (2-Propenenitrile)  
 Acrylonitrile (2-Propenenitrile)  
 Aflatoxins  
 Aldrin (1, 2, 3, 4, 10, 10-Hexachloro-  
 1, 4, 4a, 5, 8, 8a, 8b-hexahydro-endo, exo-1, 4: 5,8-  
 Dimethanonaphthalene)  
 Allyl alcohol (2-Propen-1-ol)  
 Aluminium phosphide  
 4-Aminobiphenyl ([1, 1',-Biphenyl]-4-amine)  
 6-Amino-1, 1a, 2, 8, 8a, 8b-hexahydro-8-  
 (hydroxymethyl)-8a-methoxy-5methyl-  
 carbamatae azirino [2', 3' : 3, 4]pyrrolo[ 1,2-  
 a]indole-4, 7-dione, (ester) (Mitomysin C)  
 (Azirino[2', 3' : 3, 4] pyrrolo (1, 2-a) indole-4, 7-  
 dione,6-amino-8[  
 Barium and compounds, N.O.S.\*  
 Barium cyanide  
 Benz [c] acridine (3, 4-Benzacridine)  
 Benz [a] anthracene (1, 2-Benzanthracene)  
 Benzene (Cyclohexatriene)

- Benzenearsonic acid (Arsonic acid, phenyl-)  
 Benzene, 2-amino-1-methyl (o-Toluidine)  
 Benzene, 4-amino-1-methyl (p-Toluidine)  
 Benzene, dichloromethyl- (Benzal chloride)  
 Benzenethiol (Thiophenol)  
 Benzidine ([1, 1' -Biphenyl-4, 4' diamine)  
 Benzol [b] fluoranthene (2, 3-Benzofluoranthene)  
 Benzo [j] fluoranthene (7, 8-Benzofluoranthene)  
 Benzo [a] pyrene (3, 4-Benzophyrene)  
 p Benzoquinone (1, 4-Cyclohexadienedione)  
 Benzotrichloride (Benzene, trichloromethyl-)  
 Benzyl chloride (Benzene, chloromethyl-)  
 Beryllium and compounds, N.O.S.\*  
 Bis (2-Chloroethoxy) methane (Ethane, 1, 1\_- [methylenebis (oxy) ] bis [2-chloro-])  
 Bis (2-chloroethyl) ether (Ethane, 1, 1\_- oxybis [2-chloro-])  
 N, N-Bis (2-chloroethyl)-2-naphthylamine  
 Chlornaphazine)  
 Bis (2-chloroisopropyl) ether (propane, 2, 2\_- oxybis [2-chloro-])  
 Bis (chloromethyl) ether (Methane, oxybis [chloro-])  
 Bis (2-ethylhexyl) phthalate (1, 2-Benzenedicarboxylic acid, bis (2-ethylhexyl) ester)  
 Bromoacetone (2-Propanone, 1-bromo-)  
 Bromomethane (Methyl bromide)  
 4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)  
 Brucine (Strychnidin 10-one, 2, 3-dimethoxy-)  
 2-Butanone peroxide (Methyl ethyl ketone, peroxide)  
 Butyl benzyl phthalata (1, 2-Benzenedicarboxylic acid, butyl phenylmethyl ester)  
 2-sec-Butyl-4, 6-dinitrophenol (DNBP) (Phenol, 2, 4-dinitro-6-(1-methylpropyl)-)  
 Cadmium and compounds, N.O.S.\*  
 Calcium chromate (Chromic acid, calcium salt)  
 Calcium cyanide  
 Carbon disulphide (Carbon bisulphide)  
 Carbon oxyfluoride (Carbonyl fluoride)  
 Chloral (Acetaldehyde, trichloro-)  
 Chlorambucil (Butanoic acid, 4-[bis (2-Chloroethyl) amino] benzene-)  
 Chlordane (alpha and gamma isomers) (4, 7-Methanoindan, 1, 2, 4, 5, 6, 7, 8, 8-octachloro-3, 4, 7, 7a-tetrahydro-) (alpha and gamma isomers)  
 Chlorinated benzenes, N.O.S.\*  
 Chlorinated ethane, N.O.S.\*  
 Chlorinated fluorocarbons, N.O.S.\*  
 Chlorinated naphthalene, N.O.S.\*  
 Chlorinated phenol, N.O.S.\*  
 Chloroacetaldehyde (Acetaldehyde, chloro-)  
 Chloroalkyl ethers, N.O.S.\*  
 P-Chloroaniline (Benzenamine, 4-Chloro-)  
 Chlorobenzene (Benzene, chloro-)  
 Chlorobenzilate (Benzenoacetic acid, 4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester)  
 2-Chloro-1, 3-butadiene  
 p-Chloro-m-cresol (Phenol, 4-Chloro-3-methyl)  
 1-Chloro-2, 3-epoxypropane (Oxirane, 2-(chloromethyl)-)  
 2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy) -)  
 Chloroform (Methane, trichloro-)  
 Chloromathane (Methyl, chloride)  
 Chloromethyl methyl ether (methane, chloromethoxy-)  
 2-Chloronaphthalene (Naphthalene, beta-chloro-)  
 2-Chlorophenol (Phenol, o-chloro-)  
 1-(o-Chlorophenyl) thiourea (Thiourea, (2-chlorophenyl) -)  
 3-Chloropropene  
 3-Chloropropionitrile (Propanenitrile, 3-chloro-)  
 Chromium and compounds, N.O.S.\*  
 Chrysene (1,2-Benzphenanthrene)  
 Citrus red No. 2 (2-Naphthol, 1-[(2, 5-dimethoxyphenyl) azol]-)  
 Coal tars  
 Copper cyanide  
 Creosote (Creosote, wood)  
 Cresols (Cresylic acid) (Phenol, methyl-)  
 Crotonaldehyde (2-Butenal)  
 Cyanides (soluble salts and complexes), N.O.S.\*  
 Cyanogen (Ethanedinitrile)  
 Cyanogen bromide (Bromine cyanide)  
 Cyanogen chloride (Chlorine cyanide)  
 Cycasin (beta-D-Glucopyranoside, (methyl-ONN-azoxy) methyl-)  
 2-Cyclohexyl-4-6-dinitrophenol (Phenol, 2-cyclohexyl-4, 6-dinitro-)  
 Cyclophosphamide (2H-1, 3, 2,- Oxazaphosphorine, [bis (2-chloroethyl) amino]-tetrahydro, 2-oxide)  
 Daunomycin (5, 12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl) oxy]-7, 8, 9, 10-tetrahydro-6, 8, 11-trihydroxy-1-methoxy-)  
 DDD (Dichlorodiphenyldichloroethane) (Ethane, 1, 1-dichloro-2, 2-bis (p-chlorophenyl)-)  
 DDE (Ethylene, 1, 1-dichloro-2, 2-bis (4-chlorophenyl)-)  
 DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1, 1, 1-trichloro-2-2 bis (p-chlorophenyl)-)  
 Diallate (S-(2, 3-dichloroallyl) diisopropylthiocarbamate)

- Dibenz [a,h] acridine (1, 2, 5, 6-Dibenzacridine)  
 Dibenz [a,j] acridine (1, 2, 7, 8-Dibenzacridine)  
 Dibenz [a,h] anthracene (1, 2, 5, 6-Dibenzanthracene)  
 7-H-Dibenz [c,g] carbazole (3, 4, 5, 6-Dibenzcarbazole)  
 Dibenzo [a,e] pyrene (1, 2, 4, 5-Dibenzpyrene)  
 Dibenzo [a,h] pyrene (1,2,5,6-Dibenzpyrene)  
 Dibenzo [a,i] pyrene (1, 2, 7, 8-Dibenzpyrene)  
 1, 2-Dibromo-3-chloropropane (Propane, 1, 2-dibromo-3-chloro-)  
 1,2-Dibromoethane (Ethylene dibromide)  
 Dibromomethane (Methylene bromide)  
 Di-n-butyl phthalate (1, 2-Benzenedicarboxylic acid, dibutyl ester)  
 o-Dichlorobenzene (Benzene, 1, 2-dichloro-)  
 m-Dichlorobenzene (Benzene, 1, 3-dichloro-)  
 p-Dichlorobenzene (Benzene, 1, 4-dichloro-)  
 Dichlorobenzene, N.O.S.\* (Benzene, dichloro-, N.O.S.\*)  
 3, 3' -Dichlorobenzidine ([1, 1' -Bephenyl]-4, 4' -diamine, 3, 3' -dichloro-)  
 1, 4-Dichloro-2-butene (2-Butene, 1, 4-Butene, 1, 4-dichloro-)  
 Dichlorodifluoromethane (Methane, dichlorodifluoro-)  
 1, 1-Dichloroethane (Ethylidene dichloride)  
 1, 2-Dichloroethane (Ethylene dichloride)  
 trans-1, 2-Dichloroethene (1, 2-Dichloroethylene)  
 Dichloroethylene, N.O.S.\* (Ethene, dichloro-, N.O.S.\*)  
 1, 1-Dichloroethylene (Ethene, 1, 1-dichloro-)  
 Dichloromethane (Methylene chloride)  
 2, 4-Dichlorophenol (Phenol, 2, 4-dichloro-)  
 2, 6-Dichlorophenol (Phenol, 2, 6-dichloro-)  
 2, 4-Dichlorophenoxyacetic acid (2, 4-D), salts and esters (Acetic acid, 2, 4-dichlorophenoxy-, salts and esters)  
 Dichlorophenylarsine (Phenyl dichloroarsine)  
 Dichloropropane, N.O.S.\* (Propane, dichloro-, N.O.S.\*)  
 1, 2-Dichloropropene (Propylene dichloride)  
 Dichloropropanol, N.O.S.\* (Propanol, dichloro-, N.O.S.\*)  
 Dichloropropene, N.O.S.\* (Propene, dichloro-, N.O.S.\*)  
 1, 3-Dichloropropene, (1-Propene, 1, 3-dichloro-)  
 Dieldrine (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octa-hydro-endo, exo-1, 4 : 5, 8-Dimethanonaphthalene)  
 1, 2 : 3, 4-Diepoxybutane (2, 2\_-Bioxirane)  
 Diethylarsine (Arsine, diethyl-)  
 N, N-Diethylhydrazine, 1, 2-diethyl)  
 O, O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, O, O-diethyl S-methyl ester)  
 O, O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)  
 Diethyl phthalate (1,2-Benzenedicarboxylic acid, diethyl ester)  
 O, O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O, O-diethyl O-pyrazinyl ester)  
 Diethylstilbesterol (4, 4' -Stilbenediol, alpha, alpha-diethyl, bis (dihydrogen phosphate, (E)-)  
 Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)  
 3,4-Dihydroxy-alpha-(methylamino) methyl benzyl alcohol (1, 2-benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]-)  
 Diisopropylfluorophosphate (DFP) (Phosphorofluoric acid, bis (1-methylethyl) ester)  
 Dimethoate (Phosphorodithioic acid, O, O-dimethyl S-[2-methylamino]-2oxoethyl) ester  
 3, 3\_-Dimethoxybenzidine/[1, 1\_-Biphenyl]-4, 4\_dimamine, 3-3 dimethoxy-)  
 p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenylazo)-)  
 7,12-Dimethylbenz [a] anthracene (1, 2-Benzanthracene, 7, 12—dimethyl-)  
 3, 3\_ Dimethylbenzidine ([1, 1\_-Biphenyl]-4, 4\_diamine, 3, 3\_-dimethyl-)  
 Dimethylcarbamoyl Chloride (Carbamoyl chloride, dimethyl-)  
 1, 1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)  
 1, 2-Dimethylhydrazine (Hydrazine, 1, 2-dimethyl-)  
 3, 3-Dimethyl-(methylthio)-2-butanone, O-[(methylamino) carbonyl]oxime (Thiofanox)  
 alpha, alpha-Dimethylphenethylamine] (Ethanamine, 1, 1-dimethyl-2-phenyl)  
 2, 4-Dimethylphenol (Phenol, 2, 4-dimethyl-)  
 Dimethyl phthalate (1, 2-Benzenedicarboxylic acid, dimethyl ester)  
 Dimethyl sulfate (Sulphuric acid, dimethyl ester)  
 Dinitrobenzene, N.O.S.\* (Benzene, dinitro-, N.O.S.\*)  
 4, 6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6—methyl-, and salts)  
 2, 4-Dinitro-o-cresol and salts (Phenol, 2, 4-dinitro-)  
 2, 4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)  
 2, 6-Dinitrotoluene (Benzene, 1-methyl-2, 6-dinitro-)  
 Di-n-octyl phthalate (1, 2-Benzenedicarboxylic acid, Dioctyl ester)  
 1, 4-Dioxane (1, 4-Diethylene oxide)

- Diphenylamine (Benzenamine, N-Phenyl-)  
 1, 2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)  
 Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)  
 Disulphoton (O, O-diethyl S-[2-(ethylthio)ethyl] phosphorodithioate)  
 2, 4-Dithiobiuret (Thioimidodicarbonic diamide)  
 Endosulphan (5-Norbornene, 2, 3-dimethanol, 1, 4, 5, 6, 7, 7-hexachloro-, cyclic sulphite)  
 Endrin and metabolites (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-endo, endo-1, 4 : 5, 8-dimethanonaphthalene, and metabolites)  
 Ethyl carbamate (Urethan) Carbamic acid, ethyl ester)  
 Ethyl cyanide (propanenitrile)  
 Ethylenebisdithiocarbamic acid, salts and esters (1, 2-Ethanediylobiscarbamodithioic acid, salts and esters.  
 Ethyleneimine (Aziridine)  
 Ethylene oxide (Oxirane)  
 Ethylenethiourea (2-Imidazo-hidinethione)  
 Ethylmethacrylate (2-Propenoic acid, 2-methyl-, ethyl ester)  
 Ethylmethanesulphonate (Methanesulphonic acid, ethyl ester)  
 Fluoranthene (Benzo [j, k] fluorene)  
 Fluorine  
 2-Fluoroacetamide (Acetamide, 2-fluoro-)  
 Fluoroacetic acid, sodium salt (Acetic acid, fluorine, sodium salt)  
 Formaldehyde (Methylene, oxide)  
 Formic acid (Methanoic acid)  
 Glycidylaldehyde (1-Propanol-2-3-epoxy)  
 Halomethane, N.O.S.\*  
 Heptachlor (4, 7-methano-1H-indene, 1, 4, 5, 6, 7, 8, 8-heptachloro-3a, 4, 7, 7a-tetrahydro-)  
 Heptachlor epoxide (alpha, beta, and gamma isomers) (4, 7-Methano-1H-indene, 1, 4, 5, 6, 7, 8, 8-heptachloro-2, 3-epoxy-3a, 4, 7, 7-tetrahydro-, alpha, beta, and gamma isomers)  
 Hexachlorobenzene (Benzene, hexachloro-)  
 Hexachlorobutadiene (1, 3-Butadiene, 1, 1, 2, 3, 4, 4-hexachloro-)  
 Hexachlorocyclohexane (all isomers) (Lindane and isomers)  
 Hexachlorocyclopentadiene (1, 3-Cyclopentadiene, 1, 2, 3, 4, 5, 5-hexachloro-)  
 Hexachlorodibenzo-p-dioxins  
 Hexachloroethane (Ethane, 1, 1, 1, 2, 2, 2-hexachloro-)  
 1, 2, 3, 4, 10, 10-Hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-1, 4: 5, 8-endo, endo-  
 dimethanonaphthalene (Hexachlorohexahydro-endo, endo-dimethanonaphthalene)  
 Hexachlorophene (2, 2'-Methylenebis (3, 4, 6-trichlorophenol))  
 Hexachloropropene (1-Propene, 1, 1, 2, 3, 3, 3, 3-hexachloro-)  
 Hexaethyl tetraphosphate (Tetraphosphoric acid, hexaethyl ester)  
 Hydrazine (Diamine)  
 Hydrazine (Diamine)  
 Hydrocyanic acid (Hydrogen cyanide)  
 Hydrophluoric acid (Hydrogen fluoride)  
 Hydrogen sulphide (Sulphur hydride)  
 Hydroxydimethylarsine oxide (Cacodylic acid)  
 Indeno (1, 2, 3-cd) pyrene (1, 10-(1, 2-phenylene) pyrene)  
 Iodomethane (methyl iodide)  
 Iron Dextran (Ferric dextran)  
 Isocyanic acid, methyl ester (Methyl isocyanate)  
 Isobutyl alcohol (1-Propanol, 2-methyl-)  
 Isosafrole (Benzene, 1, 2-methylenedioxy-4-allyl-)  
 Kepone (Decachlorooctahydro-1, 3, 4, 4-Methano-2H-Cyclobuta[cd]pentalen-2-one)  
 Lasiocarpine (2-Butenoic acid, 2-methyl-, 7-[(2, 3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy) methyl]-2, 3, 5, 7a-tetrahydro-1H-pyrolizin-1-yl ester)  
 Lead and compounds, N.O.S.\*  
 Lead acetate (Acetic acid, lead salt)  
 Lead phosphate (Phosphoric acid, lead salt)  
 Lead subacetate (Lead, bis (acetato-O) tetrahydroxytri-)  
 Maleic anhydride (2, 5-Furandione)  
 Maleic hydrazide (1, 2-Dihydro-3, 6-pyridazinedione)  
 Malononitrile (Propanedinitrile)  
 Melphalan (Alanine, 3-[p-bis (2-chloroethyl) amino] phenyl-, L-)  
 Mercury Fulminate (Fulminic acid, mercury salt)  
 Mercury and compounds, N.O.S.\*  
 Methacrylonitrile (2-Propenenitrile, 2-methyl-)  
 Methanethiol (Thiomethanol)  
 Methapyrilene (Pyridine, 2-[2-dimethylamino) ethyl]-2-thenylamino-)  
 Metholonyl (Acetimidic acid, N-[ (methylcarbamoil) oxy] thio-, methyl ester)  
 Methoxychlor (Ethane, 1, 1, 1-trichloro-2, 2'-bis (p-methoxyphenyl)-)  
 2-Methylaziridine (1, 2-Propylenimine)  
 3-Methylcholanthrene (Benz [j] aceanthrylene, 1, 2-dihydro-3-methyl-)  
 Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)  
 4, 4'-Methylenebis (2-chloroaniline) (Benzenamine, 4, 4'-methylenebis-(2-chloro-)



- Methyl ethyl ketone (MEK) (2-Butanone)  
Methyl hydrazine (Hydrazine, methyl-)  
2-Methylacetonitrile (Propanenitrile, 2-hydroxy-2-methyl-)  
Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)  
Methyl methanesulphonate (Methanesulphonic acid, methyl ester)  
2-Methyl-2-(methylthio) propionaldehyde-o-(methycarbonyl) oxime (Propanal, 2-methyl-2-(methylthio)-, O-[ (methylamino) carbonyl] oxime)  
N-Methyl-N'-nitro-N-nitrosoguanidine (Guanidine, N-nitros-N-methyl-N\_ nitro-)  
Methyl parathion (O, O-dimethyl O-(4-nitrophenyl) phosphorothioate)  
Methylthiouracil (4-1H-Pyrimidinone, 2, 3-dihydro-6-methyl-2-thioxo-)  
Mustard gas (Sulphide, bis (2-chloroethyl)-)  
Naphthalene  
1, 4-Naphthoquinone (1, 4-Naphthalenedione)  
1-Naphthylamine (alpha-Naphthylamine)  
2-Naphthylamine (beta-Naphthylamine)  
1-Naphthyl 2-thiourea (Thiourea, 1-naphthalenyl-)  
Nickel and compounds, N.O.S.\*  
Nickel carbonyl (Nickel tetracarbonyl)  
Nickel cyanide (nickel (II) cyanide)  
Nicotine and salts, Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)  
Nitric oxide (Nitrogen (II) oxide)  
p-Nitroaniline Benzenamine, 4-nitro-)  
Nitrobenzine (Benzene, nitro-)  
Nitrogen dioxide (Nitrogen (IV) oxide)  
Nitrogen mustard and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)  
Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)  
Nitroglycerine (1, 2, 3-Propanetriol, trinitrate)  
4-Nitrohenol (Phenol, 4-dinitro-)  
4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide)  
Nitrosamine, N.O.S.\*  
N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)  
N-Nitrosodiethanolamine (Ethanol, 2, 2'-(nitrosoimino) bis-)  
N-Nitrosodiethylamine (Ethanamine, N-Ethyl-N-nitroso-)  
N-Nitrosodimethylamine (Dimethylnitrosamine)  
N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)  
N-Nitrosodimethylamine (Dimethylnitrosamine)  
N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)  
N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)  
N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)  
N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)  
N-Nitrosomethyl-virylamine (Ethenamine, N-methyl-N-nitroso)  
N-Nitrosomorpholine (Morpholine, N-nitroso-)  
N-Nitrosornicotine (Nornicotine, N-nitroso-)  
N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)  
Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)  
Nitrosopyrrolidine (pyrrole, tetrahydro-, N-nitroso-)  
N-Nitrososarcosine (Sarcosine, N-nitroso-)  
5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)  
Octamethylpyrophosphoramidate (Diphosphoramidate, octamethyl-)  
Osmium tetroxide (Osmium (VIII) oxide)  
7-Ocabcyclo [2, 2, 1] heptane-2, 3-dicarbonylic acid (Enodothal)  
Paraldehyde (1, 3, 5-Trioxane, 2, 4, 6- triethyl-)  
Parathion (Phosphorothioic acid, O, O-diethyl O-(P-nitrophenyl ester)  
Pentachlorobenzene (Benzene, pentachloro-)  
Pentachlorodibenzo-p-dioxins  
Pentachlorodibenzofurans  
Pentachloroethane (Ethane, pentachloro-)  
Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)  
Pentachlorophenol (Phenol, pentachloro-)  
Phenacetin (Acetamide, N-(4-ethoxyphenyl)-)  
Phenol (Benzene, hydroxy-)  
Phenylenediamine (Benzenediamine)  
Phenylmercury acetate (Mercury, acetatophenyl-)  
N-Phenylthiourea (Thiourea, phenyl-)  
Phosgene (Carbonyl chloride)  
Phosphine (Hydrogen phosphide)  
Phosphrodichioic acid, O, O-diethyl S-[(ethylthio) methyl] ester (Phorate)  
Phosphorothioic acid, O, O-dimethyl O-[P-(dimethylamino)sulphonyl] phenyl] ester (camphur)  
Phthalic acid esters, N.O.S.\* (Benzene, 1,2-dicarboxylic acid, esters, N.O.S.\*  
Phthalic anhydride (1, 2-Benzenedicarboxylic acid anhydride)  
2-Picoline (Pyridine, 2-methyl-)  
Polychlorinated biphenyl, N.O.S.\*  
Potassium cyanide  
Potassium silver cyanide (Argentate (1-), dicyano-, potassium)  
Pronamide (3, 5-Dichloro-N-(1, 1-dimethyl-2-propynyl) benzamide)  
1, 3-Propanesultone (1, 2-Oxathiolane, 2, 2-

- dioxide)
- n-Propylamine (1-Propane)
- Propylthiouracil (Undecamethylenediamine, N, N-bis (2-chlorobenzyl)-, dihydrochloride)
- 2-Propyn-1-ol (Progargyl alcohol)
- Pyridine
- Reserpine (Yohimban-16-carboxylic acid, 11, 17-dimethoxy-18-[(3, 4, 5-trimethoxybenzoyl)oxy]-, methyl ester)
- Resorcinol (1, 3-benzenediol)
- Saccharin and salts (1, 2-Benzoisothiazolin-3-one, 1, 1-dioxide, and salts)
- Safrol (Benzene, 1, 2-methylenedioxy-4-allyl-)
- Selenious acid (Selenium dioxide)
- Selenium and compounds, N.O.S.\*
- Selenium sulphide (Sulphur selenide)
- Selenourea (Carbamimidoseleonic acid)
- Silver and compounds N.O.S.\*
- Silver cyanide
- Sodium cyanide
- Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-)
- Strontium sulphide
- Strychnine and salts (Strychnidin-10-one, and salts)
- 1, 2, 4, 5-Tetrachlorobenzene (Benzene, 1, 2, 4, 5-tetrachloro-)
- Tetrachlorodibenzo-p-dioxins
- Tetrachlorodibenzofurans
- 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin (TCDD) Dibenzo-p-dioxin, 2, 3, 7, 8-tetrachloro-)
- Tetrachloroethane, N.O.S.\* (Ethane, Tetrachloro-, N.O.S.\*)
- 1, 1, 1, 2-Tetrachlorethane (Ethane, 1, 1, 1, 2-tetrachloro-)
- Tetrachlorethylene (Ethane, 1, 1, 2, 2-tetrachloro-)
- Tetrachloromethane (Carbon tetrachloride)
- 2, 3, 4, 6-Tetrachlorophenol (Phenol, 2, 3, 4, 6-tetrachloro-)
- Tetraethylthiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)
- Tetraethyl lead (Plumbane, tetraethyl-)
- Tetraethylpyrophosphate (Pyrophosphoric acid, tetraethyl ester)
- Tetranitromethane (Methane, tetranitro-)
- Thallium and compounds, N.O.S.\*
- Thallic oxide (Thallium (III) oxide)
- Thallium (I) acetate (Acetic acid, thallium (I) salt)
- Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)
- Thallium (I) chloride
- Thallium (I) nitrate (Nitric acid, thallium (I) salt)
- Thallium selenite
- Thallium (I) sulphate (Sulphuric acid, thallium (I) salt)
- Thioacetamide (Ethanethioamide)
- Thiosemicarbazide (Hydrazinecarbothioamide)
- Thiourea (Carbamide thio-)
- Thiuram (Bis (dimethylthioucarbamoyle) disulphide)
- Toluene (Benzene, methyl-)
- Toluenediamine, N.O.S. (Diaminotoluene)
- 2, 4-Toluenediamine
- 2, 6-Toluenediamine
- 3, 4-Toluenediamine
- o-Toluidine hydrochloride (Benzanamine, 2-methyl-, hydrochloride)
- Tolylene diisocyanate (Benzene, 1, 3-diisocyanatomethyl-)
- Toxaphene (Camphene, octachloro-)
- Tribromomethane (Bromoform)
- 1, 2, 4-Trichlorobenzene (Benzene, 1, 2, 4-trichloro-)
- 1, 1, 1-Trichloroethane (Methyl chloroform)
- 1, 1, 2-Trichloroethane (Ethane, 1, 1, 2-trichloro-)
- Trichloroethane (Trichloroethylene)
- Trichloromethanethiol (Methanethiol, trichloro-)
- Trichloromonofluoromethane (Methane, trichlorofluoro-)
- 2, 4, 5-Trichlorophenol (Phenol, 2, 4, 5-trichloro-)
- 2, 4, 6-Trichlorophenol (Phenol, 2, 4, 6-trichloro-)
- 2, 4, 5-Trichlorophenoxyacetic acid (2, 4, 5-TP) Acetic acid, 2, 4 5-trichlorophenoxy-)
- 2, 4, 5-Trichlorophenoxyacetic acid (2, 4, 5-TP) (Silvex) (Propionic acid, 2-(2, 4, 5-trichlorophenoxy)-)
- Trichloropropane, N.O.S.\* (Propane, trichloro-, N.O.S.\*)
- 1, 2, 3-Trichloropropane (Propane, 1, 2, 3-trichloro-)
- O, O, O-Triethyl phosphorothioate (Phosphorothioic acid, O, O, O-triethyl ester)
- Sym-Trinitrobenzene (Benzene, 1, 3, 5-trinitro-)
- Tris (1-aziridinyl) phosphine sulphide (Phosphine sulphide, tris (1-ariridinyl)-)
- Tris (2, 3-dibromopropyl) phosphate (1-Propanol, 2, 3-dibromo-, phosphate)
- Trypan blue (2, 7-Naphthalenedisulfonic acid, 3, 3' -[3, 3' -dimethyl (1, 1' -biphenyl)-4, 4'-diyl] bis (azo)] bis (5-amino-4-hydroxy-, tetrasodium salt)
- Uracil mustard (Uracil 5-[bis (2-chlorethyl) amino]-)
- Vanadic acid, ammonium salt (ammonium vanadate)
- Vanadium pentoxide (Vanadium V) oxide)
- Vinyl chloride (Ethane, chloro-)
- Zinc cyanide
- Zinc phosphide
- \*The abbreviation N.O.S. signifies those members of general class "not otherwise specified" by name in listing.

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## PART IV

## GLOSSARY OF ENVIRONMENTAL TERMS

## GLOSSARY OF TERMS

## A

**Abandoned Well:** A well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose.

**Abatement:** Reducing the degree or intensity of, or eliminating, pollution. **Absorption:** The passage of one substance into or through another, e.g., an operation in which one or more soluble components of a gas mixture are dissolved in a liquid. **Accelerator:** In radiation science, a device that speeds up charged particles such as electrons or protons.

**Accident site:** the location of an unexpected occurrence, failure or loss, either at a plant or along a transportation route, resulting in a release of hazardous materials.

**Acclimatization:** the physiological and behavioural adjustments of an organism to changes in its environment.

**Acetylcholine:** A substance in the human body having important neurotransmitter effects on various internal systems; often used as a bronchoconstrictor. **Acid Deposition:** A complex chemical and atmospheric phenomenon that occurs when emissions of sulfur and nitrogen compounds and other substances are transformed by chemical processes in the atmosphere, often far from the original sources, and then deposited on earth in either a wet or dry form. The wet forms, popularly called "acid rain", can fall as rain, snow, or fog. The dry forms are acidic gases or particulates. **Acid Rain:** (See acid deposition).

**Activated carbon:** A highly adsorbent form of carbon used to remove odors and toxic substances from liquid or gaseous emissions. In waste treatment it is used to remove dissolved organic matter from waste water. It is also used in motor vehicle evaporative control systems.

**Activated sludge:** Sludge that results when primary effluent is mixed with bacteria-laden sludge and then agitated and aerated to promote biological treatment.

This speeds breakdown of organic matter in raw sewage undergoing secondary waste treatment. **Active Ingredient:** In any pesticide product, the component which kills, or otherwise controls, target pests. Pesticides are regulated primarily on the basis of active ingredients.

**Active Life of facility:** The period from the initial receipt of dangerous waste at a facility until FEPA issues a certificate of final closure. **Acute Exposure:** A single exposure to a toxic substance which results in severe biological harm or death. Acute exposures are usually characterized as lasting no longer than a day. **Acute Toxicity:** The ability of a substance to cause poisonous effects resulting in severe biological harm or death soon after a single exposure or dose. Also, any severe poisonous effect resulting from a single short-term exposure to a toxic substance. (See: chronic toxicity, toxicity). **Acutely Hazardous Waste:** Dangerous waste sources (listed in FAC 173-303-9904 FO20, F022, F023, F026, or F027, and discarded Chemical Products (listed in FAC 173-303-9903) that are identified with a dangerous waste number beginning with a "P" or that shows an "X" or "A" in the reason for designation column. **Adaptation:** Changes in an organism's structure or habit that help it adjust to its surroundings. **Add-on Control Device:** An air pollution control device such as carbon absorber or incinerator which reduces the pollution in an exhaust gas. The control device usually does not affect the process being controlled and thus is "add-on" technology as opposed to a scheme to control pollution through making some alteration to the basic process.

**Adhesion:** Molecular attraction which holds the surfaces of two substances in contact.

**Adsorption 1:** Adhesion of molecules of gas, liquid, or dissolved solids to a surface. 2. An advanced method of treating wastes in which activated carbon removes organic matter from waste water.

**Adulterants:** Chemical impurities or substances that by law do not belong in a food, or in a pesticide.

**Advanced Waste Water Treatment:** Any treatment of sewage that goes beyond the secondary or biological water treatment stage and includes the removal of nutrients such as phosphorus and nitrogen and a high percentage of suspended solids. (See primary, secondary treatment).

**Advisory:** A non-regulatory document that communicates risk information to persons who may have to make risk management decisions.

**Aeration:** A process which promotes biological degradation of organic water. The process may be passive (as when waste is exposed to air), or active (as when a mixing or bubbling device introduces the air).

**Aerobic:** Life or processes that require, or rare not destroyed by, the presence of oxygen (See anaerobic).

**Aerobic Treatment:** Process by which microbes decompose complex organic compounds in the presence of oxygen and use the liberated energy for reproduction and growth. Types of aerobic processes include extended aeration, trickling filtration, and rotating biological contractors.

**Aerosol:** A suspension of liquid or solid particles in a gas.

**Afterburner:** In incinerator technology, a burner located so that the combustion gases are made to pass through its flame in order to remove smoke and odours. It may be attached to or be separated from the incinerator proper.

**Agent Orange:** A toxic herbicide and defoliant which was used in the Vietnam conflict. It contains 2, 4, 5-trichlorophenoxyacetic acid (2, 4, 5-T) and 2-A dichlorophenoxyacetic acid (2, 4-D) with trace amounts of dioxin.

**Agglomeration:** The process by which precipitation particles grow larger by collision or contract with cloud particles or other precipitation particles.

**Agglutination:** The process of uniting solid particles coated with a thin layer of adhesive material or of arresting solid particles by impact on a surface coated with an adhesive.

**Agricultural Pollution:** The liquid and solid wastes from farming, including: runoff and leaching of pesticides and fertilizers, erosion and dust from plowing, animal manure and carcasses, crop residues, and debris.

**Airborne Particulates:** Total suspended particulate matter found in the atmosphere as solid particles or liquid droplets. Chemical composition of particulates varies widely, depending on location and time of year. Airborne particulates include: wind blown dust, emissions from industrial processes, smoke from the burning of wood and coal, and the exhaust of motor vehicles.

**Airborne Release:** Release of any chemical into the air.

**Air Changes Per Hour (ACH):** The movement of a volume of air in a given period of time; if a house has one air change per hour, it means that all of the air in the house will be placed in a one-hour period.

**Air Contaminant:** Any particulate matter, gas or combination thereof, other than water vapour of natural air. (See air pollutant).

**Air Curtain:** A method of containing oil spills. Air bubbling through a perforated pipe causes an upward

water flow that slows the spread of oil. It can also be used to stop fish from entering polluted water.

**Air Mass:** A widespread body of air that gains certain meteorological or polluted characteristics - e.g., a heat inversion or smogginess while set in one location. The characteristics can change as it moves away.

**Air Monitoring:** (See monitoring)

**Air Pollutant:** Any substance in air which could, if in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of matter capable of being airborne. They may be in the form of solid particles, liquid droplets, gases, or airborne. They may be in the form of solid particles, liquid droplets, gases, or in combinations of these forms. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents, with or without photoactivation. Exclusive of pollen, fog, and dust, which are of natural origin, about 100 contaminants have been identified and fall into the following categories: solids, sulfur compounds, volatile organic chemicals, nitrogen compounds, oxygen compounds halogen compounds, radioactive compounds, and odors.

**Air Pollution:** The presence of contaminant or pollutant substances in the air that do not disperse properly and interfere with human health or welfare, or produce other harmful environmental effects.

**Air Pollution Episode:** A period of abnormally high concentration of air pollutants, often due to low winds and temperature inversion, that can cause illness and death. (See: episode, pollution).

**Air Quality Control Region:** An area-designated by the federal government - in which communities share a common air pollution problem. Sometimes several states are involved.

**Air Quality Criteria:** The levels of pollution and lengths of exposure above which adverse health and welfare effects may occur.

**Air Quality Standards:** The level of pollutants prescribed by regulations that may not be exceeded during a specified time in a defined area.

**Alachlor:** A herbicide, marketed under the trade name Lasso, used mainly to control weeds in corn and soybean fields.

**Alar:** Trade name for daminozide, a pesticide that makes apples redder, firmer, and less likely to drop off trees

before growers are ready to pick them. It is made from ethyl isocyanate.

**Algae:** Simple rootless plants that grow in sunlit waters in relative proportion to the amounts of nutrients available. They can affect water quality adversely by lowering the dissolved oxygen in water, they are food for fish and small aquatic animals.

**Algal Blooms:** Sudden spurts of algal growth, which can affect water quality adversely and indicate potentially hazardous changes in local water chemistry.

**Alpha Particle:** A positively charged particle composed of 2 neutrons and 2 protons released by some atoms undergoing radioactive decay. The particle is identical to the nucleus of a helium atom.

**Alternate Method:** Any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated in specific cases to FEPA's satisfaction to produce results adequate for compliance.

**Ambient Air:** Any unconfined portion of the atmosphere: open air, surrounding air.

**Ambient Air Quality Standards:** (See: Criteria Pollutants and National Ambient Air Quality Standards). **Anadromous:** Fish that spend their adult life in the sea but swim upriver to fresh-water spawning grounds to reproduce.

**Anaerobic:** A life or process that occurs in, or is not destroyed by, the absence of oxygen.

**Antagonism:** The interaction of two chemicals having opposing, or neutralizing effect on each other, or - given some specific biological effect - a chemical interaction that appears to have an opposing or neutralizing effect over what might otherwise be expected.

**Antibodies:** Proteins produced in the body by immune system cells in response to antigens, and capable of combining with antigens.

**Anti-Degradation Clause:** Part of FEPA air quality and water quality requirements prohibiting deterioration where pollution levels are above the legal limit.

**Antigen:** A substance that causes production of antibodies when introduced into animal or human tissue.

**APHA:** American Public Health Association.

**Aquatic LC50:** (same as TL 96). A concentration in mg/l (ppm) which kills in 96 hours half of a group of ten or more of a medium sensitivity warm water species or

fish such as *Lepomis macrochirus* (bluegill) or *Pimephales promelas* (flathead minnow), or cold water species such as salmonidae, when using the testing method described in subsection 1.8.1.

**API:** American Petroleum Institute.

**Aquifer:** An underground geological formation, or group of formations containing usable amounts of groundwater that can supply wells and springs.

**Arbitration:** A process for the resolution of disputes. Decisions are made by an impartial arbitrator selected by the parties. These decisions are usually legally binding. (See: mediation).

**Area Source:** Any small source of non-natural air pollution that is released over a relatively small area but which cannot be classified as a point source. Such sources may include vehicles and other small fuel combustion engines.

**Asbestos:** A mineral fiber that can pollute air or water and cause cancer or asbestosis when inhaled. FEPA has banned or severely restricted its use in manufacturing and construction.

**Asbestos containing waste material:** Any waste that contains more than one per cent asbestos by weight and that can be crumbled, pulverized, or reduced to powder when dry, by hand pressure.

**Asbestosis:** A disease associated with chronic exposure to an inhalation of asbestos fibers. The disease makes breathing progressively more difficult and can lead to death.

**A-Scale Sound Level:** A measurement of sound approximating the sensitivity of the human ear, used to note the intensity or annoyance of sounds.

**Assimilation:** The ability of a body of water to purify itself of pollutants.

**ASTM:** American Society of Testing and Materials.

**Atmosphere (atm):** A standard unit of pressure representing the pressure exerted by a 29.92-inch column of mercury at sea level at 45° latitude and equal to 1,000 grams per square centimeter. (the) The whole mass of air surrounding the earth, composed largely of oxygen and nitrogen.

**Atomize:** To divide a liquid into extremely minute particles, either by impact with a jet of steam or compressed air, or by passage through some mechanical device.

**Attainment Area:** An area considered to have air qual-

ity as good as or better than the national ambient air quality standard as defined in the Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

**Attenuation:** The process by which a compound is reduced in concentration over time, through adsorption, degradation, dilution, and/or transformation.

**Attractant:** A chemical or agent that lures insects or other pests by stimulating their sense of smell.

**Attrition:** Wearing or grinding down of a substance by friction. A contributing factor in air pollution, as with dust.

**Autotrophic:** An organism that produces food from inorganic substances.

**AWWA:** American Water Works Association.

## B

**Background Level:** In air pollution control, the concentration of air pollutants in a definite area during a fixed period of time prior to the starting up or on the stoppage of a source of emission under control. In toxic substances monitoring, the average presence in the environment, originally referring to naturally occurring phenomena.

**BACTA - Best Available Control Technology:** An emission limitation based on the maximum degree of emission reduction which (considering energy, environmental, and economic impacts and other costs) is achievable through application of production processes and available methods, systems, and techniques.

**Bacteria:** (Singular, bacterium) Microscopic living organisms which can aid in pollution control by consuming or breaking down organic matter in sewage, or by similarly acting on oil spills or other water pollutants. Bacteria in soil, water or air can also cause human, animal and plant health problems.

**Baffle Chamber:** In incinerator design, a chamber designed to promote the settling of fly ash and coarse particulate matter by changing the direction and/or reducing the velocity of the gases produced by the combustion of the refuse or sludge.

**Baghouse Filter:** Large fabric bag, usually made of glass fibres, used to eliminate intermediate and large (greater than 20 microns in diameter) particles. This device operates in a way similar to the bag of an electric vacuum cleaner, passing the air and smaller particulate matter, while entrapping the larger particulates.

**Baling:** Compacting solid waste into blocks to reduce volume and simplify handling.

**Ballistic separator:** A machine that sorts organic from inorganic matter for composting.

**Band Application:** In pesticides, the spreading of chemicals over, or next to, each row of plants in a field.

**Banking:** A system for recording qualified air emission reductions for later use in bubble, offset, or netting transactions. (See: emissions trading).

**Bar Screen:** In wastewater treatment, a device used to remove large solids.

**Barrier Coating(s):** A layer of a material that acts to obstruct or prevent passage of something through a surface that is to be protected, e.g. grout, caulk or various sealing compounds; sometimes used with polyurethane membranes to prevent corrosion or oxidation of metal surfaces, chemical impacts on various materials, or, for example, to prevent soil-gas-borne radon from moving from walls, cracks, or joints in a house.

**Basal Application:** In pesticides, the application of a chemical on plant stems or tree trunks just above the soil line.

**Batch:** Any waste which is generated less frequently than once a month.

**Benthic Organism (Benthos):** A form of aquatic plant or animal life that is found on or near the bottom of a stream, lake or ocean.

**Benthic Region:** The bottom layer of a body of water.

**Beryllium:** An airborne metal that can be hazardous to human health when inhaled. It is discharged by machine shops, ceramic and propellant plants, and foundries.

**Beta Particle:** An elementary particle emitted by radioactive decay, that may cause skin burns. It is halted by a thin sheet of paper.

**Bioassay:** Using living organisms to measure the effect of a substance, factor, or condition by comparing before-and-after data. Term is often used to mean cancer bioassays.

**Biochemical Oxygen Demand (BOD):** A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the BOD, the greater the degree of pollution.

**Biodegradable:** The ability to break down or decompose rapidly under natural conditions and processes.

**Biological Control:** In pest control, the use of animals and organisms that eat or otherwise kill or out-compete pests.

**Biological Magnification:** Refers to the process whereby certain substances such as pesticides or heavy metals move up the food chain, work their way into a river or lake and are eaten by aquatic organisms such as fish which in turn are eaten by large birds, animals or humans. The substances become concentrated in tissues or internal organs as they move up the chain. (See: bioaccumulative).

**Biological Oxidation:** The way bacteria and micro-organisms feed on and decompose complex organic materials. Used in self-purification of water bodies and in activated sludge wastewater treatment.

**Biological Treatment:** A treatment technology that uses bacteria to consume waste. This treatment breaks down organic materials.

**Biomass:** All of the living material in a given area; often refers to vegetation. Also called "biota".

**Biomonitoring:** 1. The use of living organisms to test the suitability of effluents for discharge into receiving waters and to test the quality of such waters down stream from the discharge. 2. Analysis of blood, urine, tissues, etc., to measure chemical exposure in humans.

**Biosphere:** The portion of earth and its atmosphere that can support life.

**Biostabilizer:** A machine that converts solid waste into compost by grinding and aeration.

**Biota:** (See: biomass).

**Biotechnology:** Techniques that use living organisms or parts of organisms to produce a variety of products (from medicines to industrial enzymes) to improve plants or animals or to develop micro-organisms for specific uses such as removing toxics from bodies of water, or as pesticides.

**Biotic Community:** A naturally occurring assemblage of plants and animals that live in the same environment and are mutually sustaining and interdependent.

**Black Lung:** A disease of the lungs caused by habitual inhalation of coal dust.

**Blackwater:** Water that contains animal, human or food wastes.

**Bloom:** A proliferation of algae and/or higher aquatic plants in a body of water; often related to pollution, es-

pecially when pollutants accelerate growth.

**Bod<sub>5</sub>:** The amount of dissolved oxygen consumed in five days by biological processes breaking down organic matter.

**Bog:** A type of wetland that accumulates appreciable peat deposits. Bogs depend primarily on precipitation for their water source, are usually acidic and rich in plant residue with a conspicuous mat of living green moss.

**Boom:** 1. A floating device used to contain oil on a body of water. 2. A piece of equipment used to apply pesticides from ground equipment such as a tractor or truck (See: sonic broom).

**Botanical Pesticide:** A pesticide whose active ingredient is a plant produced chemical such as nicotine or strychnine.

**Brackish Water:** A mixture of fresh and salt water.

**Broadcast Application:** In pesticides, the spreading of chemicals over an entire area.

**Bubble:** A system under which existing emissions sources can propose alternate means to comply with a set of emissions limitations; under the bubble concept, sources can control more than required at one emission point where control costs are relatively low in return for a comparable relaxation of controls at a second emission point where costs are higher.

**Bubble Policy:** (See emissions trading).

**Buffer Strips:** Strips of grass or other erosion-resisting vegetation between or below cultivated strips or fields.

**Buffer Zone Standard:** This specifies the distance between a source of environmental nuisance or hazard and areas inhabited or frequented by the general public.

**Burial Ground (Graveyard):** A disposal site for radioactive waste materials that uses earth or water as a shield.

**By-product:** Material, other than the principal product, that is generated as a consequence of an industrial process.

## C

**Cadmium (Cd):** A heavy metal element that accumulates in the environment.

**Cap:** A layer of clay, or other highly impermeable material installed over the top of a closed landfill to prevent

entry of rainwater and minimize production of leachate.

**Capture Efficiency:** The fraction of all organic vapours generated by a process that are directed to an abatement or recovery device.

**Carbon Adsorber:** An add-on control device which uses activated carbon to absorb volatile organic compounds from a gas stream. The VOCs are later recovered from the carbon. **Carbon Dioxide (CO<sub>2</sub>):** A colorless, non-poisonous gas, which results from fossil fuel combustion and is normally a part of the ambient air.

**Carbon Monoxide (CO):** A colorless, odorless, non-poisonous gas, produced by incomplete fossil fuel combustion.

**Carboxyhemoglobin:** Hemoglobin in which the iron is associated with carbon monoxide (CO). The affinity of hemoglobin for CO is about 300 times greater than for oxygen.

**Carcinogen:** Any substances that can cause or contribute to the production of cancer.

**Carcinogenic:** Cancer-producing.

**Carrying Capacity:** 1. In recreation management, the amount of use a recreation area can sustain without deterioration of its quality. 2. In wildlife management, the maximum number of animals an area can support during a given period of the year.

**Cask:** A thick-walled container (usually lead) used to transport radioactive material. Also called a coffin.

**Catalytic Converter:** An air pollution abatement device that removes pollutants from motor vehicle exhaust, either by oxidizing them into carbon dioxide and water or reducing them to nitrogen and oxygen.

**Catalytic Incinerator:** A control device with oxidizes volatile organic compounds (VOCs) by using a catalyst to promote the combustion process. Catalytic incinerators require lower temperatures than conventional thermal incinerators, with resultant fuel and cost savings.

**Categorical Pretreatment Standard:** A technology-based effluent limitation for an industrial facility which discharges into a municipal sewer system. Analogous in stringency to Best Availability Technology (BAT) for direct dischargers.

**Cathodic Protection:** A technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell.

**Caustic Soda:** Sodium hydroxide, a strong alkaline sub-

stance used as the cleaning agent in some detergents.

**CBOD<sub>5</sub>:** The amount of dissolved oxygen consumed in 5 days from the carbonaceous portion of biological processes breaking down in an effluent. The test methodology is the same as for BOD<sub>5</sub>, except that nitrogen demand is suppressed.

**Cells:** 1. In solid waste disposal, holes where waste is dumped, compacted, and covered with layers of dirt on a daily basis. 2. The smallest structural part of living matter capable of functioning as an independent unit.

**Centrifugal Collection:** A mechanical system using centrifugal force to remove aerosols from a gas stream or to de-water sludge.

**Cesium (Cs):** A silver-white, soft ductile element of the alkali metal group that is the most electropositive element known. Used especially in photoelectric cells.

**Channelization:** Straightening and deepening streams so water will move faster, a flood-reduction or marsh-drainage tactic that can interfere with waste assimilation capacity and disturb fish and wildlife habitats.

**Characteristic:** Any one of the four categories used in defining hazardous waste: ingitability, corrosivity, reactivity, and toxicity.

**Chemical Oxygen Demand (COD):** A measure of the oxygen required to oxidize all compounds in water, both organic and inorganic.

**Chemical Treatment:** Any one of a variety of technologies that use chemicals or a variety of chemical processes to treat waste.

**Chemosterilant:** A chemical that controls pests by preventing reproduction.

**Chilling Effect:** The lowering of the Earth's temperature because of increased particles in the air blocking the sun's rays. (See: greenhouse effect).

**Chlorinated Hydrocarbons:** These include a class of persistent, broad-spectrum insecticides, that linger in the environment and accumulate in the food chain. Among them are DDT, aldrin, dieldrin, heptachlor, chlordane, lindane, endrin, mirex, hexachloride, and toxaphene. Other examples include TCE, used as an industrial solvent.

**Chlorinated Solvent:** An organic solvent containing chlorine to drinking water, sewage, or industrial waste to disinfect or to oxidize undesirable compounds.

**Chlorinator:** A device that adds chlorine, in gas or liq-



uid form, to water or sewage to kill infectious bacteria.

**Chlorine-Contact Chamber:** That part of a water treatment plant where effluent is disinfected by chlorine.

**Chlorofluorocarbons (CFC's):** A family of inert, non-toxic, and easily liquified chemicals used in refrigeration, air conditioning, packaging, insulation, or as solvents and aerosol propellants. Because CFCs are not destroyed in the lower atmosphere they drift into the upper atmosphere where their chlorine components destroy ozone.

**Chlorosis:** Discoloration of normally green plant parts, that can be used by diseases, lack of nutrients, or various air pollutants.

**Chronic Toxicity:** The capacity of a substance to cause long-term poisonous human health effects. (See acute toxicity).

**Clarification:** Clearing action that occurs during waste water treatment when solids settle out. This is often aided by centrifugal action and chemically induced coagulation in waste water.

**Clarifier:** A tank in which solids are settled to the bottom and are subsequently removed as sludge.

**Cleanup:** Actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term "cleanup" is sometimes used interchangeably with the terms remedial action, removal action, response action, or corrective action.

**Cloning:** In biotechnology, obtaining a group of genetically identical cells from a single cell. This term has assumed a more general meaning that includes making copies of a gene.

**Closed-Loop Recycling:** Reclaiming or reusing waste water for non-potable purposes in an enclosed process.

**Closure:** The requirements placed upon all TSD facilities to ensure that all such facilities are closed in an acceptable manner (See also "post-closure").

**Coagulation:** A clumping of particles in waste water to settle out impurities. It is often induced by chemicals such as lime, alum and iron salts.

**Coastal Zone:** Lands and waters adjacent to the coast that exert an influence on the uses of the sea and its ecology, or, inversely, whose uses and ecology are affected by the sea.

**Coefficient of Haze (COH):** A measurement of visibility interference in the atmosphere.

**Coliform Organism:** Microorganisms found in the intestinal tract of humans and animals. Their presence in water indicates fecal pollution and potentially dangerous bacterial contamination by disease-causing microorganisms.

**Combined Sewers:** A sewer system that carries both sewage and storm-water runoff. Normally, its entire flow goes to a waste treatment plant, but during a heavy storm, the storm water volume may be so great as to cause overflows. When this happens untreated mixtures of storm water and sewage may flow into receiving waters. Storm-water runoff may also carry toxic chemicals from industrial areas or streets into the sewer system.

**Combustion:** Burning, or rapid oxidation, accompanied by release of energy in the form of heat and light. A basic cause of air pollution.

**Combustion Product:** Substance produced during the burning or oxidation of a material.

**Command Post:** Facility located at a safe distance upwind from an accident site, where the on-scene coordinator, responders, and technical representatives can make response decisions, deploy manpower and equipment, maintain liaison with news media, and handle communications.

**Comment Period:** Time provided for the public to review and comment on a proposed FEPA action or rulemaking after it is published.

**Communication:** mechanical shredding or pulverizing of waste. Used in both solid waste management and wastewater treatment.

**Comminuter:** A machine that shreds or pulverizes solids to make waste treatment easier.

**Community Relations:** The FEPA effort to establish two-way communication with the public to create understanding of FEPA programs and related actions, to assure public input into decisionmaking processes related to affected communities, and to make certain that the Agency is aware of and responsive to public concerns.

**Community Water System:** A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25-year-round residents.

**Compaction:** Reduction of the bulk of solid waste by rolling and tamping.

**Compliance Coating:** A coating whose volatile organic compound content does not exceed that allowed by regulation.

**Compliance Schedule:** A negotiated agreement between a pollution source and a government agency that specifies dates and procedures by which a source will reduce emissions and, thereby, comply with a regulation.

**Compost:** A mixture of garbage and degradable trash with soil in which certain bacteria in the soil break down the garbage and trash into organic fertilizer.

**Composting:** The natural biological decomposition of organic material in the presence of air to form a humus-like material controlled methods of composting include mechanical mixing and aerating, ventilating the materials by dropping them through a vertical series of aerated chambers, or placing the compost in the piles out in the open air and mixing it or turning it periodically.

**Confined Aquifer:** An aquifer in which ground water is confined under pressure which is significantly greater than atmospheric pressure.

**Conservation:** Avoiding waste of, and renewing when possible, human and natural resources. The protection, improvement, and use of natural resources according to principles that will assure their highest economic or social benefits.

**Constituent or Dangerous Waste Constituent:** A chemically distinct component of a dangerous waste stream or mixture.

**Contact Pesticide:** A chemical that kills pests when it touches them, rather than by being eaten (stomach poison). Also, soil that contains the minute skeletons of certain algae that scratches and dehydrates waxy-coated insects.

**Container:** Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

**Contaminant:** Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

**Contingency Plan:** A document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or other accident that releases toxic chemicals, hazardous wastes, or radioactive materials which threaten human health or the environment.

**Contract Labs:** laboratories under contract to FEPA, which analyze samples taken from wastes, soil, air, and water or carry out research projects.

**Contrails:** Long, narrow clouds caused when high-flying jet aircraft disturb the atmosphere.

**Contour Plowing:** Farming methods that breakground following the shape of the land in a way that discourages erosion.

**Conventional Pollutants:** Statutorily listed pollutants which are understood well by scientists. These may be in the form of organic waste, sediment, acid, bacteria and viruses, nutrients, oil and grease, or heat.

**Conventional Systems:** Systems that have been traditionally used to collect municipal waste water in gravity sewers and convey it to a central primary or secondary treatment plant prior to discharge to surface waters.

**Coolant:** A liquid or gas used to reduce the heat generated by power production in nuclear reactors, electric generators, various industrial and mechanical processes, and automobile engines.

**Cooling Tower:** A structure that helps remove heat from water used as a coolant; e.g., in electric power generating plants.

**Core:** The uranium-containing heart of a nuclear reactor, where energy is released.

**Corrosion:** The dissolving and wearing away of metal caused by a chemical reaction such as between water and the pipes that the water contracts, chemicals touching a metal surface, or contact between two metals.

**Corrosive:** A chemical agent that reacts with the surface of a material causing it to deteriorate or wear away.

**Cost-Effective Alternative:** An alternative control or corrective method identified after analysis as being the best available in terms of reliability, permanence, and economic considerations.

**Cover:** Vegetation or other material providing protection as ground cover.

**Cover Material:** Soil used to cover compacted solid waste in a sanitary landfill.

**Crawl Space:** In some types of houses, which are constructed so that the floor is raised slightly above the ground, an area beneath the floor which allows access to utilities and other services. This is in contrast to slab-on-grade or basement construction houses.

**Criteria:** Descriptive factors taken into account by FEPA in setting standards for various pollutants. These factors are used to determine limits on allowable concentration levels, and to limit the number of violations per year when issued by FEPA, the criteria provide guidance to the States on how to establish their standards.

**Cubic Feet Per Minute (CFM):** A measure of the volume of a substance flowing through air within a fixed period of time. With regard to indoor air, refers to the amount of air, in cubic feet, that is exchanged with indoor air in a minute's time, or an air exchange rate.

**Cultural Eutrophication:** Increasing rate at which water bodies "die" by pollution from human activities.

**Cumulative Working Level Months (CWLm):** The sum of lifetime exposure to radon working levels expressed in total working level months.

**Curie:** A quantitative measure of radioactivity equal to  $3.7 \times 10^{10}$  disintegrations per second.

**Cutie-Pie:** An instrument used to measure radiation levels.

**Cyclone Collector:** A device that uses centrifugal force to pull large particles from polluted air.

## D

**DDT:** The first chlorinated hydrocarbon insecticide (chemical name: Dichloro-phenyl-Trichloromethane). It has a half-life of 15 years and can collect in fatty tissues of certain animals. EPA banned registration and interstate sale of DDT for virtually all but emergency uses in the United States in 1972 because of its persistence in the environment and accumulation in the food chain.

**Dechlorination:** Removal of chlorine for a substance by chemically replacing it with hydrogen or hydroxide ions in order to detoxify the substances involved.

**Decibel (dB):** A unit of sound measurement. In general, a sound doubles in loudness for every increase of ten decibels.

**Decomposition:** The breakdown of matter by bacteria and fungi. It changes the chemical makeup and physical appearance of materials.

**Degradation:** The process by which a chemical is reduced to a else complex form.

**Delegated State:** A state (or other governmental entity) which has applied for, and received authority to administer, within its territory, its state regulatory program as the federal program required under Decrees 42 and 58 of 1988. The term does not connote any transfer of FEPA authority to a State.

**Defoliant:** A herbicide that removes leaves from trees and growing plants.

**Denitrification:** The anaerobic biological reduction of nitrate nitrogen to nitrogen gas.

**Depletion Curve:** In hydraulics, a graphical representation of water depletion from storage-stream channels, surface soil, and ground water. A depletion curve can be drawn for base flow, direct runoff, or total flow.

**Depressurization:** A condition that occurs when the air pressure inside a structure is lower than the air pressure outside. Depressurization can occur when household appliances that consume or exhaust house air, such as fireplaces or furnaces, are not supplied with enough makeup air. Radon-containing soil gas may be drawn into a house more rapidly under depressurized conditions.

**Dermal LD50:** The single dosage in milligrams per kilogram (mg/kg) body weight which, when dermally (skin) applied for 24 hours, within 14 days kills half of a group of ten rabbits each weighing between 2.0 and 3.0 kilograms.

**Dermal Toxicity:** The ability of a pesticide or toxic chemical to poison people or animals by contact with the skin. (See: contact pesticide).

**DES:** A synthetic estrogen, diethylstilbestrol, is used as a growth stimulant in food animals. Residues in meat are thought to be carcinogenic.

**Desalinization:** Removing salt from ocean or brackish water.

**Desiccant:** A chemical agent that absorbs moisture; some desiccant are capable of drying out plants or insects, causing death.

**Designated Bugs:** Popular term for microbes developed through biotechnology that can degrade specific toxic chemicals at their source in toxic waste dumps or in ground water.

**Designated facility:** The facility designated by the generator on the manifest to receive a dangerous waste shipment.

**Desulfurization:** Removal of sulfur from fossil fuels to reduce pollution.

**Designated Uses:** Those water uses identified in state water quality standards which must be achieved and maintained. uses can include cold water fisheries, public water supply, agriculture, etc.

**Detergent:** Synthetic washing agent that helps to remove dirt and oil. Some contain compounds which kill useful bacteria and encourage algae growth when they

are in wastewater that reaches receiving waters.

**Developer:** A person, government unit, or company that proposes to build a hazardous waste treatment, storage, or disposal facility.

**Diatomaceous Earth (Diatomite):** A chalk-like material (fossilized diatoms) used to filter out solid waste in waste-water treatment plants, also used as an active ingredient in some powdered pesticides.

**Diazinon:** An insecticide, not to be used on open areas such as sod farms and golf courses because it posed a danger to migratory birds who gathered on them in large numbers. It could be used in agriculture, or on lawns of homes and commercial establishments.

**Dicofol:** A pesticide used on citrus fruits.

**Differentiation:** The process by which single cells grow into particular forms of specialized tissue, e.g., root, stem, leaf.

**Diffused Air:** A type of aeration that forces oxygen into sewage by pumping air through perforated pipes inside a holding tank and bubbling it through the sewage.

**Digester:** In wastewater treatment, a closed tank; in solid waste conversion, a unit in which bacterial action is induced and accelerated in order to break down organic matter and establish the proper carbon to nitrogen ratio.

**Digestion:** The biochemical decomposition of organic matter, resulting in partial gasification, liquefaction, and mineralization of pollutants.

**Dike:** A low wall that can act as a barrier to prevent a spill from spreading.

**Dilution Ratio:** The relationship between the volume of water in a stream and the volume of incoming water. It affects the ability of the stream to assimilate waste.

**Dinocap:** A fungicide used primarily by apple growers to control summer diseases. Laboratory tests found it caused birth defects in rabbits.

**Dinoseb:** A herbicide that is also used as a fungicide and insecticide. It poses the risk of birth defects and sterility.

**Dioxin:** Any of a family of compounds known chemically as dibenzo-p-dioxins. Concern about them arises from their potential toxicity and contaminants in commercial products. Tests on laboratory animals indicate that it is one of the more toxic man-made chemicals known.

**Direct Discharger:** A municipal or industrial facility which introduces pollution through a defined conveyance or system; a point source.

**Discharge or Dangerous Waste Discharge:** The accidental or intentional release of hazardous substances, dangerous waste or waste constituent may enter or be emitted into the environment. Release includes, but is not limited to, the actions of: Spilling, leaking, pumping, pouring, emitting, dumping, emptying, depositing, placing, or injecting.

**Disinfectant:** A chemical or physical process that kills pathogenic organisms in water. Chlorine is often used to disinfect sewage treatment effluent, water supplies, wells, and swimming pools.

**Dispersant:** A chemical agent used to break up concentrations of organic material such as spilled oil.

**Disposal:** Final placement or destruction of toxic radioactive, or other wastes, surplus or banned pesticides or other chemicals, polluted soils, and drums containing hazardous materials from removal actions or accidental releases. Disposal may be accomplished through use of approved secure landfills, surface impoundments, land farming, deep well injection, ocean dumping; or incineration.

**Dissolved Oxygen (DO):** The oxygen freely available in water. Dissolved oxygen is vital to fish and other aquatic life and for the prevention of odours. Traditionally the level of dissolved oxygen has been accepted as the single most important indicator of a water body's ability to support desirable aquatic life. Secondary and advanced waste treatment are generally designed to protect DO in waste-receiving waters.

**Dissolved Solids:** Disintegrated organic and inorganic material contained in water. Excessive amounts make water unfit to drink or use in industrial processes.

**Distillation:** The act of purifying liquids through boiling, so that the steam condenses to a pure liquid and the pollutants remain in a concentrated residue.

**DNA:** Deoxyribonucleic acid, the molecule in which the genetic information for most living cells is encoded. Viruses, too, can contain RNA.

**DNA Hybridization:** Use of a segment of DNA, called a DNA probe, to identify its complementary DNA; used to detect specific genes. This process takes advantage of the ability of a single strand of DNA to combine with a complimentary strand.

**DOE:** Department of Environment (United Kingdom).

**Dose:** In radiology, the quantity of energy or radiation absorbed.

**Dosimeter:** An instrument that measures exposure to radiation.

**Drain:** An open or closed conduit which conduct stormwater, run-offs, domestic waste waters etc.

**Dredging:** Removal of mud from the bottom of water bodies using a scooping machine. This disturbs the ecosystem and causes silting that can kill aquatic life. Dredging of contaminated muds can expose aquatic life to heavy metals and other toxics.

**Dump:** A site used to dispose of solid wastes without environmental controls.

**Dust:** Particles light enough to be suspended in air.

**Dustfall Jar:** An open container used to collect large particles from the air for measurement and analysis.

**DW:** Dangerous waste.

**Dystrophic Lakes:** Shallow bodies of water that contain much humus and/or organic matter, that contain many plants but few fish and are highly acidic.

## E

**Ecological Impact:** The effect that a man-made or natural activity has on living organisms and their non-living (abiotic) environment.

**Ecology:** The relationship of living things to one another and their environment, or the study of such relationships.

**Economic Poisons:** Chemicals used to control pest and to defoliate cash crops such as cotton.

**Ecosphere:** The "bio-bubble" that contains life on earth, in surface waters, and in the air. (See: biosphere).

**Ecosystem:** The interacting system of a biological community and its non-living environmental surroundings.

**EDW:** Extremely Dangerous Waste.

**Effluent:** Waste water-treated or untreated - that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

**Effluent Limitation:** Restrictions established by a State

of FEPA on quantities, rates and concentrations in waste water discharges.

**EHW:** Extremely Hazardous Waste.

**Electrodialysis:** A process that uses electrical current applied to permeable membranes to remove minerals from water. Often used to desalinate salty or brackish water.

**Electrostatic Precipitator (ESP):** An air pollution control device that removes particles from a gas stream (smoke) after combustion occurs. The ESP imparts an electrical charge to the particles, causing them to adhere to metal plates inside the precipitator. Rapping on the plates causes the particles to fall into a hopper for disposal.

**Emergency (Chemicals):** A situation created by an accidental release or spill of hazardous chemicals which poses a threat to the safety of workers, residents, the environment, or property.

**Emergency Episode:** (See: air pollution episode).

**Emission:** Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities, from residential chimneys; and from motor vehicle, locomotive, or aircraft exhausts.

**Emission Factor:** The relationship between the amount of pollution produced and the amount of raw material processed. For example, an emission factor for a blast furnace making iron would be the number of kilograms of particulates per ton of raw materials.

**Emission Standard:** The maximum amount of air polluting discharge legally allowed from a single source, mobile or stationary.

**Endangered Species:** Animals, birds, fish, plants, or other living organisms threatened with extinction by man-made or natural changes in their environment.

**Endangerment Assessment:** A study conducted to determine the nature and extent of contamination at a site and the risk posed to public health or the environment. FEPA or the state conducts the study.

**Enforcement:** FEPA: actions to obtain compliance with environmental laws, rules, regulations, or agreements and/or obtain penalties or criminal sanctions for violations.

**Enrichment:** The addition of nutrients (e.g., nitrogen, phosphorus, carbon compounds) from sewage effluent or agricultural runoff to surface water. This process greatly increases the growth potential for algae and aquatic plants.

**Environment:** The sum of all external conditions affecting the life, development and survival of an organism.

**Environmental Assessment:** A written environmental analysis to determine whether a development would significantly affect the environment and thus require preparation of a more detailed environmental impact statement.

**Environmental Audit:** 1. An independent assessment of the current status of a party's compliance with applicable environmental requirements. 2. An independent evaluation of a party's environmental compliance policies, practices, and controls.

**Environmental Impact Statement:** A document required of development agencies by the FEPA for major projects or legislative proposals significantly affecting the environment. A tool for decision making, it describes the positive and negative effects of the undertaking and lists alternative actions.

**Environmental Response Team:** FEPA experts located in FEPA's Zonal Offices all over Nigeria, who can provide around-the-clock technical assistance to FEPA State offices and State Governments during all types of emergencies involving hazardous wastes sites and spills of hazardous substances.

**Epidemic:** Widespread outbreak of a disease, or a large number of cases of a disease in a single community or relatively small area.

**Epidemiology:** The study of diseases as they affect population, including the distribution of disease, or other health-related states and events in human populations, the factors (e.g. age, sex, occupation, economic status) that influence this distribution, and the application of this study to control health problems.

**Episode (Pollution):** An air pollution incident in a given area caused by a concentration of atmospheric pollution reacting with meteorological conditions that may result in a significant increase in illnesses or deaths. Although most commonly used in relation to air pollution, the term may also be used in connection with other kinds of environmental events such as a massive water pollution situation.

**Equivalent Method:** Any method of sampling and analyzing for air pollution which has been demonstrated to the FEPA Director/Chief Executive's satisfaction to be, under specific conditions, an acceptable alternative to the normally used reference methods.

**Equilibrium:** In relation to radiation, the state at which the radioactivity of consecutive elements within a radioactive series is neither increasing nor decreasing.

**Erosion:** The wearing away of land surface by wind or water. Erosion occurs naturally from weather or run-off but can be intensified by land-clearing practices related to farming, residential or industrial development, road building, or timber-cutting.

**Estuary:** Regions of interaction between rivers and nearshore ocean waters, where tidal action and river flow create a mixing of fresh and salt water. These areas may include bays, mouths of rivers, salt marshes, and lagoons. These brackish water ecosystems shelter and feed marine life, birds, and wildlife (See: wetlands).

**Ethylene Dibromide (EDB):** A chemical used as an agricultural fumigant and in certain industrial processes. Extremely toxic and found to be a carcinogen in laboratory animals.

**Eutrophication:** The slow aging process during which a lake, estuary, or bay evolves into a bog or marsh and eventually disappears. During the later stages of eutrophication the water body is choked by abundant plant life as the result of increased amounts of nutritive compounds such as nitrogen and phosphorus. Human activities can accelerate the process.

**Eutrophic Lakes:** Shallow, murky bodies of water that have excessive concentrations of plant nutrients causing excessive algal production. (See: dystrophic lakes).

**Evaporation Ponds:** Areas where sewage sludge is dumped and allowed to dry out.

**Evapotranspiration:** The loss of water from the soil both by evaporation and by transpiration from the plants growing in the soil.

**Exceedance:** Violation of environmental protection standards by exceeding allowable limits or concentration levels.

**Exclusionary:** Any form of zoning ordinance that tends to exclude specific classes of persons or businesses from a particular district or area.

**Exempt Solvent:** Specific organic compounds that are not subject to requirements of regulation because they have been deemed by FEPA to be of negligible photochemical reactivity.

**Exempted Aquifer:** Underground bodies of water defined in the Underground Injection Control programme as aquifers that are sources of drinking water (although they are not being used as such) and that are exempted from regulations barring underground injection activities.

**Exposure:** The amount of radiation or pollutant present in an environment which represents a potential health threat to the living organisms in that environment.

**Extremely Hazardous Substances:** Any of the chemicals identified by FEPA on the basis of toxicity, and listed under FAC 000-000-9903. The list is subject to revision.

## F

**Fabric Filter:** A cloth device that catches dust particles from industrial emissions.

**Facility:** All contiguous land, and structures, other appurtenances, and improvements on the land used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of dangerous waste. Unless otherwise specified, the terms "facility", "treatment", "storage", "disposal facility", "TSD facility", "dangerous waste facility" or "waste management facility", shall be used interchangeably.

**Feasibility Study:** 1. Analysis of the practicability of a proposal; e.g. a description and analysis of the potential clean-up alternatives for a site or alternatives for a site. The feasibility study usually recommends selection of a cost-effective alternative. It usually starts as soon as the remedial estimation is underway; together, they are commonly referred to as the "R/FS". The term can apply to a variety of proposed corrective or regulatory actions. 2. In research, a small-scale investigation of a problem to ascertain whether or not a proposed research approach is likely to provide useful data.

**Fecal Coliform Bacteria:** Bacteria found in the intestinal tracts of mammals. Their presence in water or sludge is an indicator of pollution and possible contamination by pathogens.

**Feedlot:** A relatively small, confined area for the controlled feeding of animals that tends to concentrate large amounts of animal wastes that cannot be absorbed by the solid and, hence, may be carried to nearby streams or lakes by rainfall runoff.

**Fen:** A type of wetland that accumulates peat deposits. Fens are less acidic than bogs, deriving most of their water from groundwater rich in calcium and magnesium. (See: wetlands).

**FEPA:** Federal Environmental Protection Agency established by Decree No. 58 of November, 1988.

**Fermentation:** Chemical reactions accompanied by living microbes that are supplied with nutrients and other critical conditions such as heat, pressure, and light that are specific to the reaction at hand.

**Fertilizer:** Materials such as nitrogen and phosphorus that provide nutrients for plants. Commercially sold fertilizers may contain other chemicals or may be in the form of processed sewage sludge.

**Filling:** Depositing dirt and mud or other materials into aquatic areas to create more dry land, usually for agricultural or commercial development purposes. Such activities often damage the ecology of the area.

**Filtration:** A treatment process, under the control of qualified operators, for removing solid (particulate) matter from water by passing the water through porous media such as sand or a manmade filter. The process is often used to remove particles that contain pathogenic organisms.

**Final Closure:** The closure of all dangerous waste management units at a facility in accordance with all applicable closure requirements so that dangerous waste management activities are no longer conducted at the facility.

**Finding of No Significant Impact (FNSI):** A document prepared by FEPA that presents the reasons impact: why a proposed action would not have a significant impact on the environment and thus would not require preparation of an Environmental Impact Statement. An FNSI is based on the results of an environmental assessment.

**First Draw:** The water that immediately comes out when a tap is first opened. This water is likely to have the highest level of lead contamination from plumbing materials.

**Floc:** A clump of solids formed in sewage by biological or chemical action.

**Flocculation:** The process by which clumps of solids in water or sewage are made to increase in size by biological or chemical action so that they can be separated from the water.

**Floor Sweep:** A vapour collection designed to capture vapours which are heavier than air and which collect along the floor.

**Flowmeter:** A gauge that shows the speed of wastewater moving through a treatment plant. Also used to measure the speed of liquids moving through various industrial processes.

**Flue Gas:** The air coming out of a chimney after combustion in the burner it is venting. It can include nitrogen oxides, carbon oxides, water vapour, sulfur oxides, particles and many chemical pollutants.

**Flue Gas Desulfurization:** A technology which uses a sorbent, usually lime or limestone, to remove sulfur dioxide from the gases produced by burning fossil fuels. Flue gas desulfurization is currently the state-of-the-art technology in use by major SO<sub>2</sub> emitter, e.g., power plants.

**Fluorides:** Gaseous, solid, or dissolved compounds containing fluorine that result from industrial processes. Excessive amounts in food can lead to fluorosis.

**Fluorocarbon (FCs):** Any of a number of organic compounds analogous to hydrocarbons in which one or more hydrogen atoms are replaced by fluorine. Once used as a propellant in aerosols, they are now primarily used in coolants and some industrial processes. FCs containing chlorine are called chlorofluorocarbons (CFCs). They are believed to be modifying the ozone layer in the stratosphere, thereby allowing more harmful solar radiation to reach the Earth's surface.

**Fluorosis:** An abnormal condition caused by excessive intake of fluorine, characterized chiefly by mottling of the teeth.

**Flume:** A natural or man-made channel that diverts water.

**Flush:** 1. To open a cold-water tap to clear out all the water which may have been sitting for a long time in the pipes. In new homes, to flush a system means to send large volumes of water gushing through the unused pipes to remove loose particles or solder and flux. 2. To force large amounts of water through liquid to clean out piping or tubing, storage or process tanks. **Fly Ash:** Non-combustible residual particles from the combustion process carried by flue gas.

**Fogging:** Applying a pesticide by rapidly heating the liquid chemical so that it forms very fine droplets that resemble smoke or fog. It may be used to destroy mosquitoes, black flies and similar pests.

**Food Chain:** A sequence of organisms, each of which uses the next, lower member of the sequence as a food source.

**Food Chain Crops:** Tobacco, crops grown for human consumption, and crops grown to feed animals whose products are consumed by humans.

**Formaldehyde:** A colourless, pungent, irritating gas CH<sub>2</sub>O, used chiefly as a disinfectant and preservative and in synthesizing other compounds and resins.

**Formulation:** The substances or mixture of substances which is comprised of all active and inert ingredients in a pesticide.

**Fresh Water:** Water that generally contains less than 1,000 milligrams per litre of dissolved solids.

**Fuel Standard:** This specifies the levels of sulphur lead and other toxic substances in a fuel. The levels of these toxic substances in the fuel will determine their respective levels during combustion.

**Fugitive Emissions:** Emissions not caught by a capture system.

**Fume:** Tiny particles trapped in vapour in a gas stream.

**Fumigant:** A pesticide that is vapourized to kill pests. Used in buildings and greenhouses.

**Fungi:** (Singular, Fungus) Molds, mildews, yeasts, mushrooms, and puffballs, a group of organisms that lack chlorophyll( i.e., are not photosynthetic) and which are usually non-mobile, filamentous, and multicellular. Some grow in the ground, others attach themselves to decaying trees and other plants, getting their nutrition from decomposing organic matter. Some cause disease, others stabilize sewage and break down solid wastes in composting.

**Fungicide:** Pesticides which are used to control, prevent, or destroy fungi.

## G

**Gamma Radiation:** Gamma rays are true rays of energy in contrast to alpha and beta radiation. The properties are similar to x-rays and other electromagnetic waves. They are the most penetrating waves of radiant nuclear energy but can be blocked by dense materials such as lead.

**Gasification:** Conversion of solid material such as coal into a gas for use as a fuel.

**Geiger Counter:** An electrical device that detects the presence of certain types of radioactivity.

**Gene:** A length of DNA that directs the synthesis of a protein.

**General Permit:** A permit applicable to a class or category of dischargers.

**Generator:** A facility or mobile source that emits pollutants into the air or releases hazardous wastes into water or soil.

**Genetic Engineering:** A process of inserting new ge-



netic information into existing cells in order to modify any organism for the purpose of changing one of its characteristics.

**Genetic Properties:** Those substances which cause or significantly contribute to nitrogen teratogenic or carcinogenic effects in man or wildlife.

**Germicide:** Any compound that kills disease-causing micro-organisms.

**Granular Activated Carbon Treatment:** A filtering system often used in small water systems and individual homes to remove organics. GAC can be highly effective in removing elevating levels of radon from water.

**Gray Water:** The term given to domestic wastewater composed of washwater from sinks, kitchen sinks, bathroom sinks and tubs, and laundry tubs.

**Greenhouse Effect:** The warming of the Earth's atmosphere caused by a build-up of carbon dioxide or other trace gases; it is believed by many scientists that this build-up allows light from the sun's rays to heat the Earth but prevents a counterbalancing loss of heat.

**Grinder Pump:** A mechanical device which shreds solids and raises the fluid to a higher elevation through pressure sewers.

**Gross Alpha Particle Activity:** Total activity due to emission of alpha particles. Used as the screening measurement for radioactivity generally due to naturally-occurring radionuclides. Activity is commonly measured in picocuries.

**Gross Beta Particle Activity:** Total activity due to emission of beta particles used as the screening measurement of radioactivity from man-made radionuclides since the decay products of fission are beta particle and gamma ray emitters. Activity is commonly measured in picocuries.

**Ground Cover:** Plants grown to keep soil from eroding.

**Grounding water:** The supply of fresh water found beneath the Earth's surface, usually in aquifers, which is often used for supplying wells and springs. Because ground water is a major source of drinking water there is growing concern over areas where leaching agricultural or industrial pollutants or substances from leaking underground storage tanks are contaminating ground water.

## H

**Habitat:** The place where a population (e.g., human,

animal, plant, microorganism) lives and its surroundings, both living and non-living.

**Half-Life:** 1. The time required for a pollutant to lose half its effect on the environment, for example, the half-life of DDT in the environment is 15 years, of radium, 1,580 years. 2. The time required for half of the atoms of a radioactive element to undergo decay. 3. The time required for the elimination of one half a total dose from the body.

**Halogen:** Any of a group of 5 chemically-related non-metallic elements that includes bromine, fluorine, chlorine, iodine, and astatine.

**Halogenated hydrocarbons (HH):** Organic compounds which, as part of their composition, include one or more atoms of fluorine, chlorine, bromine, iodine, or astatine. The requirements of this document apply to only those halogenated hydrocarbons which can be obtained using the testing method described in subsection 1.8.1, and which are persistent dangerous wastes.

**Halon:** bromine-containing compounds with long atmospheric lifetimes whose breakdown in the stratosphere cause depletion of ozone. Halons are used in fire-fighting.

**Hammermill:** A high-speed machine that hammers and cutters to crush, grind, chip or shred solid wastes.

**Hard Water:** Alkaline water containing dissolved salts that interfere with some industrial processes and prevent soap from lathering.

**Hazardous Air Pollutants:** Air pollutants which are not covered by ambient air quality standards but which may reasonably be expected to cause or contribute to irreversible illness or death. Such pollutants include asbestos, beryllium, mercury, benzene, coke oven emissions, radionuclides, and vinyl chloride.

**Hazardous Ranking System:** The principle screening tool used by FEPA to evaluate risks to public health and the environment associated with abandoned or uncontrolled hazardous waste sites.

**Hazardous Substance:** 1. Any material that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive. 2. Any substance designated by FEPA to be reported if a designated quantity of the substance is spilled in the waters of Nigeria or if otherwise emitted to the environment.

**Hazardous Waste:** By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at

least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special FEPA lists.

**Hazards Analysis:** The procedures involved in (1) identifying potential sources of release of hazardous materials from fixed facilities or transportation accidents; (2) determining the vulnerability of a geographical area to a release of hazardous materials; and (3) comparing hazards to determine which present greater or lesser risks to a community.

**Hazards Identification:** Providing information on which facilities have extremely hazardous substances, what those chemicals are, and how much there is at each facility. The process also provides information on how the chemicals are stored and whether they are used at high temperatures.

**Heat Island Effects:** A "dome" of elevated temperatures over an urban area caused by structural and pavement heat fluxes, and pollutant emissions from the area below the dome.

**Heavy Metals:** Metallic elements with high atomic weights, e.g. mercury, chromium, cadmium, arsenic, and lead. They can damage living things at low concentration and tend to accumulate in the food chain.

**Heptachlor:** An insecticide allowed only for use in seed treatment.

**Herbicide:** A chemical pesticide designed to control or destroy plants, weeds, or grasses.

**Herbivore:** An animal that feeds on plants.

**Heterotrophic Organisms:** Consumers such as humans and animals and decomposers—chiefly bacteria and fungi—that are dependent on organic matter for food.

**High-Density Polyethylene:** A material that produces toxic fumes when burned. Used to make plastic bottles and other products.

**High-Level Radioactive Waste (HLW):** Waste generated in the fuel of a nuclear reactor, found at nuclear reactors or nuclear fuel reprocessing plants. It is a serious threat to anyone who comes near the wastes without shielding (See : Low-Level Radioactive Waste).

**Holding Pond:** A pond or reservoir, usually made of earth, built to store polluted runoff.

**Hood Capture Efficiency:** The emissions from a process which are captured by hood and directed into the control device, expressed as a per cent of all emissions.

**Host:** 1. In genetics, the organism, typically a bacte-

rium, into which a gene from another organism is transplanted. 2. In medicine, an animal infected by or parasitized by another organism.

**Humus:** Decomposed organic material.

**Hybrid:** A cell organism resulting from a cross between two unlike plant or animal cells or organisms.

**Hybridoma:** A hybrid cell that produces monoclonal antibodies in large quantities.

**Hydrocarbons (HC):** Chemical compounds that consist entirely of carbon and hydrogen.

**Hydrogen Sulphide (HS):** Gas emitted during organic decomposition. Also a by product of oil refining and burning. It smells like rotten eggs and, in heavy concentration, can cause illness.

**Hydrogeology:** The geology of ground water, with particular emphasis on the chemistry and movement of water.

**Hydrology:** The science dealing with the properties, distribution, and circulation of water.

## I

**Ignitable:** Capable of burning or causing a fire.

**Impoundment:** A body of water or sludge confined by a dam, dike, floodgate, or other barrier.

**Immediately Dangerous to Life and Health (IDLH):** The maximum level to which a healthy individual can be exposed to a chemical for 30 minutes and escape without suffering irreversible health effects or impairing symptoms. used as "level of concern". (See: level of concern).

**In vitro:** 1. "In glass", a test-tube culture. 2. Any laboratory test using living cells taken from an organism.

**In vivo:** In the living body of a plant or animal. In vivo tests are those laboratory experiments carried out on whole animals or human volunteers.

**Incineration:** Burning of certain types of solid, liquid or gaseous materials. 2. A treatment technology involving destruction of waste by controlled burning at high temperatures, e.g., burning sludge to remove the water and reduce the remaining residues to a safe, non-burnable ash which can be disposed of safely on land, in some waters or in underground locations.

**Incineration at Sea:** Disposal of waste by burning at sea on specially-designed incinerator ships.

**Incinerator:** A furnace for burning wastes under controlled conditions.

**Incompatible waste:** A dangerous waste which is unsuitable for placement in a particular device or facility because it may corrode or decay the containment materials, or is unsuitable for mixing with another waste or material because the mixture might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, fumes, mists, or gases, or flammable fumes.

**Indicator:** In biology, an organism, species, or community whose characteristics show the presence of specific environmental conditions.

**Indirect Discharge:** Introduction of pollutants from a non-domestic source into a publicly owned waste treatment system. Indirect discharges can be commercial or industrial facilities whose wastes go into the local sewers.

**Indoor Air:** The breathing air inside a habitable structure or conveyance.

**Indoor Air Pollution:** Chemical, physical, or biological contaminants in indoor air.

**Indoor Climate:** Temperature, humidity, lighting and noise levels in a habitable structure or conveyance. Indoor climate can affect indoor air pollution.

**Inert Ingredient:** Pesticide components such as solvents, carriers, and surfactants that are not active against target pests. Not all inert ingredients are innocuous.

**Inert Separator:** A device that uses centrifugal force to separate waste particles.

**Infiltration:** 1. The penetration of water through the ground surface into sub-surface solid or the penetration of water from the soil into sewer or other pipes through defective joints, connections, or manhole walls, 2. A land application technique where large volumes of waste water are applied to land, allowed to penetrate the surface and percolate through the underlying soil. (See percolation).

**Inflow:** Entry of extraneous rain water into a sewer system from sources other than infiltration, such as basement drains, manholes, storm drains, and street washing.

**Influent:** Water, wastewater, or other liquid flowing into a reservoir, basin, or treatment plant.

**Inhalation LC<sub>50</sub>:** A concentration in milligrams of substance per litre of air which, when administered to the

respiratory tract for 4 hours, kills within 14 days half of a group of ten rats each weighing between 200 and 300 grams.

**Injection Well:** A well into which fluids are injected for purposes such as waste disposal, improving the recovery of crude oil, or solution mining.

**Injection Zone:** A geological formation, group of formations, or part of a formation receiving fluids through a well.

**Island Water:** Water not subject to tidal influence.

**Inner Liner:** A continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the wastes or reagents used to treat the waste.

**Inoculum:** 1. Bacterium placed in compost to start biological action. 2. A medium containing organisms which is introduced into cultures or living organisms.

**Inorganic Chemicals:** Chemical substances of mineral origin, not of basically carbon structure.

**Insecticide:** A pesticide compound specifically used to kill or control the growth of insects.

**Inspection and Maintenance (I/M):** 1. Activities to assure proper emissions-related operation of mobile sources of air pollutants, particularly automobile emissions controls. 2. Also applies to wastewater treatment plants and other anti-pollution facilities and processes.

**Instream Use:** Water use taking place within a stream channel, e.g., hydro-electric power generation, navigation, water-quality improvement, fish propagation, recreation.

**Integrated Pest Management (IPM):** A mixture of pesticide and non-pesticide methods to control pests.

**Interceptor Sewers:** Large sewer lines that, in a combined system, control the flow of the sewage to the treatment plant. In a storm, they allow some of the sewage to flow directly into a receiving stream, thus preventing an overload by a sudden surge of water into the sewers. They are also used in separate systems to collect the flows from main and trunk sewers and carry them to treatment points.

**Interstate Waters:** Waters that flow across or form part of state or international boundaries.

**Interstitial Monitoring:** The continuous surveillance of the space between the walls of an underground storage tank.

**Inversion:** An atmospheric condition caused by a layer of warm air preventing the rise of cooling air trapped beneath it. This prevents the rise of pollutants that might otherwise be dispersed and can cause an air pollution episode.

**Ion:** An electrically charged atom or group of atoms which can be drawn from waste water during the electro-dialysis process.

**Ion Exchange Treatment:** A common water softening method often found on a large scale at water purification plants that remove some organics and radium by adding calcium oxide or calcium hydroxide to increase the pH to a level where the metals will precipitate out.

**Ionization Chamber:** A device that measures the intensity of ionizing radiation.

**Ionizing Radiation:** Radiation that can remove electrons from atoms, i.e., alpha, beta, and gamma radiation.

**Irradiated Food:** Food that has been subject to brief radioactivity, usually by gamma rays, to kill insects, bacteria, and mold, and preserve it without refrigeration or freezing.

**Irradiation:** Exposure to radiation of wavelengths shorter than those of visible light (gamma, x-ray, or ultraviolet), for medical purposes, the destruction of bacteria in milk or other food stuffs, or for inducing polymerization of monomers or vulcanization of rubber.

**Irrigation:** Technique for applying water or wastewater to land areas to supply the water and nutrient needs of plants.

**Isotope:** A variation of an element that has the same atomic number but a different weight

because of its neutrons, various isotopes of the same element may have different radioactive behaviour.

## K

**Kinetic Rate Coefficient:** A number that describes the rate at which a water constituent such as a biochemical oxygen demand or dissolved oxygen increases or decreases.

## L

**Lagoon:** (1) A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater, also used for storage of wastewaters or spent nuclear fuel rods (2) Shallow body of water, often separated from the sea by

coral reefs or sandbars.

**Land Application:** Discharge of wastewater onto the ground for treatment or reuse. (See: irrigation).

**Land Farming (of waste):** A disposal process in which hazardous waste deposited on or in the soil is naturally degraded by microbes.

**Landfills:** 1. Sanitary landfills are land disposal sites for non-hazardous solid wastes at which the waste is spread in layers, compacted to the smallest practical volume, and cover material applied at the end of each operating day. 2. secure chemical landfills are disposal sites for hazardous wastes. They are selected and designed to minimize the chance of release of hazardous substances into the environment.

**Land treatment:** The practice of allowing dangerous waste onto or incorporating dangerous waste into the soil surface so that it will degrade or decompose. If the waste will remain after the facility is closed, this practice is disposal.

**Lateral Sewers:** Pipes that run under city streets and receive the sewage from home and businesses.

**LC 50/Lethal Concentration:** Median level concentration, a standard measure of toxicity. It tells how much of a substance is needed to kill half of a group of experimental organisms at a specific time of observation. (See: LD 50).

**Leachate:** A liquid that results from water collecting contaminants as it trickles through wastes, agricultural pesticides or fertilizers. Leaching may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil.

**Leachate Collection System:** A system that gathers leachate and pumps it to the surface for treatment.

**Leaching:** The process by which soluble constituents are dissolved and carried down through the soil by a percolating fluid. (See: Leachate).

**Lead (Pb):** A heavy metal that is hazardous to health if breathed or swallowed. Its use in gasoline, paints, and plumbing compounds has been sharply restricted or eliminated by federal laws and regulations. (See: heavy metals).

**Leaded Gasoline:** Gasoline to which lead has been added to raise the octane level.

**LD50/Lethal Dose:** The dose of a toxicant that will kill 50 per cent of the test organisms within a designated

period of time. The lower the LD 50, the more toxic the compound.

**LDO:** The highest concentration of a toxic substance at which none of the organisms die.

**LD L0:** The lowest concentration and dosage of a toxic substance which kills test organisms.

**Level of Concern (LOC):** The concentration in air of an extremely hazardous substance above which there may be serious immediate health effects to anyone exposed to it for short periods of time.

**Lift:** In a sanitary landfill, a compacted layer of solid waste and the top layer of cover material. **Lifting Station:** (See: Pumping station).

**Limestone Scrubbing:** Process in which sulfur gases moving towards a smokestack are passed through a limestone and water solution to remove sulfur before it reaches the atmosphere.

**Limiting Factor:** A condition, whose absence, or excessive concentration, is incompatible with the needs or tolerance of a species or population and which may have a negative influence on their ability to grow or even survive.

**Limnology:** The study of the physical, chemical, meteorological, and biological aspects of fresh water.

**Liner:** 1. A relatively impermeable barrier designed to prevent leachate from leaking from a landfill. Liner materials include plastic and dense clay. 2. An insert or sleeve for sewer pipes to prevent leakage or infiltration.

**Lipid Solubility:** The maximum concentration of a chemical that will dissolve in fatty substances; lipid soluble substances are insoluble in water. If a substance is lipid soluble it will very selectively disperse through the environment via living tissue.

**Liquefaction:** Changing a solid into a liquid.

**Lower Explosive Limit (LEL):** The concentration of a compound in air below which a flame will not propagate if the mixture is ignited.

**Lowest Achievable Emission Rate:** This is the rate of emissions which reflects (a) the most stringent emission limitation which is contained in the implementation plan of any state for such source unless the owner or operator of the proposed source demonstrates such limitations are not achievable; or (b) the most stringent emissions limitation achieved in practice, whichever is more stringent. Application of this term does not permit a proposed new or modified source to emit pollutants in excess of existing new source standards.

**Low-Level Radioactive Waste (LLRW):** Wastes less hazardous than most of those generated by a nuclear reactor. Usually generated by hospitals research laboratories, and certain industries. The Energy Commission and FEPA share responsibilities for managing them. (See: high-level radioactive wastes).

## M

**Marine Sanitation Devices:** Any equipment installed on board a vessel to receive, retain, treat, or discharge sewage and any process to treat such sewage.

**Major Modification:** This term is used to define modifications with respect to Prevention of Significant Deterioration and New Source Review, and refers to modifications to major stationary sources of emissions and provides significant pollutant increase levels below which a modification is not considered major.

**Major Stationary Sources:** Term used to determine to applicability of Prevention of Significant Deterioration and new source regulations. In a non-attainment area, any stationary pollutant source that has a potential to emit more than 100 tons per year is considered a major stationary source. In PSD areas the cutoff level may be either 100 or 250 tons, depending upon the type of source.

**Manufacturers Formulation:** A list of substances or component parts as described by the maker of a coating, pesticide or other product containing chemicals or other substances.

**Marsh:** A type of a wetland that does not accumulate appreciable peat deposits and is dominated by herbaceous vegetation. Marshes may be either fresh or saltwater and tidal or non-tidal. (See: wetlands).

**Matabolite:** Any substance produced in or by biological processes and derived from a pesticide.

**Maximum Contaminant Level:** The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

**Mechanical Aeration:** Use of mechanical energy to inject air into water to cause a waste stream to absorb oxygen.

**Mechanical Turbulence:** Random irregularities of fluid motion in air caused by buildings or mechanical, non-thermal processes.

**Media:** Specific environments- air, water, soil - which are the subject or regulatory concern and activities.

**Mercury:** A heavy metal that can accumulate in the environment and is highly toxic if breathed or swallowed. (See: heavy metals).

**Methane:** A colourless, non-poisonous, flammable gas created by anaerobic decomposition of organic compounds.

**Microbes:** Microscopic organisms such as algae, animals, viruses, bacteria, fungus, and protozoa, some of which causes diseases. (See: micro-organism).

**Mist:** Liquid particles measuring 500 to 40 microns, that are formed by condensation of vapour. By comparison, "fog" particles are smaller than 40 microns.

**Mitigation:** Measures taken to reduce adverse impacts on the environment.

**Mixed Liquor:** A mixture of activated sludge and water containing organic matter undergoing activated sludge treatment in an aeration tank.

**Mobile Source:** A moving producer of air pollution, mainly forms of transportation such as cars, trucks, motorcycles, airplanes.

**Modelling:** An investigative technique using a mathematical or physical representation of a system or theory that accounts for all or some of its known properties. Models are often used to test the effect of changes of system components on the overall performance of the system.

**Model Plant:** A description of a typical but theoretical plant used for developing economic, environmental impact and energy impact analyses as support for regulations or regulatory guidelines. It is an imaginary plant with features of existing or future plants used to estimate the cost of incorporating air pollution control technology as the first step in exploring the economic impact of a potential NSPS.

**Monitoring:** Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, animals and other living things.

**Monitoring Wells:** Wells drilled at a hazardous waste management facility or Superfund site to collect groundwater samples for the purpose of physical, chemical, or biological analysis to determine the amounts, types and distribution of contaminants in the ground water beneath the site.

**Monoclonal Antibodies:** (Also called MABs and MCAs) Molecules of living organisms that selectively find and attach to other molecules to which their struc-

ture conforms exactly. This could also apply to equivalent activity by chemical molecules.

**Muck Soils:** Earth made from decaying plant materials.

**Mulch:** A layer of material (wood chips, straw, leaves, etc.) placed around plants to hold moisture, prevent weed growth, protect the plants and enrich the soil.

**Multiple Use:** Use of land for more than one purpose, i.e., grazing of livestock, wildlife production, recreation, watershed, and timber production. Could also apply to use of bodies of water for recreational purposes, fishing, and water supply.

**Mutagen:** Any substance that can cause a change in genetic material.

**Mutate:** To bring about a change in the genetic constitution of a cell by altering its DNA. In turn, "mutagenesis" is any process by which cells are mutated

## N

**National Ambient Air Quality Standards (NAAQS):** Air quality standards established by FEPA that apply to outside air throughout the country.

**National Response Centre:** The FEPA operations centre that receives notifications of all releases of oil and hazardous substances into the environment.

**National Response Team (NRT):** Representatives of relevant federal agencies that, as a team, co-ordinate federal responses to nationally significant incidents of pollution and provide advice and technical assistance to the responding agency(ies) before and during a response action.

**Natural Gas:** A natural fuel containing primarily methane and ethane that occurs in certain geologic formations.

**Natural Selection:** The process of survival of the fittest by which organisms that adapt to their environment survive and those that do not disappear.

**Navigable Waters:** Traditionally, waters sufficiently deep and wide for navigation by all, or specified sizes of vessel.

**Necrosis:** Death of plant or animal cells. In plants, necrosis can discolour areas on the plant or kill it entirely.

**Nematocide:** A chemical agent which is destructive to nematodes (round worms or threadworms).

**Neutralization:** Decreasing the acidity or alkalinity of a substance by adding to it alkaline or acidic materials respectively.

**New Source:** Any stationary source which is built or modified after publication of final or proposed regulations that prescribe a standard of performance which is intended to apply to that type of emission source.

**New Source Performance Standards (NSPS):** Uniform national FEPA air emission and water effluent standards which limit the amount of pollution allowed from new sources or from existing sources that have been modified.

**Nitrate:** A compound containing nitrogen which can exist in the atmosphere or as a dissolved gas in water and which can have harmful effects on humans and animals. Nitrates in water can cause severe illness in infants and cows.

**Nitric Oxide (NO):** A gas formed by combustion under high temperature and high pressure in an internal combustion engine. It changes into nitrogen dioxide in the ambient air and contributes to photochemical smog.

**Nitrification:** The process whereby ammonia in wastewater is oxidized to nitrite and then to nitrate by bacterial or chemical reactions.

**Nitrotriacetic Acid (NTA):** A compound being used to replace phosphates in detergents.

**Nitrite:** 1. An intermediate in the process of nitrification. 2. Nitrous oxide salts used in food preservation.

**Nitrogen Dioxide (NO<sub>2</sub>):** The result of nitric oxide combining with oxygen in the atmosphere. a major component of photochemical smog.

**Nitrogenous wastes:** Animal or vegetable residues that contain significant amounts of nitrogen.

**Nitrogen Oxides (NO<sub>x</sub>):** Products of combustion from transportation and stationary sources and major contributors to the formation of ozone in the troposphere and acid deposition.

**Non-Conventional Pollutant:** Any pollutant which is not a statutorily listed or which is poorly understood by the scientific community.

**Non-ionizing Electromagnetic Radiation:** 1. Radiation that does not change the structure of atoms but does heat tissue and may cause harmful biological effects. 2. Microwaves, radio waves, and low-frequency electromagnetic fields from high-voltage transmission lines.

**Non-Point Source:** Pollution sources which are diffuse and do not have single point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater runoff. The commonly used categories for non-point sources are agriculture, forestry, urban, mining, construction, dams and channels, land disposal and saltwater intrusion.

**Nuclear Power Plant:** A facility that converts atomic energy into usable power, heat produced by a reactor makes steam to drive turbines which produce electricity.

**Nuclear Winter:** Prediction by some scientists that smoke and debris rising from massive fires resulting from a nuclear war could enter the atmosphere and block out sunlight for weeks or months. The scientists making this prediction project a cooling of the earth's surface, and changes in climate which could, for example, negatively effect world agricultural and weather patterns.

**Nutrient:** Any substance assimilated by living things that promotes growth. The term is generally applied to nitrogen and phosphorus in wastewater, but is also applied to other essential and trace elements.

## O

**Ocean:** A bigger body of water with a higher rate of dispersion and dilution.

**Off-Site Facility:** A hazardous waste treatment, storage or disposal area that is located at a place away from the generating site.

**Oil Spill:** An accidental or intentional discharge of oil which reaches bodies of water. Can be controlled by chemical dispersion, combustion, mechanical containment, and/or adsorption.

**Oil Fingerprinting:** A method that identifies sources of oil and allows spills to be traced back to their source.

**Oligotrophic Lakes:** Deep clear lakes with low nutrient supplies. They contain little organic matter and have a high dissolved-oxygen level.

**Oncogenic:** A substance that causes tumors, whether benign or malignant.

**On Scene Co-ordinator (OSC):** An official of a government Agency/Department predestinated by FEPA to co-ordinate and direct spill or dump removal action or oil or hazardous spill corrective action.

**On-Site Facility:** A hazardous waste treatment, storage or disposal area that is located on the generating site.

**Opacity:** The amount of light obscured by particulate pollution in the air; clear window glass has a zero opacity, a brick wall has 100 per cent opacity. Opacity is used as an indicator of changes in performances of particulate matter pollution control systems.

**Open Burning:** Uncontrolled fires in an open dump.

**Open Dump:** An uncovered site used for disposal of waste without environmental control. (See: dump).

**Operable Unit:** Term of each of a number of separate activities undertaken as part of a spill or dump site cleanup. A typical operable unit would be removing drums and tanks from the surface of a site.

**Operation and Maintenance:** 1. Activities conducted at a site after a spill or dump site action is completed to ensure that the action is effective and operating properly. 2. Actions taken after construction to assure that facilities constructed to treat waste water will be properly operated, maintained, and managed to achieve efficiency levels and prescribed effluent limitations in an optimum manner.

**Operator:** A person responsible for the overall operation of a facility.

**Oral LD50:** The single dosage in milligrams per kilogram (mg/kg) body weight, when orally administered, which, within 14 days, kills half a group of ten or more white rats each weighing between 200 and 300 grams.

**Organic:** Referring to or derived from living organisms. 2. In chemistry, any compound containing carbon.

**Organic Chemicals/Compounds:** Animal or plant-produced substances containing mainly carbon, hydrogen, and oxygen.

**Organic Matter:** Carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.

**Organism:** Any living thing.

**Organophosphates:** Pesticide chemicals that contain phosphorus; used to control insects. They are short-lived, but some can be toxic first applied.

**Organotins:** Chemical compounds used in anti-foulant paints to protect the hulls of boats and ships, buoys, and dock pilings from marine organisms such as barnacles.

**Osmosis:** The tendency of a fluid to pass through a permeable membrane such as the wall of a living cell into a less concentrated solution so as to equalize the concentrations on both sides of the membrane.

**Outfall:** The place where an effluent is discharged into receiving waters.

**Overburden:** The rock and soil cleared away before mining.

**Overfire Air:** Air forced into the top of an incinerator or boiler to fan the flames.

**Overland Flow:** A land application technique that cleanses waste water by allowing it to flow over a sloped surface. As the water flows over the surface, the contaminants are removed and the water is collected at the bottom of the slope for re-use.

**Overturn:** The period of mixing (turnover), by top to bottom circulation, of previously stratified water masses. This phenomenon may occur in spring and/or fall, or after storms. It results in a uniformity of chemical and physical properties of the water at all depths.

**Oxidant:** A substance containing oxygen that reacts chemically in air to produce a new substance. The primary ingredient of photochemical smog.

**Oxidation Pond:** A man-made lake or body of water in which waste is consumed by bacteria. It is used most frequently with other waste-treatment processes. An oxidation pond is basically the same as a sewage lagoon.

**Oxygenated Solvent:** An organic solvent containing oxygen as part of the molecular structure. Alcohols and ketones are oxygenated compounds often used as paint solvents.

**Ozonator:** A device that adds ozone to water.

**Ozone:** Found in two layers of the atmosphere, the stratosphere and the troposphere. In the stratosphere (the atmospheric layer beginning 12 to 17 kilometers above the earth's surface) ozone is a form of oxygen found naturally which provides a protective layer shielding the earth from ultraviolet radiation's harmful health effects on humans and the environment. In the troposphere (the layer extending up 12 to 17 kilometers from the earth's surface), ozone is a chemical oxidant and major component of photochemical smog. Ozone can seriously affect the human respiratory system and is one of the most prevalent and widespread urban pollutants. Ozone in the troposphere is produced through complex chemical reactions of nitrogen oxides, which are among the primary pollutants emitted by combustion sources; hydrocarbons, released into the atmosphere through the combustion, handling and processing of petroleum products; and sunlight.

**Ozone Depletion:** Destruction of the stratospheric ozone layer which shields the earth from ultraviolet radiation



harmful to biological life. This destruction of ozone is caused by the breakdown of certain chlorine and/or bromine containing compounds (Chlorofluorocarbons or halons) which break down when they reach the stratosphere and catalytically destroy ozone molecules.

## P

**Packed Tower:** A pollution control device that forces dirty air through a tower packed with crushed rock or wood chips while liquid is sprayed over the packing material. The pollutants in the air stream either dissolve or chemically react with the liquid.

**Pandemic:** Widespread throughout an area, nation or the world.

**Paraquat:** A standard herbicide used to kill various types of crops, including marijuana.

**Particulates:** Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog, found in air or emissions.

**Particulate Loading:** The mass of particulates per unit volume of air or water.

**Pathogenic:** Capable of causing disease.

**Pathogens:** Micro-organism that can cause disease in other organisms or in humans, animals and plants. They may be bacteria, viruses, or parasites and are found in sewage, in runoff from animal farms or rural areas populated with domestic and/or wild animals, and in water used for swimming. Fish and shellfish contaminated by pathogens, or the contaminated water itself, can cause serious illnesses.

**PCBs:** A group of toxic, persistent chemicals (polychlorinated biphenyls) used in transformers and capacitors for insulating purposes and in gas pipeline systems as a lubricant.

**Percolation:** The movement of water downward and radially through the sub-surface soil layers, usually continuing downward to the ground water.

**Permeability:** The rate at which liquids pass through soil or other materials in a specified direction.

**Permit:** An authorization, license, or equivalent control document issued by FEPA or an approved state agency to implement the requirements of an environmental regulation; e.g., a permit to operate a wastewater treatment plant or to operate a facility that may generate harmful emissions.

**Persistence:** Refers to the length of time a compound,

once introduced into the environment, stays there. A compound may persist for less than a second or indefinitely.

**Persistent Pesticides:** Pesticides that do not break down chemically or breakdown very slowly and that remain in the environment after a growing season.

**Pest:** An insect, rodent, nematode, fungus, weed or other form of terrestrial or aquatic plant or animal life or virus, bacterial or micro-organism that is injurious to health or the environment.

**Pesticide:** Substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Also, any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. Pesticides can accumulate in the food chain and/or contaminate the environment if mis-used.

**Pesticide Tolerance:** The amount of pesticide residue allowed by law to remain in or on a harvested crop. By using various safety factors, FEPA sets these levels well below the point where the chemicals might be harmful to consumers.

**Ph:** A measure of the acidity or alkalinity of a liquid or solid material.

**Phenols:** Organic compounds that are by products of petroleum refining, tanning, and textile, dye, and resin manufacturing. Low concentrations cause taste and odour problems in water; higher concentrations can kill aquatic life and humans.

**Pheromone:** Hormonal chemical produced by female of a species to attract a mate.

**Phosphates:** Certain chemical compounds containing phosphorus.

**Phosphorus:** An essential chemical food element that can contribute to the eutrophication of lakes and other water bodies. Increased phosphorus levels result from discharge of phosphorus containing materials into surface waters.

**Photochemical Oxidants:** Air pollutants formed by the action of sunlight on oxides of nitrogen and hydrocarbons.

**Photochemical Smog:** Air pollution caused by chemical reactions of various pollutants emitted from different sources.

**Physical and Chemical Treatment:** Processes generally used in large-scale waste-water treatment facilities. Physical processes may involve air-stripping or filtration.

**Chemical treatment** includes coagulation, chlorination, or ozone addition. The term can also refer to treatment processes, treatment of toxic materials in surface waters and ground waters, oil spills, and some methods of dealing with hazardous materials on or in the ground.

**Phytoplankton:** That portion of the plankton community comprised of tiny plants, e.g., algae, diatoms.

**Phytotoxic:** Something that harms plants.

**Picocurie:** Measurement of radioactivity. A picocurie is one million millionth, or a trillionth, of a curie, and represents about 2.2 radioactive particle disintegrations per minute.

**Picocuries Per Litre (pCi/l):** A unit of measure used for expressing levels of radon gas. (See: picocurie).

**Pig:** A container, usually lead, used to ship or store radioactive materials.

**Pile:** 1. The fuel element in a nuclear reactor. 2. A heap of waste.

**Placard:** proper display and of identification on vehicles transporting dangerous waste.

**Plankton:** Tiny plants and animals that live and float in water.

**Plasmid:** A circular piece of DNA that exists apart from the chromosome and replicates independently of it. bacterial plasmids carry information that renders the bacterial resistant to antibiotics. Plasmids are often used in genetic engineering to carry desired genes into organisms.

**Plastics:** Non-metallic compounds that result from a chemical reaction, and are moulded or formed into rigid or pliable construction materials or fabrics.

**Plugging:** 1. The act or process of stopping the flow of water, oil, or gas into or out of a formation through a borehole or well penetrating that formation. 2. Stopping a leak or sealing off a pipe or hose.

**Plume:** 1. A visible or measureable discharge of a contaminant from a given point of origin. Can be visible or thermal in water, or visible in the air, for example, a plume of smoke. 2. The area of measurable and potentially harmful radiation leaking from a damaged reactor. 3. The distance from a toxic release considered dangerous for those exposed to the leaking fumes.

**Plutonium:** A radioactive metallic element similar chemically to uranium.

**Point Source:** A stationery location or fixed facility from which pollutants are discharged or emitted. Also, any single identifiable source of pollution, e.g., a pipe, ditch, ship, ore pit, factory smokestack.

**Pollen:** 1. A fine dust produced by plants. 2. The fertilizing element of flowering plants. 3. A natural or background air pollutant.

**Pollutant:** Generally, any substance introduced into the environment that adversely affects the usefulness of a resource.

**Pollutant Standard Index (PSI).** Measure of adverse health effects of air pollution levels in major cities.

**Pollution:** Generally, the presence of matter or energy whose nature, location or quantity produces undesired environmental effects. Under the Clean Water Act, for example, the term is defined as the man-made or man-induced alteration of the physical, biological, and radiological integrity of water.

**Polycyclic Aromatic Hydrocarbons (PAH):** Hydrocarbon molecules composed of two or more benzene rings. For the purpose of this document, the PAH of concern for designation are only those PAH with more than three rings and less than seven rings.

**Polyelectrolytes:** Synthetic chemicals that help solids to clump during sewage treatment.

**Polymer:** Basic molecular ingredients in plastic.

**Polyvinyl Chloride (PVC):** A tough, environmentally indestructible plastic that releases hydrochloric acid when burned.

**Population:** A group of interbreeding organisms of the same kind occupying a particular space. Generically, the number of humans or other living creatures is designated to be 30 years.

**Post-Closure:** The time period following the shutdown of a waste management or manufacturing facility. For monitoring purposes, this is often considered to be 30 years.

**Potable Water:** Water that is safe for drinking and cooling.

**Potentially Responsible Party (PRP):** Any individual or company including owners, operators, transporters or generators potentially responsible for, or contributing to, the contamination problems at a spill or dump site whenever possible. FEPA requires PRPs, through administrative and legal actions, to clean up hazardous waste sites they have contaminated.

**PPM/PPB:** Parts per million/parts per billion, a way of expressing tiny concentrations of pollutants in air, water, soil, human tissue, food, or other products.

**Precipitate:** A solid that separates from a solution because of some chemical or physical change.

**Precipitation:** Removal of solids from liquid waste so that the hazardous solid portion can be disposed of safely; removal of particles from airborne emissions.

**Precipitators:** Air pollution control devices that collect particles from an emission.

**Precursor:** In photochemical terminology, a compound such as volatile organic compound (VOC) that "precedes" an oxidant. Precursors react in sunlight to form ozone or other photochemical oxidants.

**Preliminary Assessment:** The process of collecting and reviewing available information about a known or suspected waste site or release.

**Pressure Sewers:** A system of pipes in which water, waste water, or other liquid is transported to a higher elevation by use of pumping force.

**Pretreatment:** Processes used to reduce, eliminate, or alter the nature of waste water pollutants from non-domestic sources before they are discharged into publicly owned treatment works.

**Prevention:** Measures taken to minimize the release of wastes to the environment.

**Prevention of Significant Deterioration (PSD):** FEPA programme in which State and/or Federal permits are required that are intended to restrict emissions for new or modified sources in places where air quality is already better than required to meet primary and secondary ambient air quality standards.

**Primary Waste Treatment:** First steps in waste water treatment; screens and sedimentation tanks are used to remove most materials that floats or will settle. Primary treatment results in the removal of about 30 per cent of carbonaceous biochemical oxygen demand from domestic sewage. **Process Weight:** Total weight of all materials, including fuel, used in a manufacturing process. It is used to calculate the allowable particulate emission rate from the process.

**Proteins:** Complex nitrogenous organic compounds of high molecular weight that contain amino-acids as their basic unit and are essential for growth and repair of animal tissue. Many proteins are enzymes.

**Protoplast:** A membrane-bound cell from which the

outer cell wall has been partially or completely removed. The term often is applied to plant cells.

**Public Water System:** A system that provides piped water for human consumption to at least 15 service connections or regularly serves 25 individuals.

**Publicly Owned Treatment Works (POTW):** A waste treatment works owned by a State, Unit of Local government, usually designed to treat domestic waste waters.

**Pumping Station:** Mechanical devices installed in sewer or water systems or other liquid carrying pipelines that move the liquids to a higher level.

**Putrescible:** Able to rot quickly enough to cause odours and attract flies.

**Pyrolysis:** Decomposition of a chemical by extreme heat.

## Q

**Quality Assurance/Quality Control:** A system of procedures, checks, audits and corrective actions to ensure that all FEPA research design and performance, environmental monitoring and sampling, and other technical and reporting activities are of the highest achievable quality.

**Quench Tank:** A water-filled tank used to cool incinerator residues or hot materials during industrial processes.

## R

**Radiation Absorbed Dose (RAD):** A unit of absorbed dose of radiation. One RAD of absorbed dose is equal to .01 joules per kilogram.

**Radiation:** Any form of energy propagated as rays, waves, or streams of energetic particles. The term is frequently used in relation to the emission of rays from the nucleus of an atom.

**Radiation Standards:** Regulations that set maximum exposure limits for protection of the public from radioactive materials.

**Radioactive Substances:** Substances that emit radiation.

**Radiobiology:** The study of radiation effects on living things.

**Radio Frequency Radiation:** (See Non-ionizing Radiation)

**Radionuclide:** Radioactive element characterized according to its atomic mass and atomic number which can be man-made or naturally occurring. Radioisotopes can have a long life as soil or water pollutants, and are believed to have potentially mutagenic effects on the human body.

**Radius of Vulnerable Zone:** The maximum distance from the point of release of a hazardous substance in which the airborne concentration could reach the level of concern under specified weather conditions. **Radon:** A colourless naturally occurring, radioactive, inert gaseous element formed by radioactive decay of radium atoms in soil or rocks.

**Radon Decay Products:** A term used to refer collectively to the immediate products of the radon decay chain. These include Po-218, Pb-214, Bi-214, and Po-214, which have an average combined half-life of about 30 minutes.

**Rasp:** A machine that grinds waste into a manageable material and helps prevent odour.

**Raw Sewage:** Untreated waste water.

**Reasonably Available Control Technology (RACT):** The lowest emissions limit that a particular source is capable of meeting by the application of control technology that is both reasonably available, as well as technologically and economically feasible. RACT is usually applied to existing sources in non-attainment areas and most cases is less stringent than new source performance standards.

**Receiving Waters:** A river, lake, ocean, stream or other water-course into which waste water or treated effluent is discharged.

**Recharge:** The process by which water is added to a zone of saturation, usually by percolation from the soil surface, e.g., the recharge of an aquifer.

**Recharge Area:** A land area in which water reaches to the zone of saturation from surface infiltration, e.g., an area where rainwater soaks through the earth to reach an aquifer.

**Reclaim:** To process a material in order to recover useable products, or to regenerate the material. Reclamation is the process of reclaiming.

**Recombinant Bacteria:** A type of micro-organism whose genetic makeup has been altered by deliberate introduction of new genetic elements. The offspring of these altered bacteria also contain these new genetic elements.

**Recombinant DNA (rDNA):** The new DNA that is formed by combining pieces of DNA from different organisms or cells.

**Recommended Maximum Contaminant Level (RMCL):** The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on human health would occur, and which includes an adequate margin of safety. Recommended levels are non-enforceable health goals. (See maximum contaminant level).

**Record of Decision (ROD):** A public document that explains which cleanup alternative(s) will be used for a spill or dump cleanup.

**Recover:** Extract a useable material from a solid or dangerous waste through a physical, chemical, biological, or thermal process. Recovery is the process of recovering.

**Re-cycle/Re-use:** The process of minimizing the generation of waste by recovering useable products that might otherwise become waste. Examples are the recycling of aluminium cans, waste paper, and bottles.

**Red Tide:** A proliferation of a marine plankton that is toxic and often fatal to fish. This natural phenomenon may be stimulated by the addition of nutrients. A tide can be called red, green or brown, depending on the coloration of the plankton.

**Re-entry Interval:** The period of time immediately following the application of a pesticide during which unprotected workers should not enter a field.

**Refuse:** (See solid waste).

**Refuse Reclamation:** Conversion of solid waste into useful products, e.g., composting organic wastes to make the soil conditioners or separating aluminium and other metals for melting any recycling.

**Regeneration:** Manipulation of individual cells or masses of cells to cause them to develop into whole plants.

**Regional Response Team (RRT):** Representatives of FEPA, local and State agencies who may assist in coordination of activities at the request of the On-Scene Co-ordinator before and during an environmental accident such as oil spill, cleaning up of highly polluted water.

**Registrant:** Any manufacturer or formulator who obtains registration for a pesticide active ingredient or product.

**Registration:** Formal listing with FEPA and Ministry of Health of a new pesticide before it can be sold or distributed in intra- or inter-state commerce. The product

must be registered with the Federal Ministry of Health. Ministry of Health is responsible for registration (pre-market licensing) of pesticides on the basis of data demonstrating that they will not cause unreasonable adverse effects on human health or the environment when used according to approved label directions.

**Registration Standards:** Published reviews of all the data available on pesticide active ingredients.

**Roantgen Equivalent Man (REM):** The unit of dose equivalent from ionizing radiation to the human body, used to measure the amount of radiation to which a person or a part of a human has been exposed.

**Remedial Action (RA):** The actual construction or implementation phase of a spill or dumps site cleanup that follows remedial design.

**Remedial design (RD):** A phase of remedial action that follows the remedial investigation/feasibility study and includes development of engineering drawing and specifications for a site cleanup.

**Remedial Investigation:** An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a spill or dump site; establish criteria for cleaning up the site; identify preliminary alternatives for remedial actions; and support the technical and cost analyses of the alternatives. The remedial investigation is usually done with the feasibility study. Together they are usually referred to as the "RI/RS".

**Remedial Project Manager (RPM):** The FEPA or State official responsible for overseeing remedial action at a site.

**Remedial Response:** A long-term action that stops or substantially reduces a release or threat of a release of hazardous substances that is serious but not an immediate threat to public health.

**Removal Action:** Short-term immediate action taken to address releases of hazardous substances that require expedited response. (See: cleanup).

**Reportable Quantity (RQ):** The quantity of a hazardous substance that triggers reports. If a substance is released in amounts exceeding its RQ, the release must be reported to the National Response Center, the State, and community emergency co-ordinators for areas likely to be affected.

**Representative Sample:** A sample which can be expected to exhibit the average properties of the sample sources.

**Requirement:** This is used to describe an administrative decision by a regulatory body to fulfill a given mission. It does not necessarily have a scientific justification.

**Re-registration:** The re-evaluation and re-licensing of existing pesticides originally registered prior to current scientific and regulatory standards. Ministry of Health re-registers pesticides through its Registration Program.

**Reservoir:** Any natural or artificial holding area used to store, regulate, or control water.

**Residual:** Amount of a pollutant remaining in the environment after a natural or technological process has taken place, e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after the air passes through a scrubbing or process.

**Resistance:** For plants and animals, the ability to withstand poor-environmental conditions and/or attacks by chemicals or disease. The ability may be inborne or developed.

**Resource:** A person, thing, or action needed for living or to improve the quality of life.

**Response Action:** A FEPA authorized action involving either a short-term removal action or a long-term removal response that may include but is not limited to: removing hazardous materials from a site to a FEPA-approved hazardous waste facility for treatment, containment, or destruction; containing the waste safely on-site, destroying or treating the waste on-site; and identifying and removing the source of ground-water contamination and halting further migration of contaminants. (See: cleanup).

**Resource Recovery:** The process of obtaining matter or energy from materials formerly discarded.

**Restoration:** Measures taken to return a site to pre-violation conditions.

**Restricted Use:** When a pesticide is registered, some or all of its uses may be classified for restricted use if the pesticide requires special handling because of its toxicity. Restricted use pesticides may be applied only by trained, certified applicators or those under their direct supervision.

**Restriction Enzymes:** Enzymes that recognize certain specific regions of a long DNA molecule and then cut the DNA into smaller pieces.

**Reverse Osmosis:** A water treatment process used in small water systems by adding pressure to force water

through a semi-permeable membrane. Reverse osmosis removes most drinking water contaminants. Also used in wastewater treatment. Large-scale reverse osmosis plants are now being developed.

**Ribonucleic Acid (RNA):** A molecule that carries the genetic message from DNA to a cell's protein-producing mechanisms; similar to, but chemically different from, DNA.

**Riparian Habitat:** Areas adjacent to rivers and streams that have a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

**Riparian Rights:** Entitlement of a land owner to the water on or bordering his property, including the right to prevent diversion or misuse of upstream waters. Generally, a matter of state law.

**Risk Assessment:** The qualitative and quantitative evaluation performed in an effort to define the risk posed to human health and/or the environment by the presence or potential presence and/or use of specific pollutants.

**Risk Communication:** The exchange of information about health or environmental risks between risk assessors, risk managers, the general public, news media, interest groups, etc.

**Run-Off:** Any rainwater, leachate, or other liquid which drains over land from any part of a facility.

**Run-On:** Any rainwater, leachate, or other liquid which drains over land onto any part of a facility.

## S

**Salinity:** The degree of salt in water.

**Salts:** Minerals that water picks up as it passes through the air, over and under the ground, and as it is used by households and industry.

**Salt Water Intrusion:** The invasion of fresh surface or ground water by salt water. If the salt water comes from the ocean it may be called sea water intrusion. **Salvage:** The utilization of waste materials.

**Sanitation:** Control of physical factors in the human environment that could harm development, health, or survival.

**Sand Filters:** Devices that remove some suspended solids from sewage. Air and bacteria decompose additional wastes filtering through the sand so that cleaner water drains from the bed.

**Sanitary Survey:** An on-site review of the water sources, facilities, equipment, operation and maintenance of a public water system to evaluate the adequacy of these elements for producing and distributing safe drinking water.

**Saturated Zone:** A subsurface area in which all pores and cracks are filled with water under pressure equal to or greater than that of the atmosphere.

**Scrap:** Materials discarded from manufacturing operations that may be suitable for reprocessing.

**Scrap Metal:** Bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g. radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

**Screening:** Use of screens to remove coarse floating and suspended solids from sewage.

**Scrubber:** An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.

**Secondary Drinking Water Regulations:** Unenforceable regulations which apply to public water systems and which specify the maximum contamination levels which, in the judgement of FEPA, are required to protect the public welfare. These regulations apply to any contaminants, that may adversely affect the odour or appearance of such water and consequently may cause people served by the system to discontinue its use.

**Secondary Treatment:** The second step in most publicly owned waste treatment systems in which bacteria consume the organic parts of the waste. It is accomplished by bringing together waste, bacteria, and oxygen in trickling filters or in the activated sludge process. This treatment removes floating and settleable solids and about 90 per cent of the oxygen-demanding substances and suspended solids. Disinfection is the final stage of secondary treatment. (See: primary, tertiary treatment).

**Secure Chemical (See: landfills).**

**Secure Maximum Contaminant Level:** Maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a water supply, the consumer, or of contamination resulting from corrosion of piping and plumbing caused by water quality.

**Sediments:** Soil, sand, and minerals washed from land into water usually after rain. They pile up in reservoirs, rivers and harbours, destroying fish-nesting areas and holes of water animals, and clouding the water so that

needed sunlight might not reach aquatic plants. Careless farming, mining, and building activities will expose sediment materials, allowing them to be washed off the land after rainfalls.

**Sedimentation:** Letting solids settle out of wastewater by gravity during wastewater treatment.

**Sedimentation Tanks:** Holding areas for wastewater where floating wastes are skimmed off and settled solids are removed for disposal.

**Selective Pesticide:** A chemical designed to affect only certain types of pests leaving other plants and animals unharmed.

**Semi-Confined Aquifer:** An aquifer that is partially confined by a soil layer (or layers) of low permeability through which recharge and discharge can occur.

**Senescence:** Term for the aging process. Sometimes used to describe lakes or other bodies of water in advanced stages of eutrophication.

**Septic Tank:** An underground storage tank for wastes from homes having no sewer line to a treatment plant. The waste goes directly from the home to the tank, where the organic waste is decomposed by bacteria and the sludge settles to the bottom. The effluent flows out of the tank into the ground through drains; the sludge is pumped out periodically.

**Service Connector:** The pipe that carries tap water from the public water main to a building.

**Settleable Solids:** Materials heavy enough to sink to the bottom of a wastewater treatment tank.

**Settling Chamber:** A series of screens placed in the way of the gases to slow the stream of air, thus helping gravity to pull particles out of the emission into a collection area.

**Settling Tank:** A holding area for wastewater, where heavier particles sink to the bottom for removal and disposal.

**Sewage:** The waste and wastewater produced by residential and commercial establishments and discharged into sewers.

**Sewage Lagoon:** (See: Lagoon).

**Sewage Sludge:** Sludge produced at a Publicly Owned Treatment Works.

**Sewage Works:** A wastewater treatment plant.

**Sewer:** A channel or conduit that carries wastewater and stormwater runoff from the source to a treatment plant or receiving stream. Sanitary sewers carry household, industrial, and commercial waste. Storm sewers carry runoff from rain or snow. Combined sewers are used for both purposes.

**Sewerage:** The entire system of sewage collection, treatment, and disposal.

**Shotgun:** Non-scientific term for the process of breaking up the DNA derived from an organism and then moving each separate and unidentified DNA fragment into a bacterium.

**Signal Words:** The words used on a pesticide label - Danger, Warning, Caution - to indicate the level of toxicity of the chemicals.

**Significant Deterioration:** Pollution resulting from a new source in previously "clean" areas. (See: prevention of significant deterioration).

**Significant Municipal Facilities:** These publicly owned sewage treatment plants that discharge 4 million litres per day or more and are therefore considered by States to have the potential for substantial effect on the quality of receiving waters.

**Significant Violations:** Violations by point source discharges of sufficient magnitude and/or duration to be a regulatory priority.

**Silt:** Fine particles of sand or rock that can be picked up by the air or water and deposited as sediment.

**Silviculture:** Management of forest land for timber. Sometimes contributes to water pollution, as in clear-cutting.

**Sinking:** Controlling oil spills by using an agent to trap the oil and sink it to the bottom of the body of water where the agent and the oil are biodegraded.

**Site Inspection:** The collection of information from a site to determine the extent and severity of hazards posed by the site. It follows and is more extensive than a preliminary assessment. The purpose is to gather information necessary to score the site, using the Hazard Ranking System and to determine if the site presents an immediate threat requires prompt removal action.

**Siting:** The process of choosing a location for a facility.

**Skimming:** Using a machine to remove oil or scum from the surface of the water.

**Slow Sand Filtration:** Treatment process involving passage of raw water through a bed of sand at low velocity which results in the substantial removal of chemical and biological contaminants.

**Sludge:** A semi-solid residue from any of a number of air or water treatment processes. Sludge can be a hazardous waste.

**Slurry:** A watery mixture of insoluble matter that results from some pollution control techniques.

**Smelter:** A facility that melts or fuses ore, often with an accompanying chemical change, to separate the metal. Emissions are known to cause pollution. Smelting is the process involved.

**Smog:** Air pollution associated with oxidants. (See: photochemical smog).

**Smoke:** Particles suspended in air after incomplete combustion of materials.

**Soft Detergents:** Clearing agents that break down in nature.

**Soft Water:** Any water that is not "hard" i.e., does not contain a significant amount of dissolved minerals such as salts containing calcium or magnesium.

**Solid Adsorption Field:** A sub-surface area containing a trench or bed with clean stones and a system of distribution piping through which treated sewage may seep into the surrounding soil for further treatment and disposal.

**Soil Conditioner:** A organic material like humus or compost that helps soil absorb water, build a bacterial community, and distribute nutrients and minerals.

**Soil Gas:** Gaseous elements and compounds that occur in the small spaces between particles of the earth and soil. Such gases can move through or leave the soil or rock, depending on changes in pressure.

**Solder:** A metallic compound used to seat the joints between pipes. Until recently, most solder contained 50 per cent lead.

**Sole Source Aquifer:** An aquifer that supplies 50 per cent or more of the drinking water of an area.

**Solid Waste:** Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex, and sometimes, hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Techni-

cally, solid waste also refers to liquids and gases in containers.

**Solid Waste Disposal:** The final placement of refuse that is not salvaged or recycled.

**Solid Waste Management:** Supervised handling of waste materials from their source through recovery processes to disposal.

**Solidification and Stabilization:** Removal of wastewater from a waste or changing it chemically to make the waste less permeable and susceptible to transport by water.

**Solvent:** Substance (usually liquid) capable of dissolving or dispersing one or more other substances.

**Soot:** Carbon dust formed by incomplete combustion.

**Sorption:** The Action of soaking up or attracting substances. A process used in many pollution control systems.

**Source:** Any building, structure, facility, or installation from which there is or may be the discharge of pollutants.

**Special Review:** Formally known as Rebuttable Presumption Against Registration (RPAR), this is the regulatory process through which existing pesticides suspected of posing unreasonable risks to human health, non-target organisms, or the environment are referred to review by FEPA. The review requires an intensive risk/benefit analysis with opportunity for public comment. If the risk of any use of a pesticide is found to outweigh social and economic benefits, regulatory actions - ranging from label revisions and use-restriction to cancellation or suspended registration - can be initiated.

**Species:** A reproductively isolated aggregate of interbreeding populations of organisms.

**Spent Material:** Any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

**Spill Prevention Control and Countermeasures Plan (SPCC):** Plan covering the release of hazardous substance as defined in Decrees 42 and 58 of 1988.

**Sprawl:** Unplanned development of open land.

**Spoil:** Dirt or rock that has been removed from its original location, destroying the composition of the soil in the process, as with strip-mining or dredging.



**Stabilization:** Conversion of the active organic matter in sludge into inert, harmless material.

**Stabilization Ponds:** (See Lagoon).

**Stable Air:** A mass of air that is not moving normally, so that it holds rather than disperses pollutants.

**Stock Effect:** Used air, as in a chimney, that moves upward because it is warmer than the surrounding atmosphere.

**Stack Gas:** (See: flue gas).

**Stagnation:** Lack of motion in a mass of air or water, which tends to hold pollutants.

**Standards:** Prescriptive norms which govern action and actual limits on the amount of pollutants or emissions produced. FEPA, under most of its responsibilities, establishes minimum standards.

**State Emergency Response Commission (SERC):** Commission appointed by each State governor according to the requirements of the State. The SERC's designate emergency planning districts, appoint local emergency planning committees, and supervise and co-ordinate their activities.

**State Implementation Plans (SIP):** FEPA-approved State plans for the establishment, regulation, and enforcement of air pollution standards.

**Stationary Source:** A fixed, non-moving producer of pollution, mainly power plants and other facilities using industrial combustion processes.

**Sterilization:** 1. In pest control, the use of radiation and chemicals to damage body cells needed for reproduction. 2. The destruction of all living organisms in water or on the surface of various materials. In contrast, disinfection by the destruction of most living organisms in water or on surfaces.

**Storage:** Temporary holding of waste pending treatment or disposal. Storage methods include containers, tanks, waste piles, and surface impoundments.

**Storm Sewer:** A system of pipes (separate from sanitary sewers) that carry only water runoff from building and land surfaces.

**Stratification:** Separating into layers.

**Stratosphere:** The portion of the atmosphere that is 10-to-25 miles above the earth's surface

**Strip-Cropping:** Growing crops in a systematic arrange-

ment of strips or bands which serve as barriers to wind and water erosion.

**Strip-Mining:** A process that uses machines to scrape soil or rock away from mineral deposits just under the earth's surface.

**Suden Accident:** An unforeseen and unexpected occurrence which is not continuous or repeated in nature.

**Sulfur Dioxide (SO<sub>2</sub>):** A heavy, pungent, colourless, gaseous air pollutant formed primarily by the combustion of fossil plants.

**Sump:** A pit or tank that catches liquid runoff for drainage or disposal.

**Sump Pump:** A mechanism for removing water or wastewater from a sump or wet well.

**Surface Impoundment:** Treatment, storage, or disposal of liquid hazardous wastes in ponds.

**Surface Water:** All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, impoundments, seas, estuaries, etc.) and all springs, wells, or other collectors which are directly influenced by surface water.

**Surfactant:** A surface-active agent used in detergents to cause lathering.

**Surveillance system:** A series of monitoring devices designed to determine environmental quality.

**Suspended Solids:** Small particles of solid pollutants that float on the surface of, or are suspended in sewage or other liquids. They resist removal by conventional means. (See: Total Suspended Solids).

**Suspension:** The act of suspending the use of pesticide when FEPA deems it necessary to do so in order to prevent an imminent hazard resulting from continued use of the pesticide. An emergency suspension takes effect immediately; under an ordinary suspension goes into effect. Such a hearing process might take six months.

**Suspension Culture:** Individual cells or small clumps of cells growing in a liquid nutrient medium.

**Swamp:** A type of wetland that is dominated by woody vegetation and does not accumulate appreciable peat deposits. Swamps may be fresh or salt water and tidal or non-tidal. (See: Wetlands)

**Synergism:** The co-operative interaction of two or more chemicals or other phenomena producing a greater total effect than the sum of their individual effects.

**Synthetic Organic Chemicals (SOCs):** Man-made organic chemicals. Some SOC's are volatile, others tend to stay dissolved in water rather than evaporate out of it.

**Systemic Pesticide:** A chemical that is taken up from the ground or absorbed through the surface and carried through the system of the organism being protected, making the organism toxic to pests.

## T

**Tailings:** Residue of raw materials or waste separated out during the processing of crops or mineral ores.

**Tank:** A stationary device designed to contain an accumulation of dangerous waste, and which is constructed primarily of non earthen materials to provide structural support.

**TBT Paints (Trybutilin)** (*See: organotins*)

**Technology-Based Standards:** Effluent limitations applicable to direct and indirect sources which are developed on a category-by category basis using statutory factors, not including water quality effects.

**Teratogen:** Substance that causes malformation or serious deviation from normal development of embryos and fetuses.

**Terracing:** Diking, built along the contour of sloping agricultural land, that holds runoff and sediment to reduce erosion.

**Tertiary Treatment:** Advanced cleaning of wastewater that goes beyond the secondary or biological state. It removes nutrients such as phosphorus and nitrogen and most BOD and suspended solids.

**Thermal Pollution:** Discharge of heated water from industrial processes that can affect the life processes of aquatic organisms.

**Thermal treatment:** The use of a device which uses primarily elevated temperatures to treat a dangerous waste.

**Threshold Limit Value (TLV):** Represents the air concentrations of chemical substances to which it is believed that workers may be daily exposed without adverse effect.

**Threshold Planning Quantity:** A quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State emergency response commission that such facilities are subject to emergency planning under FEPA.

**Tidal Marsh:** Low, flat marshlands traversed by channels and tidal hollows and subject to tidal inundation; normally, the only vegetation present are salt-tolerant bushes and grasses. (*See: Wetlands*).

**TLM 96:** Same as "Aquatic LC50".

**Tolerances:** The permissible residue levels for pesticides in raw agricultural produce and processed foods. Whenever a pesticide is registered for use on a food or a feed crop, a tolerance (or exemption from the tolerance requirement must be established. Federal Ministry of Health establishes the tolerance levels which are enforced by the Food and Drug Administration and the Ministry of Agriculture.

**Topography:** The physical features of a surface area including relative elevations and the position of natural and man-made features.

**Totally enclosed treatment facility:** A facility for treating dangerous waste which is directly connected to a production process and which prevents the release of dangerous waste or dangerous waste constituents into the environment during treatment.

**Total Suspended Solids (TSS):** A measure of the suspended solids in wastewater, effluent, or water bodies, determined by using tests for "total suspended non-filterable solids." (*See: suspended solids*).

**Toxic:** Harmful to living organisms.

**Toxic Pollutants:** Materials contaminating the environment that cause death, disease, birth defects in organisms that ingest or absorb them. The quantities and length of exposure necessary to cause these effects can vary widely.

**Toxic Cloud:** Airborne mass of gases, vapours, fumes, or aerosols containing toxic materials.

**Toxic Substance:** A chemical or mixture that may present an unreasonable risk of injury to health or the environment.

**Toxicant:** A poisonous agent that kills or injures animal or plant life.

**Toxicity:** The degree of danger posed by a substance to animal or plant life. (*See: acute, chronic toxicity*).

**Toxicology:** The science and study of poisons control

**Transfer facility or collection facility:** A facility at which dangerous waste shipments are collected, consolidated, and stored for more than ten days before transfer to a storage, treatment, or disposal facility.

**Transformation:** The process of placing new genes into a host cell, thereby inducing the host cell to exhibit functions encoded by the DNA.

**Transpiration:** The process by which water vapour is lost to the atmosphere from living plants. The term can also be applied to the quantity of water thus dissipated.

**Transportation:** The movement of dangerous waste by air, rail, highway (land), or water.

**Transporter:** A person engaged in the off-site transportation of dangerous waste.

**Trash-to-Energy Plan:** A plan for putting waste back to work by burning trash to produce energy.

**Treatment:** The physical, chemical, or biological processing of dangerous waste to make such wastes non-dangerous or less dangerous, safer for transport, amenable for energy or material resource recovery, amenable for storage, or reduced in volume.

**Treatment, Storage, and Disposal Facility:** Site where a hazardous substance is treated, stored, or disposed. TSD facilities are regulated by FEPA and States.

**Treatment Zone:** A soil areas of the unsaturated zone of a land treatment unit within which dangerous wastes are degraded, transformed or immobilized.

**Trichloroethylene (TCE):** A stable, low-boiling colorless liquid, toxic by inhalation. TCE is used as a solvent, metal degreasing agent, and in other industrial applications.

**Trickling Filter:** A coarse, biological treatment system in which waste water is trickled over a bed of stones or other material covered with bacterial growth, leading to bacterial break down of the waste.

**Trihalomethane (THM):** One of a family of organic compounds, named as derivatives of methane. THM's are generally the by-products from chlorination of drinking water that contains organic material.

**Triple rinsing:** The cleansing of containers in accordance with the requirements of subsection 2.4.2.

**Troposphere:** The lower atmosphere the portion of the atmosphere between seven and ten miles from the Earth's surface where clouds are formed.

**Tundra:** A type of ecosystem dominated by lichens, mosses, grasses, and weedy plants. Tundra is found at high latitudes (arctic tundra) and high altitudes (alpine tundra). Arctic tundra is underlain by permafrost and is usually very wet. (*See: wetlands*).

**Turbidimeter:** A device that measures the amount of suspended solids in a liquid.

**Turbidity:** 1. Haziness in air caused by the presence of particles and pollutants. 2. A similar cloudy condition in water due to suspended silt or organic matter.

## U

**Ultra Clean Coal (UCC):** Coal that has been washed, ground into fine particles, then chemically treated to remove sulfur, ash, silicone, and other substances; usually briquetted and coated with a sealant made from coal.

**Ultraviolet Rays:** Radiation from the sun that can be useful or potentially harmful. UV rays from one part of the spectrum enhance plant life and are useful in some medical and dental procedures; UV rays from other parts of the spectrum to which humans are exposed (e.g. while getting a sun-tan) can cause skin cancer or other tissue damage. The ozone layer in the stratosphere provides a protective shield that limit the amount of ultraviolet rays that reach the Earth's surface.

**Underground injection:** The subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

**Underground Injection Control (UIC):** The programme under the Safe Drinking Water Act that regulates the use of wells to pump fluids into the ground.

**Underground Sources of Drinking Water:** As defined in the UIC programme this term refers to aquifers that are currently being used as a source of drinking water, and those that are capable of supplying a public water system. They have a total dissolved solids content of 10,000 milligrams per litre or less, and are not "exempted aquifers". (*See: exempted aquifer*).

**Underground Storage Tank:** A tank located all or partially underground that is designed to hold gasoline or other petroleum products or chemical solutions.

**Unsaturated Zone:** The area above the water table where the soil pores are not fully saturated, although some water may be present.

**Uranium:** A radioactive heavy metal element used in nuclear reactors and the production of nuclear weapons. Term refers usually to U-238, the most abundant radium isotope, although a small percentage of naturally-occurring uranium is U-235.

**Urban Runoff:** Stormwater from city streets and adjacent domestic or commercial properties that may carry

pollutants of various kinds into the sewer systems and/or receiving waters.

**USEPA:** United States Environmental Protection Agency.

## V

**Vaccine:** Dead or partial or modified antigen used to induce immunity to certain infectious diseases.

**Vapour:** The gaseous phase of substances that are liquid or solid at atmospheric temperature and pressure, e.g., steam.

**Vapour Capture System:** Any combination of hoods and ventilation system that captures or contains organic vapours in order that they may be directed to an abatement or recovery device.

**Vapour Dispersion:** The movement of vapour clouds in air due to wind, gravity spreading, and mixing.

**Vapour Plumes:** Flue gases that are visible because they contain water droplets.

**Vaporisation:** The change of a substance from a liquid to a gas.

**Variance:** Government permission for a delay or exception in the application of a given law, ordinance, or regulation.

**Vector:** 1. An organism, often an insect or rodent, that carries disease. 2. An object that is used to transport genes into a host cell (vectors can be plasmids, viruses, or other bacteria). A gene is placed in the vector; the vector then "infects" the bacterium.

**Ventilation/Suction:** The act of admitting fresh air into a space in order to replace stale or contaminated air; achieved by blowing air into the space. Similarly, suction represents the admission of fresh air into an interior space by lowering the pressure outside of the space, thereby drawing the contaminated air outward.

**Vinyl Chloride:** A chemical compound, used in producing some plastics, that is believed to be carcinogenic.

**Virus:** The smallest form of micro-organisms capable of causing disease.

**Visible Emission Standard:** This controls the emission of black smoke from stacks or vehicle exhausts.

**Volatile:** Description of any substance that evaporates readily.

**Volatile Organic Compound (VOC):** Any organic compound which participates in atmospheric photochemical reactions except for those designated by FEPA's Director/Chief Executive as having negligible photochemical reactivity.

**Volatile Synthetic Organic Chemicals:** Chemicals that tend to volatilize or evaporate from water.

**Vulnerability Analysis:** Assessment of elements in the community that are susceptible to damage should a release of hazardous materials occur.

**Vulnerable Zone:** An area over which the airborne concentration of a chemical involved in an accidental release could reach the level of concern.

## W

**Waste:** 1. Unwanted materials left over from a manufacturing process. 2. Refuse from places of human or animal habitation.

**Waste Load Allocation:** The maximum load of pollutants each discharger of waste is allowed to release into a particular waterway. Discharge limits are usually required for each specific water quality criterion being or expected to be, violated.

**Waste Treatment Stream:** The continuous movement of waste from generator to treater and disposer.

**Waste Treatment Plant:** A facility containing a series of tanks, screens, filters and other processes by which pollutants are removed from water.

**Wastewater:** The spent or used water from individual homes, a community, a farm or an industry that contains dissolved or suspended matter.

**Wastewater Operations and Maintenance:** Actions taken after construction to assure that facilities constructed to treat wastewater will be properly operated, maintained, and managed to achieve efficiency levels and prescribed effluent levels in an optimum manner.

**Water Courses:** This includes water bodies such as streams, rivers, lagoons, etc.

**Water Pollution:** The presence in water of enough harmful or objectionable material to damage the water's quality.

**Water Quality Criteria:** Specific levels of water quality which, if reached, are expected to render a body of

water suitable for its designated use. The criteria are based on specific levels of pollutants that would make the water harmful if used for drinking, swimming, farming, fish production, or industrial processes.

**Water Quality Guideline:** A numerical concentration or narrative statement recommended to support and maintain a designated water use.

**Water Quality Objective:** A numerical concentration or narrative statement which has been established to support and protect the designated uses of water at a specified site. An "Objective" is an aim or goal towards which to strive. It is not as rigid and authoritative as a standard and does not have enforcement element.

**Water Quality Standards:** State-adopted and FEPA-approved ambient standards for water bodies. The standards cover the use of the water body and the water quality criteria which must be met to protect the designated use or uses.

**Watershed:** The land area that drains into a stream.

**Water Supplier:** A person who owns or operates a public water system.

**Water Supply System:** The collection treatment, storage and distribution of potable water from source to consumer.

**Water Solubility:** The maximum concentration of a chemical compound, which can result when it is dissolved in water. If a substance is water soluble it can very readily disperse through the environment.

**Water Table:** The level of ground water.

**Well:** A bored, drilled, or driven shaft, or a dug hole, whose depth is greater than the largest surface dimension and whose purpose is to reach underground water supplies or oil, or to store or bury fluids below ground.

**Well Injection:** The subsurface emplacement of fluids in a well.

**Well Monitoring:** The measurement, by on-site instruments or laboratory methods, of the quality of water in a well.

**Well Plug:** A watertight and gastight seal installed in a borehole or well to prevent movement of fluids.

**Wetlands:** An area that is regularly saturated by surface

or ground water and subsequently is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include: swamps, bogs, fens, marshes and estuaries.

**Wildlife Refuge:** An area designated for the protection of wild animals, within which hunting and fishing are either prohibited or strictly controlled.

**Wood-Burning Stove Pollution:** Air pollution caused by emission of particulate matter, carbon monoxide, total suspended particulates, and polycyclic organic matter from wood-burning stoves.

**Working Level (WL):** A unit of measure for documenting exposure to radon decay products. One working level is equal to approximately 200 picocuries per litre.

**Working Level Month (WLM):** A unit of measure used to determine cumulative exposure to radon.

**Workroom Air Standard:** This specifies threshold limit values which represent the concentration in air below which a contaminant is normally harmless for occupational exposure. This standard is set to protect workers in factories.

**WPC:** Water Pollution Control.

## X, Y, Z

**Xenobiotic:** Term for non-naturally occurring man-made substances found in the environment (i.e. synthetic material solvents, plastics).

**Zooplankton:** Tiny aquatic animals eaten by fish.

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## ZIMBABWE

### The Forest Act

#### CHAPTER 19:05

Acts 37/1949, 28/1953, 3/1954, 12/1954, 43/1954, 14/1955, 19/1959, 8/1960, 26/1961, 14/1962 (s.2), 24/1962 (s.2), 28/1963, 47/1963 (s.62), 19/1965, 53/1967, 75/1971, 12/1972, 39/1973 (s.53), 46/1973 (s.144), 54/1973 (s.31) 9/1975, 42/1976 (s.8), 48/1976, 22/1977, 10/1978, 5/1979, 40/1981, 20/1982, 31/1983, 8/1988, 17/1989, 18/1989 (s.16), 29/1990 11/1991 (s.13); R.G.N.s 153/1963, 214/1964, 216/1970, 217/1970, 313/1970, 365/1970, 1181/1971, 923/1972; S.I.'s 468/1979, 675/1979, 662/1980, 193/1981, 489/1981, 307/1982, 364/1982, 530/1982, 669/1982, 255/1983, 455/1983, 635/1983, 647/1983, 80/1984, 117/1984, 362/1984, 86/1985, 44/1986, 283/1986, 322/1986, 156/1987, 296/1987, 88/1988, 115/1988, 206/1990.

AN ACT to establish a commission for the administration, control and management of State forests, to provide for the transfer of certain assets belonging to the Government to the said Commission; to provide for the setting aside of State forests and for the protection of private forests, trees and forest produce; to establish a Mining Timber Permit Board and to control the cutting and taking of timber for mining purposes; to provide for the conservation of timber resources and the compulsory afforestation of private land; to regulate and control trade in forest produce including the use of trade names and marks in connection with forest produce; to regulate and control the burning of vegetation; and for other purposes connected with the foregoing.

[Date of commencement: 9th December, 1949.]

#### 1. Short title

This Act may be cited as the Forest Act [Chapter 19:05].

#### 2. Interpretation

In this Act:

“appointed day” means the 2nd February, 1979;

“Commission” means the Forestry Commission established under this Act;

“commissioner” means a person who is appointed as a member of the Commission;

“demarcated forest” means an area of land which has been declared to be a demarcated forest in terms of this Act;

“fireguard” means a strip of land, whether under trees or not, which has been cleared of inflammable matter;

“forest Estate” means the Forest Estate specified in section *thirty-three*;

“forest land” means forest land specified in section *thirty-four*,

“forest officer” means any person appointed by the Minister as a forest officer for the purposes of this Act;

“forest produce”, in relation to:

- (a) a demarcated forest, means anything which is grown or is found naturally therein, including any wild or domesticated animal, but excluding any mineral or mineral substance as defined in the Mines and Minerals Act [Chapter 21:05];
- (b) an underdemarcated forest, means all trees, timber, palms and bamboos therein; but excludes anything specified by the Minister, by statutory instrument, for the purposes of this definition;

“local authority” means a municipal council, town council, local board or rural district council;

“Minister” means the Minister of Environment and Tourism or any other Minister to whom the President may, from time to time, assign the administration of this Act;

“occupier”, in relation to any land, means the person exercising general control over the land and, for the purposes of section *sixty-seven*, includes any person authorized by such an occupier to receive notice given in terms of that section;

“**plantation**” means any artificially established tree, as ordinarily understood, or forest of such trees, and includes any natural extension of such tree or trees;

“**private forest**” means a forest, plantation or tree situated on land not owned by the State;

“**private land**” means any land the ownership of which has by law, grant or title deed become vested in any person other than the President, and includes any land held by any person under any agreement whereby such person is entitled to obtain from the President title thereto on the fulfilment by him of the conditions prescribed by such agreement but does not include any Communal Land;

“**protected private forest**” means any area of land which is protected under a notice issued in terms of subsection (3) of section *thirty-seven*;

“**reserved tree**” means a tree which has been reserved by a notice in terms of section *thirty-eight*;

“**Rhodes Estates**” means the Rhodes Estates described in the Rhodes Estates Act [*Chapter 20:17*];

“**State forest**” means any demarcated forest or any undemarcated forest;

“**timber**” means all wood contained in trees, whether standing, fallen or felled, and all wood, whether produced in or imported into Zimbabwe and whether sawn, split, hewn or planed or otherwise fashioned or processed;

“**tree**” means the whole or any part of any tree as ordinarily understood, or of any shrub, bush, seedling, transplant, sapling, re-shoot, under-bush, undergrowth or regrowth;

“**trust land**” means any land, other than Communal Land, held in trust by the President or a statutory body or by a person, whether solely or jointly with others, by virtue of his being a holder of some office in a statutory body;

“**undemarcated forest**” means any area of State land which is not a demarcated forest, but does not include—

- (a) any State land held by any person under any agreement whereby such person is entitled to obtain from the President title thereto on the fulfilment by him of the conditions prescribed by such agreement;
- (b) the Parks and Wild Life Estate; or
- (c) Communal Land;

“**vegetation**” includes any tree, bush, shrub, brushwood,

undergrowth or grass and any other vegetation.

### 3 Minister may appoint forest officers

The Minister may appoint any person in the employment of the Commission or in the Public Service as a forest officer for the purposes of this Act.

## PART II FORESTRY COMMISSION

### 4 Establishment of Forestry Commission

Upon the 1st April, 1954, there shall be established a commission under the name of the Forestry Commission, which shall be a body corporate capable of suing and being sued in its corporate name and, subject to this Act, of performing all such acts as bodies corporate may be law perform.

### 5 Constitution of Commission and terms of office of commissioners

(1) The Commission shall consist of not less than three and not more than eight commissioners appointed by the Minister after consultation and in accordance with any directions the President may give him.

(2) The commissioners shall be appointed by the Minister for such periods, not exceeding three years, and on such terms and conditions as he thinks fit.

(3) The Minister shall appoint one of the commissioners to be chairman of the Commission and may, if the chairman is prevented by illness, absence from Zimbabwe or other like cause from exercising his functions as chairman, appoint one of the other commissioners to act as chairman.

(4) If a commissioner is prevented by illness, absence from Zimbabwe or other like cause from exercising his functions on the Commission, the Minister may appoint any person to act as commissioner, and the person so appointed shall, during the period of his appointment, exercise all the powers and fulfil all the duties of the commissioner for whom he is appointed to act.

(5) A commissioner may at any time by resignation under his hand addressed to the Minister resign his membership.

(6) The Commission shall pay:

- (a) to the chairman of the Commission in respect of his office as chairman, such remuneration as may be determined by the Minister;

- (b) to any other commissioner in respect of his office as commissioner, such remuneration as may be determined by the Minister;
- (c) to any person appointed to act as chairman or as a commissioner, the remuneration to which he is entitled under the terms of his appointment;
- (d) to all commissioners, travelling and subsistence allowances in accordance with such tariff and such conditions as the Commission may from time to time fix.

(7) A commissioner who ceases to be a commissioner shall be eligible for reappointment unless he is disqualified for membership of the Commission.

### 6 Disqualification for commissioner

(1) A person shall be disqualified from being a commissioner if\_

- (a) he is a member of Parliament; or
- (b) he holds any other office in which his duties are reasonably likely to conflict with his duties towards or the interests of the Commission; or
- (c) he has an interest in any undertaking connected with forestry, saw-milling or timber other than the undertaking of the Commission; or
- (d) he has any direct or indirect pecuniary interest in any contract with the Commission.

(2) It shall be the duty of the Minister to satisfy himself that every person whom the President proposes to appoint as a commissioner is not disqualified in terms of subsection (1) and also from time to time to satisfy himself that no person who is a commissioner is so disqualified; and every such person shall, whenever requested so to do, furnish him with such information as the Minister may consider necessary for the performance of his duty under this subsection.

### 7 Powers of President to declare office of commissioner vacant

- (1) If the Minister is satisfied that a commissioner\_
  - (a) is disqualified for membership of the Commission; or
  - (b) has been absent from more than three consecutive meetings of the Commission without the permission of the Commission; or

- (c) has become insolvent or made an arrangement with his creditors; or
- (d) is incapacitated by physical or mental illness; or
- (e) is otherwise unable or unfit to discharge the functions of a commissioner;

the Minister may declare his office as a commissioner to be vacant and shall notify the fact in such manner as he may think fit, and thereupon the office of that commissioner shall become vacant.

(2) When a commissioner's office becomes vacant or a commissioner dies, the Minister shall, in accordance with any directions the President may give him appoint a person to fill the vacancy and such person shall hold office until the expiration of the period during which such commissioner would, but for the vacancy or his death, as the case may be, have continued in office.

### 8 Duties of Commission

Subject to this Act, the Commission shall be charged with the following duties:

- (a) the consideration of all questions and matters arising out of or relating to general forest policy and the making of reports and recommendations thereon to the Minister;
- (b) the control, management and exploitation of State forests, plantations and forest nurseries belonging to the State and such other land as may be acquired by the State for forestry purposes;
- (c) the establishment, maintenance, improvement, renewal and exploitation of plantations and forest nurseries;
- (d) the survey of the forest resources of Zimbabwe;
- (e) advice and propaganda on all forestry matters;
- (f) conducting research and investigations into all matters pertaining to forestry and forest products;
- (g) the determination of whether the President should exercise any of his powers in terms of section thirty-five and to make a recommendation thereon to the President;
- (h) the investigation of any matter relating to the use or occupation of the Forest Estate and the making of recommendations thereon to the President where it considers such use or occupation is inconsistent with this Act;



and with such other duties relating to forestry as the Minister may from time to time direct.

### **9 Recommendation as to declaration of demarcated forest**

The Commission shall not recommend to the President that he exercise his power to declare any land demarcated forest where the recommendation relates to land which is:

- (a) parks and wild life land, unless the Parks and Wild Life Board established in terms of the Parks and wild Life Act [Chapter 20:14] has been consulted;
- (b) Communal Land, unless the Minister responsible for the administration of the Communal Land Act [Chapter 20:04], and any rural district council established for the area concerned have been consulted;
- (c) within the area under the jurisdiction of a local authority, unless the local authority has been consulted.

### **10 Recommendations as to improper use of Forest Estate**

Where any recommendation has been made to him in terms of paragraph (h) of section eight the President may—

- (a) direct any Minister to take such action as may be necessary to comply with the recommendation of the Commission; or
- (b) reject the recommendation and, in such event, the reasons therefor shall be communicated in writing to the Commission.

### **11 Powers of Commission**

For the better exercise of its duties, the Commission shall, subject to this Act, have power to do or cause to be done, either by itself or through its agents, all or any of the things specified in the Second Schedule, either absolutely or conditionally and either solely or jointly with others.

### **12 Commission to be subject to direction of Minister**

The Commission shall, in carrying out its duties and in Commission to be exercising its powers under this Act, comply with such directions as may be given to it from time to time by the Minister.

### **13 Transfer to Commission of undertaking of Forestry Branch**

- (1) As from the 1st April, 1954, the undertaking of the

Forestry Branch of the Department of Agriculture shall by virtue and subject to this Act be transferred to and vest in the Commission.

- (2) The transfer effected by subsection (1) shall extend to:

- (a) all forest produce in State forests and on other State land administered by the Forestry Branch;
- (b) such buildings occupied by the Forestry Branch as the Minister may determine;
- (c) all saw-mills, plant, vehicles, equipment, tools, gear, livestock, wells, boreholes and other water supplies belonging to the State and used by the Forestry Branch:

Provided that no State land shall be transferred to the Commission by virtue of this section.

- (3) A valuation shall be made by the Minister of the undertaking transferred in terms of this section and the sum represented by such valuation, hereinafter referred to as "initial capital", shall be a debt due by the Commission to the State.

### **14 Transfer of certain land to Commission**

- (1) Such State land, not being demarcated forest, as is designated by the Minister for the purposes of this section shall be transferred, with effect from a date fixed by the Minister, to the Commission.

- (2) The Registrar of Deeds shall, where so directed by the Minister, make such endorsements on the appropriate title deeds and in his registers as may be required by reason of the transfer to the Commission of the land referred to in subsection (1), and all such transfers shall be exempt from stamp duty, fees of office and other such charges.

### **15 Control and management of demarcated forests**

- (1) Subject to subsection (2), the Commission shall have the control and management of:

- (a) demarcated forests; and
- (b) all land expropriated in terms of section forty; and
- (c) any other State land designated by the Minister for the purposes of this paragraph.

- (2) The Commission shall have the control and management of any demarcated forest which is part of the Rhodes Estates only in so far as such demarcated forest has been leased to the Commission and only in so far as

such control and management is consistent with the lease.

## 16 Property of Commission

The Commission:

- (a) shall own:
  - (i) all immovable property designated by the Minister in terms of subsection (1) of section *fourteen* and any other immovable property the ownership of which is acquired by the Commission; and
  - (ii) all movable assets transferred to the Commission in terms of section *thirteen* and all other movable property the ownership of which is acquired by the Commission; and
  - (iii) any forest produce obtained from a demarcated forest or other land referred to in paragraph (b) or (c) of section *fifteen* which is not immovable property;

and

- (b) may exercise, subject to subsection (2) of section *fifteen*, the rights of ownership, other than the right of alienation of ownership, in respect of any demarcated forest or other land referred to in paragraph (b) or (c) of section *fifteen*.

## 17 Lease of demarcated forest

- (1) The Minister may, on the recommendation of the Commission, lease to any person any portion of a demarcated forest.
- (2) The Minister shall pay to the Commission all rents derived from any person who has been permitted in terms of subsection (1) to acquire the lease of any portion of a demarcated forest.

## 18 Contracts

Any reference to the Minister, the conservator or the Forestry Branch of the Department of Agriculture in any agreement relating to forest produce between the State and any other person or in any licence relating to forest produce granted by the State to any person shall, on or after the 1st April, 1954, be read and construed as a reference to the Commission or its chief executive officer appointed in terms of this Act, as the context may require.

## 19 Financial year and programme of Commission

- (1) The financial year of the Commission shall be the period of twelve months ending on the 30th June in each

year.

- (2) The Commission shall before the end of its financial year submit a programme to the Minister setting out in detail the projected revenue and expenditure for each of the succeeding four years, showing separately:

- (a) capital expenditure; and
- (b) deferred revenue expenditure; and
- (c) current revenue expenditure on trading account stating separately the amount required for contributions to the vehicle and equipment sinking fund; and
- (d) current revenue; and
- (e) activities carried out on behalf of the State; and
- (f) the net amounts required from the Treasury to finance capital expenditure, deferred revenue expenditure, trading activities and activities carried out on behalf of the State.

- (3) The Minister in consultation with the Minister responsible for finance may:

- (a) approve of the programme; or
- (b) after consultation with the Commission, direct deletions from, modifications of or additions to the programme.

- (4) Where the Minister has directed deletions from or modifications of or additions to the programme, the statements of projected revenue and expenditure which support it shall be amended accordingly.

- (5) No major variation of the programme approved by the Minister or of the estimates of expenditure may be made without the approval of the Minister given in consultation with the Minister responsible for finance.

- (6) For the purposes of this section\_

“activities carried out on behalf of the State” means those activities of the Commission which are carried out as a service to the public on behalf of the State;

“capital expenditure” means that expenditure, other than deferred revenue expenditure, which is incurred in acquiring assets;

“current revenue” means income derived from the activities of the Commission, including grants made by the Ministry responsible for finance but excluding advances or loans received from the State or any other source:

“current revenue expenditure” means that expenditure which is incurred in exploiting forest produce or in carrying out activities on behalf of the State;

“deferred revenue expenditure” means that expenditure which is incurred in the establishment, re-establishment or tending of plantations before they are exploited;

“trading activities” means those activities of the Commission, excluding the activities carried out directly on behalf of the State, which have as their object the exploitation of forest produce.

## 20 Commission to open banking account

The Commission shall open an account or accounts in its name at a bank or banks into which all moneys received by the Commission shall be paid in the first instance and out of which all payments by the Commission shall be made.

## 21 Advances and grants to and borrowing powers of Commission

(1) The Commission may obtain from the Ministry responsible for finance, and the Ministry responsible for finance may, out of moneys appropriated by Act of Parliament for the purpose, pay to the Commission:

- (a) by way of advances or grants such sums as may be necessary to make good any excess of expenditure over revenue in respect of the preceding year after adding back:
  - (i) in respect of trees clear-felled, the cost incurred over past years in raising them; and
  - (ii) depreciation, excluding sinking fund instalments; and
  - (iii) interest on advances from the Ministry responsible for finance;
- (b) by way of advances, such sums as may be necessary to finance the trading programme approved under section nineteen and as set out in the statement of revenue and expenditure in support thereof in respect of the current year;
- (c) by way of grant, the net amount required to finance the activities carried out on behalf of the State by the Commission in respect of the current year;
- (d) by way of advances or grants or partly by way of advances and partly by way of grants, any sums required to finance\_
  - (i) capital expenditure, excluding replacements; and

(ii) deferred revenue expenditure;

(e) by way of advances or grants, such other sums as may be approved by the Ministry responsible for finance after consultation with the Minister.

(2) The Commission may also, with the consent of or in accordance with the terms of any authority given by the Ministry responsible for finance, borrow from such sources and on such terms as the Ministry responsible for finance may approve, such sums as the Commission may require.

(3) For the purposes of this section, “activities carried out on behalf of the State”, “capital expenditure” and “deferred revenue expenditure” have the meanings, respectively, assigned to them by subsection (6) of section nineteen.

## 22 Forestry Reserve Fund

(1) As soon as there is a surplus in the funds of the Commission, the Commission shall establish a fund to be known as the Forestry Reserve Fund into which shall be paid an amount equal to three-fifths of any annual surplus as revealed by the Commission’s annual audited accounts.

(2) Surplus moneys in the Forestry Reserve Fund, which are not immediately required for any purpose for which moneys in that Fund may under this Act be applied, may be held in investments approved by the Minister after consultation with the Minister responsible for finance.

(3) The balance of any surplus remaining after the payment referred to in subsection (1) has been made and the interest received on investments made in terms of subsection (2) shall be appropriated in the following order, that is to say:

- (a) in reduction of advances and loans made to the Commission;
  - (b) in redemption of the initial capital of the Commission;
  - (c) to the credit of the Consolidated Revenue Fund.
- (4) For the purposes of this section\_

“surplus” means the balance which, at the end of the Commission’s financial year, remains on revenue and expenditure account, after taking into account interest receivable on previous payments into the Forestry Reserve Fund and after providing for administration expenses, sinking fund instalments and interest, less any net requirements on the trading activities of the succeeding year, excluding development, and any outstanding

debit balance on revenue and expenditure account brought forward from a previous period or previous periods.

### 23 Interest on advances

The Commission shall, if the Minister responsible for finance so directs, pay interest to the State on the outstanding balances of the initial capital of the Commission and of the advances made to it under subsection (1) of section *twenty-one* at such rate as may be fixed by the Minister responsible for finance.

### 24 Exemption from income tax

The receipts and accruals of the Commission shall be exempt from income tax imposed under any enactment.

### 25 Accounts and audit

(1) The Commission shall cause to be kept proper books of account and the other books and records in relation thereto and shall prepare in respect of each financial year a statement of accounts in such form as the Minister may direct.

(2) The accounts of the Commission shall be audited by an auditor appointed annually by the Commission with the approval of the Minister.

(3) The auditor appointed in terms of subsection (2) may be:

- (a) the Comptroller and Auditor-General; or
- (b) a person registered as public auditor in terms of the Public Accountants and auditors Act [Chapter 27:12].

(4) The auditor appointed in terms of subsection (2) shall make a report to the Commission on the accounts examined by him and on the statement of accounts prepared for the financial year for which he is appointed, and the report shall include a statement showing\_

- (a) whether or not he has obtained all the information and explanations he has required; and
- (b) whether or not, in his opinion, such statement of accounts is properly drawn up so as to exhibit a true and fair view of the state of affairs of the Commission according to the best of his information and the explanations given to him and as shown by the books of the Commission.

(5) The auditor appointed in terms of subsection (2) shall have a right of access at all times to the books, accounts and vouchers of the Commission and shall be

entitled to require from the members and employees of the Commission such information and explanations as may be necessary for the performance of his duties.

(6) As soon as the accounts of the commission have been audited, the Commission shall send the statement of its accounts required in terms of this section to the Minister, together with a copy of any report made on that statement by the auditor concerned.

### 26 Procedure

(1) The quorum of the Commission shall be two commissioners when the number of commissioners appointed is three or four, and not less than half the number of commissioners when the number of commissioners appointed exceeds four.

(2) The Commission shall hold such meetings as in the opinion of the chairman are necessary for the efficient conduct of its business, and such meetings shall be held not less than once in every two months.

(3) The chairman shall preside at all meetings at which he is present and in his absence from any meeting, unless an acting chairman has been appointed, the commissioners shall elect one of their number to act as chairman at that meeting.

(4) The chairman shall have a deliberative vote as well as a casting vote.

(5) If the Commission makes a decision on any matter on or in connection with which it has received from its chief executive officer appointed in terms of this Act advice of a technical nature, involving special knowledge and experience of forestry, and such decision is not in accordance with such advice, the Commission shall report the matter to the Minister, and the decision of the Minister shall be accepted by the Commission.

(6) The Commission may, with the approval of the Minister, make rules with respect to the holding of meetings of the Commission, the notices to be given of such meetings, the proceedings thereat, the keeping of minutes of such proceedings and the custody and production for inspection of such minutes.

(7) Subject to any such rules, the procedure of the Commission shall be such as the Commission may determine.

### 27 Staff of Commission

(1) Subject to this section, the Commission may appoint, upon such terms and conditions as it deems fit, such employees as it considers necessary for conducting the business of the Commission.

(2) No person on secondment from the Public Service shall be dismissed, discharged or required to retire by the Commission except with the consent of the Public Service Commission and after consultation with the Minister.

(3) Without derogation from the grounds specified in his conditions of service, an employee of the Commission may be dismissed, discharged or required to retire:

- (a) on the grounds of his continued ill-health or if he becomes incapable because of mental or physical deficiency or infirmity of efficiently performing his duties; or
- (b) if he becomes inefficient or incapable for some reason, other than mental or physical deficiency or infirmity, of efficiently performing his duties; or
- (c) if he is unsuited for the post he occupies or any other post to which he could be promoted or transferred without his consent; or
- (d) if his removal will facilitate improvements in the organization of the Commission whereby greater efficiency or economy can be effected; or
- (e) owing to the abolition of his post or a reduction in or an adjustment of the organization of the Commission; or
- (f) if he has been detained for a period of more than three months in terms of any enactment providing for the detention of persons in time of public emergency or for the preventive detention of persons; or
- (g) if he has, for a period of more than three months, been subject to an order made in terms of any enactment whereby he is required to remain within, or prohibited from entering, a specified area in Zimbabwe; or
- (h) he is deported or extradited from Zimbabwe.

(4) Subject to subsection (3), the Commission shall appoint one of its employees nominated by the Minister, after consultation with the Commission, to be the chief executive officer and another employee nominated in like manner to be the deputy of the chief executive officer.

(5) No person shall be appointed in terms of subsection (2) to be the chief executive officer or his deputy unless he holds a prescribed degree in forestry and has special knowledge and experience of forestry.

(6) The employees of the Commission shall, subject to this Act, exercise the powers and functions and perform

the duties assigned to them by the chief executive officer or, in his absence, by his deputy.

(7) Notwithstanding anything to the contrary contained in the law relating to the Public Service, no officer in the Public Service shall be seconded to the Commission except for an indefinite period.

(8) The First Schedule shall apply to any employee of the Commission who is not on secondment from the Public Service.

### 28 Pension contributions to be deducted

Any contributions for pension purposes which are payable to the Consolidated Revenue Fund in terms of this Act by an employee of the Commission, whether on secondment from the Public Service or otherwise, shall be deducted from the emoluments of the employee concerned and forwarded by the Commission to the State.

### 29 Commission to contribute to Consolidated Revenue Fund

There shall be paid monthly out of the funds of the Commission to the Consolidated Revenue Fund such amount as may be determined by the Minister responsible for finance, after consultation with the Commission, in respect of the contributions for pension purposes paid to the Consolidated Revenue Fund by employees of the Commission.

### 30 Disability benefits

(1) Any enactment providing for the payment of compensation in respect of the injury or death of officers or employees of the Public Service shall apply, *mutatis mutandis*, in relation to contributors as though they were officers or employees of the Public Service.

(2) The Minister responsible for finance may recover from the Commission any compensation paid to a contributor or his dependants in terms of subsection (1).

(3) A contributor shall not be regarded as a workman for the purposes of the National Social Security Authority Act [Chapter 17:04].

(4) In this section:

“contributor” means an employee of the Commission who is paying contributions to the Consolidated Revenue Fund in terms of this Act, whether he is on secondment from the Public Service or otherwise.

### 31 suspension, reduction or forfeiture of pension or

### gratuity

If any employee or former employee of the Commission who becomes entitled to a pension or gratuity or is in receipt of a pension under this Act:

- (a) is found by a board appointed by the President for the purpose to have made improper use of or to have disclosed in an improper manner any information which he may have obtained in the course of his employment; or
- (b) is found by a competent court to have been guilty of misappropriation of property of the Commission which would, if it had been discovered before he became entitled to a pension or gratuity, have rendered him liable to discharge or dismissal; or
- (c) is found to have made a false statement for the purpose of obtaining a pension or gratuity or commutation of pension, knowing the statement to be false or not believing it to be true; or
- (d) refuses to comply with a reasonable request made by the Commission to afford all assistance and information in his power relating to any appointment formerly held or class of duty formerly carried out by him; or
- (e) solicits or, without the consent of the Commission, accepts, directly or indirectly, any gift of a pecuniary value after retirement in connection with his service;

the President may order that any right to any pension or gratuity to which that person has become entitled or the pension of which he is in receipt shall be suspended, reduced or forfeited.

### 32 Deduction from pension, gratuity, refund of contributions or other benefit

- (1) The Minister responsible for finance may authorize the deduction from any pension, gratuity, refund of contributions, commutation of pension or other benefit payable under this Act to an employee of the Commission who has been discharged or dismissed for misconduct of an amount equal to any direct loss which the Commission has sustained by reason of the conduct of the employee on account of which the employee was discharged or dismissed from the service of the Commission.
- (2) The Minister may authorize the deduction from any pension, gratuity, refund of contributions or other benefit to which a person or his estate is entitled under this Act of a liquidated amount which that person is liable to pay to the Commission.

- (3) To facilitate the recovery of an amount due under this section, the Minister may order the commutation, in accordance with any enactment relating to the commutation of pensions payable to members of the Public Service, of all or part of the pensions payable to the member notwithstanding anything to the contrary contained in this Act.

## PART III

### FOREST ESTATE AND FOREST LAND

#### 33 Forest Estate

- (1) The Forest Estate shall consist of:
  - (a) forest land;
  - (b) demarcated forest on Rhodes Estates;
  - (c) land owned by the Commission specified in Part III of the Third Schedule.
- (2) The forest Estate shall be used for the purposes specified in this Act.

#### 34 Forest land

- (1) Forest land shall consist of State land which is declared to be a demarcated forest.
- (2) The total extent of forest land shall not be reduced by more than one per *centum* of the total extent of forest land on the appointed day.

## PART IV

### DEMARCATED FORESTS, NATURE RESERVES, PRIVATE PROTECTED FORESTS, RESERVED AND PROTECTED TREES

#### 35 Demarcated forest

- (1) Each of the areas described in Parts I and II of the Third Schedule is hereby declared to be a demarcated forest which shall be known by the name specified in the Third Schedule.
- (2) Subject to this Act, the President may, on the recommendation of the Commission, by notice in a statutory instrument, amend the Third Schedule for the purpose of:
  - (a) declaring a new demarcated forest and specifying the name thereof;
  - (b) changing the name of any demarcated forest;

- (c) adding any area to a demarcated forest;
  - (d) subtracting any area from a demarcated forest;
  - (e) abolishing any demarcated forest.
- (3) No land shall be declared to be demarcated forest unless it is:

- (a) State land; or
- (b) trust land and the trustees thereof have consented thereto.

(4) Any notice made in terms of paragraph (a), (b) or (c) of subsection (2) shall be laid before Parliament as soon as may be after it has been published and if a resolution is passed within the next twenty-eight days on which Parliament has sat next after the notice is laid before it requesting the President to rescind or vary the notice, it shall forthwith be rescinded or varied, as the case may be, by further statutory instrument but without prejudice to the validity of anything previously done thereunder.

(5) No notice may be made in terms of paragraph (d) or (e) of subsection (2) unless the proposal to make such notice has been approved by Parliament.

### 36 Minister may amend Third Schedule

(1) The Minister may, by notice in a statutory instrument, amend the Third Schedule in order to—

- (a) more clearly describe such land; or
- (b) correct any error in the description of or statement of extent of such land.

(2) The Minister may, by statutory instrument, amend Part III of the Third Schedule in order to add any land which is acquired by the Commission or delete any land which is no longer owned by the Commission.

(3) No notice made in terms of this section shall have the effect of transferring any land to or from the Forest Estate.

### 37 Owner of private land may apply for protection of forest

(1) The owner of any private land who has placed or intends to place such land or any portion of such land under a system of forest management approved by the Commission may make application to the Minister for a declaration that such land or such portion of such land shall be protected under this Act.

(2) Upon receipt of an application in terms of subsection (1), the Minister shall require the Commission—

(a) to submit a report on the area to which the application relates and to cause a sketch plan to be produced together with a written description, approved by the Surveyor-General, of the boundaries of such area;

(b) to cause a certified copy of such report, together with a copy of the plan attached thereto, to be deposited in the office of the local authority for the area and of the mining commissioner in whose district the area is situated. Such report and plan shall be available at such office during office hours for inspection by members of the public, free of charge;

(c) to cause:

- (i) in the case of an indigenous forest, three months' notice; or
- (ii) in the case of a plantation, whether already established at the date of the application or to be established thereafter, one month's notice;

of the intention to declare such area to be protected under this Act to be published on three consecutive occasions in the Gazette and in a newspaper circulating in the district in which the area is situated and to call upon any person who has any objection to the proposed declaration to lodge his objection in writing with the Minister within three months or one month, as the case may be, of the last publication of the notice in terms of this paragraph.

(3) The Minister after consideration of the application and objections, if any, may, if he is satisfied that the public interest will not be prejudiced thereby, by statutory instrument, declare that the area of private land described in such notice shall be protected under this Act.

(4) The Minister may at any time revoke any declaration issued in terms of this section if he is satisfied that the private land to which it relates is no longer under a system of forest management approved by the Commission or if the owner so requests.

### 38 Reservation of trees or forest produce

The Minister may, in respect of any State forest, by statutory instrument, declare any species of tree or any forest produce to be specially reserved and may in like manner revoke or amend any such declaration.

### 39 Protection of forest or trees from cutting

(1) Whenever, in respect of any land not being a State forest, the President deems it expedient in the public interest that any tree or the whole or any part of a forest or plantation shall be protected, the President may, by proclamation, declare such tree or such forest, part of a forest or plantation to be protected.

(2) The owner of any forest, plantation or tree in respect of which the President has exercised his power under subsection (1) shall be entitled to compensation for any loss resulting therefrom in such sum as may be mutually agreed upon or, failing agreement, as may be determined by arbitration.

**40 Expropriation of land for forest and certain other purposes**

Whenever, in the opinion of the President, any area of land is required for the production of forest produce, either by the conservation and management of forest produce existing on such land or by means of plantations, the President may expropriate such land on payment to the owner of the land of such sum as may be mutually agreed upon or, failing agreement, as may be fixed by arbitration:

Provided that the power of expropriation conferred by this section may only be exercised if the Natural Resources Board recommends the expropriation.

**41 Certain acts prohibited**

Unless authorized in terms of subsection (3) or (4) of section *forty-four*, no person shall:

- (a) cut, fell, injure or destroy any forest produce in, or remove any forest produce from, any demarcated forest or protected private forest; or
- (b) fell, remove or injure any tree or forest produce which is reserved in terms of section *thirty-eight*; or
- (c) cut, injure or destroy any tree protected or any tree in any forest or plantation or part of any forest or plantation protected in terms of section *thirty-nine* except with the written consent of the Minister and subject to such conditions as he may determine.

**42 Acts excepted from section 41**

Nothing in section *forty-one* shall be deemed to prohibit:

- (a) the owner of a protected private forest from exer-

cising full rights of ownership in regard to such protected private forest;

- (b) any act done with the permission or under the direction of the Commission;
- (c) any act done in accordance with regulations.

**PART V  
CONTROL OF MINING TIMBER RIGHTS:  
MINING TIMBER PERMIT BOARD**

**43 Interpretation in Part V**

In this Part:

“Board” means the Mining Timber Permit Board established by section *forty-six*;

“miner” means:

- (a) the holder of an exclusive prospecting order under; or
- (b) the holder of a registered mining location under; or
- (c) any miner as defined in;

the Mines and Minerals Act [Chapter 21:05]

“permit” means a mining timber permit referred to in subsection (1) of section *forty-five*;

“prospector” means:

- (a) the holder of a prospecting licence; or
- (b) the holder of a special grant to carry out prospecting operations;

issued under the Mines and Minerals Act [Chapter 21:05]

**44 Exercise of rights to timber under mining law restricted**

(1) No right to timber which is conferred upon a prospector under the mining law or under any title to land shall be exercised:

- (a) in any demarcated forest or protected private forest; or
- (b) in respect of any tree or forest produce which has been reserved under section *thirty-eight* or any tree, forest, plantation or part of any forest or plantation which has been protected under the provisions of



section *thirty-nine*.

(2) Any right to timber which is conferred upon a miner under the mining law or under any title to land may be exercised only if such miner obtains a permit under the provisions of this Part:

Provided that no such right shall be exercised:

- (a) in any demarcated forest or protected private forest; or
- (b) in respect of any tree or forest produce which has been reserved under section *thirty-eight* or any tree, forest, plantation or part of any forest or plantation which has been protected under section *thirty-nine*.

(3) Notwithstanding the provisions of subsections (1) and (2), the mining commissioner may, after consultation with the owner of a protected private forest, authorize a prospector or miner to cut or fell any vegetation in such protected private forest if such vegetation interferes with prospecting or mining operations, development work or the erection of buildings for mining purposes:

Provided that the prospector or miner shall comply with any requirement imposed by the mining commissioner as to the stacking or piling of any vegetation so cut or felled.

(4) Notwithstanding subsections (1) and (2), the commissioner may authorize a prospector or miner to cut, fell, use, stack or remove any forest produce in a demarcated forest if such forest produce interferes with prospecting or mining operations, development work or the erection of buildings for mining purposes.

#### **45 No miner may cut timber without permit**

(1) Subject to this section and notwithstanding any other law or of any title to land no miner shall cut, fell, injure or destroy:

- (a) any forest produce in or remove any forest produce from any State land; or
- (b) any indigenous trees or timber in or remove any indigenous trees or timber from private land;

unless he is in possession of a valid mining timber permit issued to him by the Board.

(2) Subsection (1) shall not apply to a miner in respect of any road-building or site-clearing operations or marking of boundary lines connected with his location, unless the Board has withdrawn this exemption on the ground that the miner is cutting, felling or removing forest produce, trees or timber in such manner as is result-

ing in undue damage to the locality concerned:

Provided that any forest produce, trees or timber cut or felled during such road-building or site-clearing operations or marking of boundary lines shall be stacked or piled.

(3) Nothing in subsection (1) shall be construed as requiring miner to be in possession of a permit in respect of the cutting, felling, removal or use of anything covered by an agreement made in terms of subsection (8) of section 103 or subsection (3) of section 178 of the Mines and Minerals Act [Chapter 21:05]

#### **46 Establishment and constitution of Mining Timber Permit Board**

(1) As from the 9th December, 1949, there shall be established a Mining Timber Permit Board.

(2) The Board shall consist of five members appointed by the Minister, of whom:

- (a) one shall be a forest officer nominated by the Commission, who shall be chairman;
- (b) one shall be a senior officer in the Public Service who is responsible to the Minister for the time being administering the Mines and Minerals Act [Chapter 21:05];
- (c) one shall be an officer of the Natural Resources Board nominated by the Natural Resources Board;
- (d) one shall be chosen by the Minister from a panel of names of persons resident in Zimbabwe submitted by the Chamber of Mines of Zimbabwe;
- (e) one shall be chosen by the Minister from a panel of names of persons resident in Zimbabwe submitted by such agricultural farming unions or associations as the Minister in his discretion may determine.

(3) The members of the Board who are members of the Public Service shall hold office at the Minister's pleasure and each of the other members shall hold office for a period not exceeding three years from the date of appointment, but shall be eligible for reappointment.

#### **47 Meetings of Board**

The Board shall at least once every three months hold an ordinary meeting for the consideration of applications for permits. The day and place of each ordinary meeting and the districts from which applications will be considered at such meeting shall be as appointed by the Board. The chairman may for good and sufficient reason on any particular occasion appoint a day and place for holding a special meeting. Due notice of all ordinary meetings

shall be published in the *Gazette*. The chairman shall, in the event of an equality of votes, have a casting vote in addition to a deliberative vote. A quorum for any meeting shall consist of the chairman and two members.

**48 Minutes of proceedings to be kept by Board**

The Board shall keep minutes of its proceedings in a book kept for that purpose which shall be signed by the chairman after confirmation at the next subsequent meeting. Such minutes shall be open at all convenient times for the inspection of the Minister or any person authorized by him.

**49 Applications for permits**

(1) Any miner who wishes to cut, fell, take, work or remove any:

- (a) forest produce from any undermarcated forest; or
- (b) indigenous trees or timber from private land other than land within a protected private forest;

under a permit shall make application therefor or for renewal thereof on the prescribed form, in triplicate, to the mining commissioner of the district in which he intends to carry out mining operations.

(2) On receipt of an application in terms of subsection (1), the mining commissioner shall:

- (a) by registered letter addressed to the ordinary postal address of the person concerned, transmit one copy of the application\_
  - (i) where the land concerned is State land, to the Minister responsible for lands;
  - (ii) where the land concerned is private land, to the owner or occupier thereof;

and inform him of his right to make representations to the Board in terms of subsection (3);

(b) transmit the application to the Board together with notification of the date on which the copy referred to in paragraph (a) was posted and any comments he may wish to make regarding the application.

(3) Any person to whom a copy of an application is required to be transmitted in terms of paragraph (a) of subsection (2) may, within the period of fourteen days from the date on which such copy was posted to him by the mining commissioner, make representations to the Board regarding the application.

(4) On receipt of an application transmitted to the Board

in terms of subsection (2), the chairman of the Board may issue a provisional permit which shall be valid until the application has been decided by the Board and shall, during its currency, be deemed to be a permit issued by the Board:

Provided that no provisional permit may be issued:

- (a) until the period referred to in subsection (3) has expired; or
- (b) if an objection to the granting of the application has been made to the Board in terms of subsection (3).

(5) An applicant or person who has made representations regarding an application in terms of subsection (3) shall furnish the Board with such further information as the Board may require.

**50 Consideration of applications and issue of permits by board**

(1) The Board shall consider any application at its next meeting which has been appointed for consideration of applications from that district and on such consideration may either grant or refuse the permit or renewal applied for:

Provided that the Board may for any good and sufficient reason postpone or adjourn the further consideration of any application.

(2) The Board may only refuse to issue or renew a permit if, in the opinion of the Board\_

- (a) the taking of timber would result in undue damage to the locality from which the applicant proposes to take timber or would adversely affect the timber supplies of that locality or Zimbabwe as a whole; or suitable alternative supplies of timber are available to the applicant.
- (b) suitable alternative supplies of timber are available to the applicant.

(3) In granting any permit or any renewal thereof the Board may impose any conditions which it may deem desirable in regard to the following matters:

- (a) the period for which the permit shall be valid;
- (b) the place from which the timber may or may not be taken;
- (c) the quantity and class of timber which may be taken;
- (d) the manner in which the timber shall be cut;
- (e) the method and route by which the timber shall be removed;

- (f) the stacking and disposal of timber felled but not taken;
- (g) the mine or mines which may use the timber;
- (h) the size and species of trees which may be felled.

#### 51 Powers of board

- (1) The Board shall have power:
  - (a) to suspend or cancel any permit if it appears to the Board that any of the conditions imposed in the grant of the permit or renewal thereof are not being observed; and
  - (b) to instruct any authorized officer to examine any place from which timber is being taken under and by virtue of a permit and to report to the Board thereon; and
  - (c) to take evidence on oath and make such other necessary investigations as it may deem fit in assisting it to come to a decision regarding the issue, suspension, cancellation or refusal of a permit and for that purpose the chairman shall have power to administer oaths.
- (2) Any person who, after having been duly sworn, wilfully gives false evidence before the Board on any matter relevant to the inquiry before it, knowing such evidence to be false or not knowing or believing it to be true, shall be guilty of perjury.

#### 52 Period of validity of permits

Every permit issued by the Board shall, unless duly suspended or cancelled, remain in force for the period stated in the permit and may be renewed from time to time by the Board for such further periods as the Board may determine.

#### 53 Appeals from decisions of Board

- (1) Any miner who is aggrieved by the refusal of the Board to issue or renew a permit or by the suspension or cancellation of the permit may, within thirty days of such refusal, suspension or cancellation, appeal in writing to the President.
- (2) Upon any such appeal the Minister may require the Board to furnish him with the reasons for its action and a copy of the evidence, if any, upon which such reasons are based.
- (3) The President may, after due consideration, make such order in the matter as he may deem fit and the Board

shall comply with any such order.

## PART VI CONSERVATION OF TIMBER RESOURCES

### 54 Interpretation in Part VI

In this Part:

“conservation committee” means\_

- (a) a conservation committee appointed for an intensive conservation area in terms of the Natural Resources Act [Chapter 20:13];
- (b) a rural district council declared to be a conservation committee for a council area in terms of the Rural District Councils Act [Chapter 29:13].

“sale” includes barter and exchange;

“sustained yield” means the constant or nearly constant quantity of indigenous timber that may be cut or removed over specified periods of time from an indigenous forest on private land, as assessed by the chief executive officer or any employee of the Commission designated by him for this purpose, whilst ensuring the continued existence of that forest on the private land concerned.

### 55 Owner or occupier of private land shall give notice of intention to dispose of indigenous timber

- (1) Any owner or occupier of private land who desires to cut or remove indigenous timber on that land for sale or for use in the manufacture of any product or who enters into any agreement for the cutting or removal of indigenous timber on that land shall, not less than fourteen days before any such timber is cut or removed, give written notice thereof in accordance with subsection (2) to the Commission which shall, before the expiration of the said period, cause the Minister and such other persons as the Minister may specify to be informed, in writing, of the contents of such notice.
- (2) Any notice given in terms of subsection (1) shall specify:
  - (a) the locality of the land concerned stating, where applicable, the name or title-deed description of the farm; and
  - (b) the name of the district or intensive conservation area in which the land concerned is situated; and
  - (c) the date on which it is intended to commence the cutting or removal of the indigenous timber.

(3) An owner or occupier of private land who has given notice in terms of subsection (1) shall not, more than one year after the date specified in terms of subsection (2):

- (a) cut or remove indigenous timber on that land for any of the purposes specified in subsection (1); or
- (b) permit any person with whom he has entered into an agreement referred to in subsection (1) to cut or remove indigenous timber on that land:

unless he has given further notice in accordance with subsection (1) containing such of the particulars specified in subsection (2) as may be appropriate in the circumstances, and thereafter he shall give such notice annually for so long as the cutting or removal of indigenous timber continues on that land.

(4) An owner or occupier of private land who cuts or removes or permits the cutting or removal of indigenous timber on that land without giving the notice required by subsection (1) or (3) shall be guilty of an offence.

(5) In this section:

"indigenous timber" includes indigenous palms and indigenous bamboos.

#### **56 Minister may give orders restricting cutting or removal of indigenous timber**

(1) Subject to this section, where the Minister is of the opinion that the cutting or removal of any indigenous timber for sale or for use in the manufacture of any product is taking place on private land in such a manner or in such quantity as to be likely to be injurious to the sustained yield of indigenous timber on that land, he may, after consultation with the Natural Resources Board and the conservation committee concerned, by notice in the *Gazette*, restrict such cutting or removal on that land to such extent as may be specified in the notice.

(2) A notice made in terms of subsection (1) shall not apply to the cutting or removal of indigenous timber\_

- (a) which is authorized in terms of a valid mining timber permit issued in terms of Part IV; or
- (b) where the indigenous timber is being cut and stumped in the course of preparing land for cultivation, tree planting or improved grazing, the construction of a fireguard, road, building or other development or the extraction of gravel, sand, stone or other materials.

(3) The Minister shall not make a notice in terms of

subsection (1) unless the occupier or, if there is no occupier, the owner of the land concerned has been notified of the proposal to make the notice and has been afforded a reasonable opportunity to make representations in relation thereto.

(4) The Minister may, by notice in the *Gazette*, amend or revoke a notice made in terms of subsection (1).

(5) The Minister shall cause a copy of any notice made in terms of subsection (1) or (4) to be served on the occupier or, if there is no occupier, the owner of the land concerned.

(6) Any person who fails to comply with a notice made in terms of subsection (1) shall be guilty of an offence and liable to a fine not exceeding two thousand dollars or to imprisonment for a period not exceeding four years or to both such fine and such imprisonment.

#### **57 Powers of entry and investigation of conservation committee and Natural Resources Board**

(1) Any member of a conservation committee on the authority of that committee, or any other person appointed by such committee for the purpose, may:

- (a) after giving reasonable notice to the occupier of private land within the area of the conservation committee or, if there is no such occupier, to the owner thereof, enter upon such land for the purpose of investigating and reporting on indigenous timber on that land:

Provided that the provisions of this paragraph shall not authorize the entry of any dwelling house without the consent of the occupier thereof;

- (b) require the occupier of private land within the area of the conservation committee or, if there is no such occupier, the owner thereof, to answer any question relating to the indigenous timber on his land:

Provided that no person shall be required to answer any question put to him in terms of this paragraph if he would be entitled to decline to answer that question were he a witness giving evidence in a court of law.

(2) Any member of the Natural Resources Board on the authority of such Board or any other person appointed by the Natural Resources Board for this purpose may exercise the powers conferred upon a member of a conservation committee in terms of subsection (1) in respect of any private land.

(3) Any person who:

- (a) hinders or obstructs a member of a conservation

committee or the Natural Resources Board or any person appointed by a conservation committee or the Natural Resources Board in the exercise of the powers conferred upon him in terms of this Part; or

- (b) fails to answer or gives an answer which he knows to be false or which he does not reasonably believe to be true to any question he may be required to answer in terms of this section;

shall be guilty of an offence and liable to a fine not exceeding one thousand dollars or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment.

#### **58 Conservation committee may temporarily restrict cutting or removal of indigenous timber**

(1) Subject to subsection (2), where a conservation committee is of the opinion that on any private land within its area cutting or removal of indigenous timber for sale, or for use in the manufacture of any product, is taking place in such manner or in such quantity as to be likely to be injurious to the sustained yield of indigenous timber on that land, it may serve notice in writing on the occupier or, if there is no such occupier, the owner of the land that:

- (a) it proposes to recommend to the Natural Resources Board that measures be taken in terms of subsection (1) of section fifty-six to restrict the cutting or removal of indigenous timber on such land; and
- (b) it prohibits, for a period not exceeding fourteen days from the date when the notice is served, the cutting or removal of indigenous timber on the land concerned.

(2) A notice made in terms of subsection (1) shall not apply to the cutting or removal of indigenous timber:

- (a) which is authorized in terms of a valid mining timber permit issued in terms of Part III; or
- (b) where the indigenous timber is being cut and stumped in the course of preparing land for cultivation, tree planting or improved grazing, the construction of a fireguard, road, building or other development or the extraction of gravel, sand, stone or other materials.

(3) If so directed by the Natural Resources Board, a conservation committee shall, by notice in writing served on the occupier or, if there is no such occupier, the owner of the land concerned, extend the period of any prohibition on the land concerned in terms of paragraph (b) of subsection (1) for a further period not exceeding fourteen days.

(4) Any person who cuts or removes any indigenous timber on any land in contravention of any notice made in terms of subsection (1) or (3) shall be guilty of an offence and liable to a fine not exceeding one thousand dollars or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment.

#### **59 Minister may give orders in relation to cutting of timber**

(1) If the Minister considers that the cutting, or the method of cutting, of indigenous timber on private land will result:

- (a) in damage to the locality by fire, climatic factors or soil erosion; or
- (b) in interference with natural water supplies, or
- (c) in general deterioration of the locality; or
- (d) in interference with or the hindrance of the natural regeneration of vegetation; or
- (e) in a general shortage of timber in the locality;

he may give written orders to the owner or occupier of such private land or to any person authorized by such owner or occupier to cut timber thereon to adopt such measures as he may deem necessary to prevent the occurrence of the results mentioned in paragraphs (a) to (e).

(2) Such orders may relate only to:

- (a) the method of cutting and removal of trees on the land and the route by which trees shall be removed;
- (b) the prohibition against or restriction of cutting trees on the land;
- (c) the afforestation or re-forestation of the land.

(3) If any person fails or neglects to carry out any order made under this section within such reasonable time as may be fixed by the Minister, he shall be guilty of an offence.

(4) If any owner of land fails or neglects to carry out any order made under paragraph (c) of subsection (2) within such reasonable time as the Minister may have fixed, the Minister may carry out or complete any work which is necessary to give effect to such order and subject to subsection (5), the amount of the cost of such work shall be a debt due by the owner to the State and, until discharged, interest shall be paid thereon at a rate not exceeding five dollars per centum per annum.

(5) If the owner considers that such work is not being satisfactorily carried out, he may appeal to the Administrative Court for an order exempting him from the whole or part of the cost of such work. Such Court shall make such order as it thinks fit, exempting the appellant from the whole or part of the cost of such work or dismissing the appeal.

#### **60 Creation of charge on land for costs of works for re-forestation**

(1) If any owner of land who has, in terms of section fifty-nine, become indebted to the State, fails to pay such debt on demand, the Minister may, in writing, direct the Registrar of Deeds to note free of charge, the debt on the title deed to such land and in the appropriate registers in the Deeds Registry and the Registrar of Deeds shall comply with such direction:

Provided that if the Registrar of Deeds is satisfied that the title deed to the land cannot, for any reason, be produced by the Minister in terms of subsection (3), he shall note the debt on the duplicate copy of the title deed and in the appropriate registers in the Deeds Registry and such noting shall have the same effect as if it had been made on the title deed.

(2) The document conveying such directions shall set forth:

- (a) a description of the land in question and the number and date of its title deed; and
- (b) the name of the owner; and
- (c) the total amount of the debt to be noted.

(3) Such document shall be accompanied by the title deed to the land.

(4) The making of such note on the title deed to the land shall create a charge of the debt noted upon the land attached thereto on transfer of the land and binding every successive owner thereof.

(5) Whenever a charge created under this section has been redeemed in full, the Minister shall notify the Registrar of Deeds who shall thereupon cancel the relevant note.

(6) After the making of the entries referred to in the proviso to subsection (1) no further transactions relating to the land affected by such endorsement shall be registered until such debt has been noted on the title deed to such land for which purpose the Registrar of Deeds is hereby authorized and required to impound the said title deed, and to make the necessary endorsement thereon whenever it may, for any reason, be lodged in his office.

#### **61 Returns relating to plantations**

- (1) The Minister may make regulations\_
  - (a) providing for the inspection of any plantation by an employee of the Commission;
  - (b) providing for the registration of persons who own or control plantations;
  - (c) specifying the records relating to plantations to be kept by persons who own or control plantations and the returns, other than returns as to growing costs and selling prices, to be furnished to the Commission by such persons.
- (2) Any person who contravenes any regulations made in terms of subsection (1) shall be guilty of an offence.

#### **62 Minister may prohibit the planting of specified trees**

- (1) The Minister may, by notice in a statutory instrument, prohibit the planting of specified trees in Zimbabwe or in any defined portion thereof by reason of their proneness to disease or poisonous properties or in order to control their spread as weeds.
- (2) Any person who plants any tree in contravention of a notice issued in terms of subsection (1) shall be guilty of an offence.

#### **63 Regulations for control of diseases and pests**

- (1) The Minister may make regulations not inconsistent with this Act or any other enactment for the purpose of combating any fungus, bacterial or virus disease or insect or parasite pests affecting any kind of forest tree or timber on any State forest or any private forest or any other land or in any vehicle, aircraft, building, depot or place for storage, stacking, seasoning or working or treatment of timber or for preventing the introduction into or the spread within Zimbabwe of any such disease or pest.

### **PART VII REGULATION OF TRADE IN FOREST PRODUCE**

#### **64 Marking of timber and registration of marks**

- (1) On or before a date to be fixed by the Minister by statutory instrument, impressions to the number to be stipulated in such notice of every stamp hammer or other mark used to distinguish timber grown or felled, whether in State or private forests, and the products of such timber worked, manufactured, processed, sold or otherwise

disposed of or removed therefrom by any person shall be registered with the Commission by the owner of such stamp hammer or mark.

(2) The Minister may, by notice in writing, require the owner or occupier of a private forest or the owner or proprietor of any sawmill, or cause him to be required, to register with the Commission on or before a date to be mentioned in such notice a specified number of impressions of a stamp hammer or other mark whereby timber felled in or removed from that forest or manufactured at or removed from that sawmill may be distinguished.

(3) From and after a date to be fixed by the Minister by statutory instrument, any person who places or causes to be placed or allows to be placed upon any timber felled in or removed from any State or private forest or manufactured at or removed from any sawmill or factory belonging to the Commission or any private sawmill or factory a mark that is not registered in accordance with this section shall be guilty of an offence.

(4) Any stamp hammer or timber mark submitted for registration and any alterations thereto shall be subject to approval by the Commission.

(5) The Minister shall cause a register to be kept and to be published from time to time in the Gazette of all stamp hammers or timber marks registered by the Commission in terms of this section.

#### **65 Import, export, transport, sale, manufacture and grading of trees and timber and use of trade names in respect thereof**

(1) The Minister may make regulations controlling or prohibiting:

(a) the importation into, or the exportation from, zimbabwe or the removal from any place to another within Zimbabwe; or

(b) the purchase or sale;

of trees of any kind or portions or products thereof, including timber but not including the fruit of fruit trees.

(2) Regulations may:

(a) provide for the inspection of any trees or portions or products thereof, including timber but not including the fruit of fruit trees, by an employee of the Commission;

(b) provide for the registration of persons who are engaged in the sawing, manufacturing, processing or selling of any timber or forest produce which may be prescribed or who deal in such timber or forest

produce;

(c) specify the records relating to such timber or forest produce to be kept by such persons and the returns, other than returns as to production costs and selling prices, to be furnished to the Commission by such persons;

(d) prescribe the dimensions and the methods and degree of seasoning and preservation treatment of any such timber and the grades, standards of quality and manner of grading, packing or marking of any such forest produce subject to which such timber or forest produce may be sawn, manufactured or processed for trade purposes or purchased or sold or imported into or exported from Zimbabwe;

(e) prohibit the use for trade purposes, sale, removal from any place to another within Zimbabwe or export from Zimbabwe of any such timber which is not of the prescribed dimensions or has not been seasoned in the prescribed manner or any such forest produce which is not of the prescribed grade or standard of quality or has not been graded, packed or marked in the prescribed manner;

(f) prescribe or define the trade name or description whereby any such timber or any produce derived therefrom shall be known or described and under which it shall be imported into or exported from or sold or otherwise disposed of in Zimbabwe and prohibit the use of any other trade name or description in place thereof;

(g) prescribe the place and manner of inspection of any of such timber or forest produce intended for export from Zimbabwe, the times at which, the manner in which and the persons to whom notice of intention to export such timber or forest produce shall be given, the fees to be paid in respect of the inspection of such timber or forest produce, the times of payment of such fees and the persons to whom such payment shall be made;

(h) prescribe the method of taking samples for examination, analysis or test of any forest produce intended for export from Zimbabwe and the circumstances under which and the manner in which such forest produce may be graded, marked, re-graded or remarked;

(i) provide generally for improvement in the quality and the methods of manufacture and marketing of any such timber or forest produce;

(j) provide for the confiscation by the State of any timber which is imported into Zimbabwe or removed from any place within Zimbabwe to another place

within Zimbabwe contrary to this Act.

(3) Any person who contravenes any regulation made in terms of this section shall be guilty of an offence.

**66 Power of Commission to make by-laws**

(1) Subject to subsection (3), the Commission may make by-laws providing for any matter which, in the opinion of the Commission, is necessary or expedient for the proper control and good management of any demarcated forest.

(2) By-laws in terms of subsection (1) may provide for the control or prohibition of:

- (a) the use of land in a demarcated forest for residence, cultivation, grazing, camping or picnicking;
- (b) the entry of persons into a demarcated forest, subject to the rights of the public to travel on public roads;
- (c) the use by persons of facilities provided in demarcated forests, including the prohibition of the use of facilities otherwise than on the basis, terms and conditions on which they are provided.

(3) By-laws made in terms of subsection (1) shall not have effect until they have been approved by the Minister and published in a statutory instrument.

(4) The Forest (Demarcated Forests) (Land Use) Regulations, 1970, published in Rhodesia Government Notice No.382 of 1970, shall be deemed to be by-laws made by the Commission in terms of this section.

**PART VIII  
CONTROL OF FIRES AND BURNING OF  
VEGETATION**

**67 Notice of intention to burn standing vegetation to be given to occupiers of adjoining land**

(1) Subject to subsection (4), no person shall burn growing or standing vegetation on any land except in accordance with notice given in terms of subsection (3) to the occupiers of all adjoining land and to a police officer at the nearest convenient police station.

(2) Such notice shall be given as follows—

- (a) a preliminary notice stating as nearly as possible the date of the proposed burning, which shall in any case be not less than two or more than eight weeks after the date of the giving of such preliminary notice, and

- (b) a final notice stating as nearly as possible the time of the proposed burning, which shall in any case be not less than six or more than twenty-four hours after the time of the giving of such final notice:

Provided that:

- (i) if for any reason the burning does not take place at such time a fresh final notice or notices shall be given;
- (ii) if it is not practicable, after reasonable inquiry, to give final notice to the occupier of any land, it shall be given to some person on the land apparently over the age of sixteen years or, if there is no such person on the land, a written notice shall be affixed in some conspicuous place on the land.

(3) Notwithstanding subsections (2) and (3), notice in terms of this section may in any particular case be dispensed with by agreement in writing between the person intending to burn as aforesaid and all the occupiers mentioned in subsection (2):

Provided that notice of the date and time of the proposed burning shall be given to a police officer at the nearest convenient police station before the burning takes place.

(4) Any person who contravenes subsection (2) or (3) shall be guilty of an offence.

**68 Provision and maintenance of fireguards on common boundaries**

(1) Any owner or occupier of land who desires to guard against fires crossing the boundaries thereof may call upon the owner or occupier of any adjoining private land on the boundaries of which sufficient fireguards have not been provided and maintained to assist him in the establishment of a common fireguard or to contribute one half of the labour or cost necessary to provide and maintain sufficient fireguards on their common boundaries within a period of three weeks after such request.

(2) If any person so called upon refuses to assist or neglects to contribute as required by subsection (1), the person so calling upon him may construct or maintain such fireguards and shall be entitled to recover from such first-mentioned person half the necessary cost of such construction or maintenance.

(3) For the purposes of this section, a fireguard shall not be sufficient unless it is at least nine metres wide on each side of the common boundary or such other line as may have been agreed upon by the owners or occupiers concerned at all points thereof.

(4) If any fireguard is of the width required by subsec-



tion (3), but its sufficiency for the purposes of this section is disputed on the ground that such fireguard is not sufficiently cleared of inflammable matter, the dispute shall be referred to the Natural Resources Board for decision and its decision thereon shall be final.

(5) For the purposes of this section, Communal Land shall be regarded as private land and the Minister shall be deemed to be the owner and occupier thereof.

(6) If a dispute arises as to the boundaries of the land in respect of which an occupier who is a miner is liable, under the provisions of this section, to assist in the establishment of a common fireguard or to contribute labour or towards the cost necessary to provide and maintain fireguards, such dispute shall be referred to the Natural Resources Board for decision and its decision shall be final.

### 69 Orders in relation to fireguards

(1) If the Minister is satisfied after consultation with the Natural Resources Board that vegetation on any land is of such a nature that a boundary fireguard of eighteen metres in width will not be sufficient protection to the adjoining land from the risk of fire, the Minister may give written orders to the owner or occupier of the land upon which such vegetation occurs:

- (a) to provide a fireguard on the boundary of his land of such width exceeding nine metres as the Minister may deem sufficient; and
- (b) to establish and maintain internal fireguards on his own land of such width as the Minister may deem necessary; and
- (c) to undertake such other protective measures as the Minister may deem necessary.

Sections fifty-nine and sixty shall apply, *mutatis mutandis*, in respect of any order made in terms of this subsection.

(2) Any owner or occupier in receipt of an order made in terms of subsection (1) may appeal to the Administrative Court on one or both of the following grounds—

- (a) that the circumstances do not justify the making of an order;
- (b) that the terms of the order are unreasonable;

and Part III of the Natural Resources Act [Chapter 20:13] shall apply, *mutatis mutandis*, accordingly.

(3) If the Minister considers that such a course is necessary or expedient for the conservation or protection of

the natural resources within an area declared to be an intensive conservation area under the Natural Resources Act [Chapter 20:13], he may authorize the conservation committee appointed for that area in terms of that Act to prepare a plan, dealing with such matters as may be prescribed by regulation, for the prevention of fires within that area and may, after consultation with the Natural Resources Board, authorize that Board to give a written order or written orders to the owners, occupiers or users of any land within such area to act in accordance with such plan.

(4) Any order given by the Natural Resources Board under an authority granted to it in terms of subsection (3) shall be deemed to be an order given by the board in terms to section 4 of the Natural Resources Act [Chapter 20:13].

### 70 Fires kindled on land of another to be controlled and extinguished

Any person who is upon the land of another, whether lawfully or not, or upon any road or vacant land shall carefully and properly extinguish any fire kindled or used by him, and until he has so done shall not go so far from any such fire as to be unable to control it by himself or his employees.

### 71 Saving of counter-firing

Nothing in this Act contained shall be deemed to prohibit any person, when his life, person or property is in danger of loss or injury from an approaching fire, from setting alight to and burning vegetation, in the manner commonly known as counter-firing, in order to prevent such loss or injury:

Provided that he shall take reasonable care that a fire so kindled does not spread beyond the limits necessary to secure him from such loss or injury.

### 72 Liability of servant acting under direction of employer

If any servant when acting under the direction or command of his employer by any act or omission contravenes this Part, such employer and such employee may both or either of them be prosecuted and, if convicted, punished under this Act.

### 73 Saving of rights to recover damages

Save in respect of any reasonable and necessary action taken under section seventy-one or seventy-five and subject to the provisions of section seventy-four, nothing in this Part contained shall be deemed to affect the right of any person aggrieved to recover damages by civil action for any loss sustained by him.

#### 74 Inquiry into damage sustained

(1) Whenever any person is convicted by a court of an offence against this Act, and it appears that such person has by that offence caused damage to any person, such court may, at the written request of such person, but in the presence of the convicted person, inquire summarily and without pleadings into the amount of damage so caused.

(2) Upon proof of such amount, such court shall give judgment therefor in favour of the applicant and against the convicted person, and such judgment shall be of the same force and effect and be executable in the same manner as if it had been given in a civil action duly instituted before such court:

Provided that judgment shall not be given under this section for a sum exceeding the civil jurisdiction of such court.

(3) Where judgment has been given in terms of subsection (2), the said convicted person shall not be liable at the suit of the said applicant to any other civil proceedings in respect of the damage for which the judgment has been given.

#### 75 Procedure in regard to extinguishing fire

(1) Whenever there is good reason to believe that any fire in the open air may become dangerous to life or property, any person acting in good faith may either alone or with persons under his control enter upon any land for the purpose of extinguishing that fire or for preventing the extension thereof.

(2) If any person believes that any fire in the open air may become dangerous to life or property, he may notify the owner or occupier of the land upon which such fire is burning of his belief. Such owner or occupier shall take all reasonable steps to extinguish or prevent the spread of such fire. Any such owner or occupier who fails to comply with the provisions of this subsection shall be guilty of an offence.

(3) If any fire is approaching within a dangerous distance of the boundary of a State forest, the forest officer present shall have the right to take full control.

(4) Any person acting in terms of subsection (1) or any owner or occupier of land upon which there is a fire such as is described in that subsection:

- (a) shall have the control of persons under his command and of persons who voluntarily place their services at his disposal;
- (b) may take such measures as in the circumstances are

reasonable and necessary or expedient for the protection of life and property or for extinguishing or preventing the spread of the fire, and may for such purpose cause reasonable destruction of any trees, grass, crops or other vegetation by cutting, burning, ploughing or otherwise;

- (c) may call upon any person present at or in the vicinity of such fire to assist or to do any act or perform any service which may reasonably be considered necessary or expedient to control or extinguish or prevent the spread of the fire;
- (d) may order any person whose life may be or may become endangered or whose presence at or in the vicinity of the fire may interfere with any operation in connection with the fire, to remove himself or any vehicle or other thing under his control.

(5) Any person who fails to comply with any requirement or order under subsection (4) shall be guilty of an offence.

(6) No liability shall attach to the State in respect of any loss or damage arising out of the lawful exercise by a forest officer of any power conferred by this section, and no person shall be entitled to any compensation or reward whatever in respect of any act performed or service rendered by him in pursuance of any requirement or order under subsection (4):

Provided that the State may pay to any person who has so suffered loss or damage or who has performed any such act or rendered any such service with respect to the protection from fire of a State forest such compensation or reward as the Minister may with the approval of the Treasury determine.

(7) No action shall lie for trespass or for damages caused in good faith by any person in charge of any operations lawfully undertaken under this section or by any person assisting in such operations, but the person in charge of the operations shall at the first convenient opportunity report the circumstances and the action taken to the nearest police officer or justice of the peace or to the provincial magistrate of the province concerned.

### PART IX

#### PLANTATIONS ON MOZAMBIQUE BORDER

##### 76 Plantations on Mozambique border

(1) No person shall, except with the prior written permission of the Minister:

- (a) plant a non-indigenous tree; or

- (b) cause or permit the growth of any re-shoot or regrowth from a non-indigenous tree; or
- (c) cause or permit the growth of any seedling of a non-indigenous tree, other than a seedling which has been planted by man;

within a distance of fifty metres from the international border between Zimbabwe and Mozambique.

(2) in giving any permission under subsection (1) the Minister may impose such conditions as he deems fit.

(3) Any person who contravenes the provisions of subsection (1) or contravenes or fails to comply with any condition imposed under subsection (2) shall be guilty of an offence.

#### 77 Removal of trees on Mozambique border

(1) Where any tree, re-shoot, regrowth or seedling such as is mentioned in section *seventy-six*, hereinafter called a tree, is growing in contravention of the provisions of that section or any condition imposed thereunder, a forest officer may serve a written notice on the owner of the land ordering him to remove such tree within a reasonable period specified in the notice.

(2) If such tree is not removed within such period, a forest officer may, if authorized in writing by the Minister, enter upon the land in question with such assistance as he may require and remove such tree, and the cost of such removal shall be a debt due by the owner of the land to the State and may be recovered by the Minister in any competent court.

(3) Nothing in this section shall relieve any person from any penalty he may have incurred under section *seventy-six*.

### PART X OFFENCES AND PENALTIES

#### 78 Major offences

Any person who:

- (a) without authority, in or on a State forest or private forest:
  - (i) cuts, injures, destroys, collects, takes or removes any tree, timber or other forest produce; or
  - (ii) injures, alters, shifts or removes or interferes with any beacon, boundary mark or fence; or
  - (iii) lights or assists in lighting or uses, rekindles or adds

fuel to any fire;

or

(b) in the open air on any land:

(i) leaves unattended a fire which he, with or without authority, has lighted or assisted in lighting or used or rekindled or to which he had added fuel before such fire is thoroughly extinguished; or

(ii) with or without authority, has lighted or assisted in lighting, or used or rekindled or added fuel to a fire which spreads or causes injury;

shall be guilty of an offence and liable on conviction:

(c) where damage has been wilfully caused:

(i) in the case of a contravention of subparagraph (iii) of paragraph (a), to:

A. a fine not exceeding four thousand dollars; or

B. imprisonment for a period not exceeding ten years; or

C. both such fine and such imprisonment;

or

(ii) in the case of a contravention of any other provision of this section, to a fine not exceeding one thousand dollars or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment;

or

(d) in cases not provided for in paragraph (c), to a fine not exceeding five hundred dollars or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment.

#### 79 Minor offences

(1) Any person who, without authority:

(a) contravenes any condition or regulation stated or referred to in any licence or permit issued under this Act; or

(b) in or on a State forest:

(i) clears, breaks up or cultivates land; or

(ii) climbs through or over any fence or gate; or

- (c) in or on a State forest or private forest, other than a plantation referred to in section eighty, enters any part where entry is prohibited by notice in terms of subsection (2); or
- (d) in or on a State forest or private forest wilfully injures, alters, shifts or in any other way interferes with any notice or notice-board;

shall be guilty of an offence.

(2) For the purposes of paragraph (c) of subsection (1), a notice prohibiting entry into any part of a forest shall be sufficient if it is published in the *Gazette* and\_

- (a) not later than fourteen days thereafter published in a newspaper circulating in the district in which the forest is situated; or
- (b) prominently displayed at or near every place where a path, track or road enters the area concerned:

Provided that the operation of any such notice shall expire one year after the date of publication in the *Gazette*.

### 80 Illegal entry of plantation

(1) Any person who, without authority, is in or on a plantation which is either a demarcated forest or a protected private forest, unless he is on a road as defined in section 3 of the Roads Act [*Chapter 13:12*] or on a specified route, shall be guilty of an offence and liable to a fine not exceeding five hundred dollars or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment.

(2) For the purposes of this section:

“specified route” means a route specified by notice published in the *Gazette* and not later than fourteen days thereafter published in a newspaper circulating in the district in which the plantation is situated:

Provided that the operation of any such notice shall expire one year after the date of publication in the *Gazette*.

(3) Whenever there is in force a notice published in terms of subsection (2), notices prohibiting entry shall be prominently displayed at or near every point where a route other than a road referred to in subsection (1) or specified route enters the plantation concerned or branches off from such a road or a specified route and enters any part of such plantation:

Provided that the failure to display any such notice or the absence of any such notice shall not be a defence in any prosecution for a contravention of subsection (1).

### 81 Offences relating to smoking or negligent use of matches

Any person who in or on a State forest or a private forest smokes where smoking is by notice prohibited, or negligently lights or throws down any burning match or burning material, shall be guilty of an offence and liable to a fine not exceeding two hundred dollars or to imprisonment for a period not exceeding six months or to both such fine and such imprisonment.

### 82 Miscellaneous offences

Any:

- (a) person who, without authority:
  - (i) makes upon or affixes to any forest produce a mark used by the Commission to indicate that such forest produce is the property of the Commission, or makes upon or affixes to any forest produce a mark to indicate that such forest produce may be lawfully cut or removed; or
  - (ii) alters, obliterates or defaces any stamp, mark or sign placed upon timber or other forest produce by or on the authority of the Commission or any licence, pass or permit issued by or on the authority of the Commission; or
  - (iii) wears any uniform or part of a uniform or any badge or other mark issued by the State or Commission to be worn by forest officers or other employees of the State or Commission;

or

- (b) forest officer or employee of the Commission who\_
  - (i) solicits or receives or agrees to receive, whether for himself or otherwise, any payment, advantage or reward, pecuniary or otherwise, in consideration of his doing anything in conflict with his duty or of his remaining from doing his duty; or
  - (ii) solicits or receives or agrees to receive, whether for himself or otherwise, from any person other than the State or Commission, as the case may be, any payment, advantage or reward, pecuniary or otherwise, in consideration of his doing his duty; or
  - (iii) trades in forest produce or acts as an agent for any person trading in forest produce;

shall be guilty of an offence and liable to the penalties specified in section seventy-eight.

### 83 Penalty

Any person who contravenes this Act or the conditions of any permit under this Act for the contravention of which no penalty is expressly provided shall be liable to a fine not exceeding two hundred dollars or imprisonment for a period not exceeding six months or to both such fine and such imprisonment.

#### **84 Licences and permits may be cancelled**

If any holder of a licence or permit under this Act, other than a mining timber permit, fails to comply with the terms and conditions of his licence or permit or contravenes this Act subject to which such licence or permit was issued, such licence or permit may be cancelled by the authority which issued it.

### **PART XI MISCELLANEOUS**

#### **85 Wrongful possession of forest produce**

(1) Whenever a forest officer or police officer on reasonable grounds suspects that any forest produce found in or obtained from or in transit from a State or private forest, or a sawmill or factory belonging to the Commission or a private sawmill or factory, is about to be or has been wrongfully removed, he may seize and detain such forest produce pending inquiry and no action for damages shall lie in respect of such seizure or detention.

(2) A forest officer or police officer may without warrant arrest any person found in possession of any forest produce unless such person produces a licence or permit authorizing the removal or gives a satisfactory account of the manner in which he became possessed of such forest produce and if any person so arrested is unable to satisfy the court that he had a lawful right to be in possession of the said forest produce, he shall be guilty of an offence.

#### **86 Special powers of various officers**

(1) Every forest officer or police officer may at all reasonable times demand from any person the production of any licence, permit or other authority which he is required under this Act to have, and any person failing to produce such licence, permit or authority on such demand shall be guilty of an offence.

(2) Every forest officer, except such description of officers as the Minister may designate, shall in or in connection with State or private forests or in respect of any offence, attempted offence or suspected offence under this Act have all the powers vested by law in police officers.

(3) Every forest officer may, in addition to the powers

conferred upon him by subsection (2), and every police officer may:

- (a) arrest without warrant any person reasonably suspected of having been a party to any of the offences mentioned in section seventy-eight;
- (b) arrest without warrant any person reasonably suspected of having been a party to any offence under this Act if such forest officer or police officer has reason to believe that the said person will fail to appear in answer to a summons;
- (c) seize any forest produce in respect of which such forest officer has reason to believe that an offence under this Act has been committed;
- (d) seize any weapon, vehicle instrument or animal or any other thing which such forest officer or police officer has reason to believe has been used in the commission of an offence under this Act.

Any seizure under this subsection shall forthwith be reported to a magistrate who may make such order as to the further retention or disposal of the seized property as may appear to him from the facts reported to be just or expedient.

#### **87 Evidence**

(1) Whenever in any proceedings under this Act the question arises whether any forest produce is the property of the Commission, it shall be presumed to be the property of the Commission unless the contrary is proved.

(2) Any person charged with doing any act for which by this Act a licence, permit or other authority is required, shall be deemed to be without such licence, permit or authority unless he produces the same to the court or gives other satisfactory proof of possessing the same.

#### **88 Court may make orders as to restitution and damages**

(1) Whenever upon the hearing of any charge under this Act or any other law the court finds as a fact that forest produce has been unlawfully removed from a State forest or a private forest, it may, in addition to the powers conferred upon it by the Criminal Procedure and Evidence Act [Chapter 9:07], order that the same be returned by the person in possession thereof or that damages in respect thereof to an amount fixed by the court be paid by the accused to the owner. Every such order may be enforced in the same manner as judgments of such court in civil actions are enforced.

(2) Subsection (1) relating to damages shall apply in respect of any unlawful cutting of or injury to forest pro-

duce or any damage wilfully or negligently caused by fire to forest produce in a forest.

**89 Powers of Minister**

(1) The Minister may make regulations providing for any matter which by this Act is required or permitted to be prescribed or which, in his opinion, is necessary or expedient to be provided for in order to carry out or give effect to this Act.

(2) Regulations in terms of subsection (1) may, in respect of undermarcated forest, provide for\_

- (a) the sale or disposal of trees, wood or other forest produce and the felling, working and removal thereof;
- (b) the issue of licences for any activity referred to in paragraph (a) and the cancellation of such licences;
- (c) the fees or charges to be paid in connection with licences issued or services or facilities provided.

(3) The Minister may, in regulations in terms of subsection (1) or by notice in writing to the Commission, fix the terms and conditions on which persons may be permitted by the Commission to occupy or lease land in a demarcated forest and the Commission shall exercise its powers in terms of this Act in accordance with such terms and conditions.

(4) The Forest (Undermarcated) Regulations, 1953, published in Rhodesia Government Notice No. 850 of 1953, shall be deemed to be regulations made by the Minister in terms of this section.

**FIRST SCHEDULE (Section 27)**

**PROVISIONS APPLICABLE TO PERSONS EMPLOYED BY COMMISSION**

**OTHER THAN PERSONS SECONDED FROM PUBLIC SERVICE**

1. In this Schedule:

“contributor” means an employee of the Commission who is required in terms of subparagraph (1) of paragraph 2 to contribute to the Consolidated Revenue Fund.

2. (1) Subject to this Schedule, the Commission may, with the approval of the Public Service Commission, require an employee to whom this Schedule applies to contribute to the Consolidated Revenue Fund as though he were a member of the Public Service.

(2) Whenever an employee of the Commission is required to contribute in terms of subparagraph (1), the Public Service Commission shall:

- (a) fix the date from which he shall contribute; and
- (b) declare whether the employee shall be regarded as an established officer or a senior or junior employee in the Public Service for the purpose of determining, in accordance with the provisions of this Schedule, the rate at which he shall contribute and any other matter relating to the payment of a pension or other benefit to him.

3. Subject to paragraphs 4 and 5, the law relating to\_

- (a) the payment of contributions and arrear contributions in respect of pensions by members of the Public Service; and
- (b) the retirement, resignation, discharge and pensionable age of members of the Public Service; and
- (c) the payment of pensions and other benefits to members of the Public Service and their dependants; and
- (d) the commutation of pensions payable to former members of the Public Service; and
- (e) the recall to duty of former members of the Public Service who were required to retire on the grounds of their ill-health or mental or physical infirmity or deficiency;

including the Pensions and Other Benefits Act [Chapter 16:01], shall apply, *mutatis mutandis*, in respect of every contributor in accordance with the declaration made in regard to him by the Public Service Commission in terms of subparagraph (b) of subparagraph (2) of paragraph 2, as though his service with the Commission were service with the State and any reference in such law to the Public Service Commission were a reference to the Commission.

4. The salary paid to a contributor by the Commission, together with any allowance declared by the Public Service Commission to be pensionable for the purposes of this paragraph, shall be regarded as the pensionable emoluments of the contributor.

5. If the Commission, without the approval of the Public Service Commission, discharges a contributor or requires him to retire\_

- (a) on the grounds of his continued ill-health or if he becomes incapable because of mental or physical deficiency or infirmity of efficiently performing his duties; or

- (b) owing to the abolition of his post or a reduction in or an adjustment of the organization of the Commission;

and the contributor is, in terms of the law referred to in paragraph 3, entitled to a pension on such discharge or retirement, the pension payable to him shall be calculated as if he had been discharged or required to retire owing to the abolition of his post but in relation to his actual pensionable service.

## SECOND SCHEDULE (Section 11)

### POWERS OF COMMISSION

1. To do anything which this Act provides may or shall be done by the Commission.
2. To purchase, lease or otherwise acquire land for any of the purposes specified in this Act.
3. To acquire, establish or construct saw-mills, seasoning kilns, preservation plants and offices and any other plant, apparatus or premises necessary or convenient for the operations of the Commission.
4. To provide accommodation, entertainment and other facilities in demarcated forests for visitors.
5. To purchase or otherwise acquire any timber, forest produce or livestock, to keep livestock in any demarcated forest and to sell or otherwise dispose of any such timber or forest produce or anything manufactured therefrom or any such livestock.
6. To construct and maintain roads, tracks, irrigation works and other developments necessary or convenient for the operations of the Commission.
7. To buy, take in exchange, hire or otherwise acquire movable property, including aircraft, vehicles, machinery, plant or apparatus, necessary or convenient for the operations of the Commission.
8. To obtain, in terms of the Water Act (Chapter 20:22), water rights necessary or convenient for the operations of the Commission as if it were the owner of demarcated forests.
9. To maintain, alter and improve property of, or controlled and managed by, the Commission.
10. to apply for, buy or otherwise acquire patents, licences, concessions or the like conferring an exclusive or non-exclusive or limited right to use information or a process which may seem to the Commission capable of being used for the operations of the Commission or the acquisition of which may seem to the Commission calculated, directly or indirectly, to benefit the Commission and to use, exercise, develop and grant licences in respect of, or otherwise turn to account, rights, information and processes so acquired.
11. To sell, exchange, lease, mortgage, dispose of, turn to account or otherwise deal with the assets of the commission or any part thereof for such consideration as the Commission may determine.
12. To grant to other persons rights in connection with the occupation or use of land which is owned or occupied or controlled and managed by the Commission for such consideration as the Commission may determine.
13. To draw, make, accept, endorse, discount, execute and issue for the purpose of the operations of the Commission promissory notes, bills of exchange, bills of lading, securities and other negotiable and transferable instruments.
14. To insure against losses, damages, risks and liabilities which the Commission may incur.
15. To enter into agreements, including agreements of suretyship or guarantee, and to modify or rescind such agreements.
16. Subject to the approval of the Minister and the Minister responsible for finance, to invest the funds of the Commission not immediately required by it.
17. To construct, purchase, take on lease or in exchange or otherwise acquire dwelling-houses for occupation by employees of the Commission.
18. On such terms and conditions as the Commission, with the approval of the Minister responsible for finance, may determine, to guarantee loans made to employees of the Commission or their spouses for the purchase of dwelling-houses or land for residential purposes, the construction of dwelling-houses and the improvement of dwelling-houses or land which are the property of such employees or their spouses.
19. To make loans to employees of the Commission for the purposes of purchasing vehicles, tools, or other equipment to be used by those employees in carrying out their duties.
20. To provide recreational facilities for, and activities conducive to, the welfare of employees and pensioners of the Commission and the families of such persons and to assist the promotion by other persons of such activities.
21. To fix fees or charges in connection with services, accommodation or facilities provided by the Commission.

sion or for licences or permits issued under this Act.

22. To do anything for the purpose of improving\_
- (a) the skill, knowledge or usefulness of persons employed in connection with forestry;
  - (b) the efficiency of the equipment of the Commission or the manner in which the equipment is operated;

and in that connection to provide or assist other persons in providing facilities for training, education and research.

23. To establish and maintain nurseries and to promote or embark upon research in connection with, and to investigate problems affecting, forestry.

24. Subject to the approval of the Minister and the Minister responsible for finance, to grant such scholarships or bursaries and provide for such fellowships as the Commission considers to be in the interests of forestry on such terms and conditions as the Commission may fix in each particular case.

25. Generally, to do all such things as are incidental or conducive to the performance of the duties of the Commission or are incidental to the powers specified in this Schedule or which are calculated, directly or indirectly, to enhance the value of, or to develop, the operations or the property of the Commission.

### THIRD SCHEDULE (Sections 33, 34 and 35)

#### FOREST ESTATE

##### PART I

#### DEMARCATED FORESTS ON FOREST LAND

##### Binga district

Item 1: *Kavira* Area: 28 200 hectares

The area of land bounded by a line drawn from the point where the Mlibizi River flows into Lake Kariba, generally southwards up that river to its confluence with the Liwando River; thence proceeding south-westwards up that river to a point where it is intersected by a game-fence at map reference 35KNL074050 on the 1:50 000 map Masutu 1827A1, Edition 1; thence south-westwards direct along it to a point at map reference NL037029 on that map; thence along it to a point at map reference NK000989 on that map; thence south-westwards along it to a point at map reference 35KMK965943 on the 1:50 000 map Boma 1826B2, published 1968; thence due

south along it to a point at map reference MK966925 on that map; thence due west to a point on the Gwai River at map reference MK861922 on that map; thence generally northwards down that river to its confluence with an unnamed tributary at map reference ML879014 on that map; thence north-eastwards direct towards the former confluence of the Zambezi and Kaunga rivers until the full-supply level of Lake Kariba is reached; thence generally eastwards along that full-supply level to the starting-point.

Map references quoted in this description are given to the nearest hundred metres.

Item 2: *Mzolo* Area: 67 200 hectares

The area of land bounded by a line drawn from a point on the Chepali River at Map reference 35KNK824822 on the 1:50 000 map Lusulu 1827B2, Edition 1, north-eastwards direct to a point on the Kwaieepa Escarpment at map reference NK953890 on that map; thence proceeding due south to the confluence of the Sitokolombizi and Kamisowe rivers; thence south-westwards up the Kamisowe River to its commencement at map reference 35KNK907726 on the 1:50 000 map Dandanda Pan 1827B4, Edition 1; thence southwards direct to a point on the Kamwali River at map reference NK905672 on that map; thence west-south-westwards along a fence, to the confluence of an unnamed tributary and the Kakulu River at map reference 35KNQ607625 on the 1:50 000 map Cewali 1827B3, Edition 1; thence north-westwards direct to a point at map reference NQ569670 on that map; thence north-westwards direct to a point on the confluence of the head-waters of the Kasawe River at map reference NQ546692 on that map; thence west-south-westwards direct to a point on a line drawn south-eastwards from Trigonometrical Station Chimeja (239/P) direct to Lubimbi Fly-gate at map reference 35KNK352644 on the 1:50 000 map Lubimbi 1827A4, Edition 1; thence north-eastwards direct to a point at map reference NK451736 on that map; thence due east to a point on the road from Lubimbi Hot Springs to Siambolo Fly-gate at map reference NK473736 on that map; thence north-eastwards along that road to Siambolo Fly-gate; thence eastwards direct for 30 kilometres to a point on the Chepali River at map reference 35KNK827789 on the 1:50 000 map Dandanda Pan 1827B4, Edition 1; thence northwards down that river to the starting-point.

Map references quoted in this description are given to the nearest hundred metres.

Item 3: *Sijarira* Area: 25 600 hectares

The area of land bounded by a line drawn from a point where the Senkwi River flows into Lake Kariba, generally eastwards up that river to its confluence with the



Makandabwe River, thence proceeding generally southwards up that river to a point where it is crossed by a road at map reference 35KNL647582 on the 1:50 000 map Siganda 1727D1, Edition 1; thence south-eastwards direct towards beacon Siganda until the Binga-Siabuwa road is reached, at map reference NL662522 on that map; thence westwards along that road to the Masumo River; thence generally northwards down that river to the point where it flows into Lake Kariba; thence generally northwards and eastwards along the fully-supply level of Lake Kariba to the starting-point.

Map references quoted in this description are given to the nearest hundred metres.

#### Bubi district

Item 4: *Bembesi* Area: 55:100 hectares

The area of land bounded by a line drawn from the south-eastern beacon of Pioneer Block East south-westwards direct to the north-western beacon of Westgate; thence proceeding south-westwards along the western boundaries of Westgate and Bembezaan to the Bembezi River; thence generally eastwards up that river to its intersection by the western boundary of Glenarton West; thence south-westwards and eastwards along its western and southern boundaries to its south-eastern beacon; thence south-westwards along the western boundaries of Nthobi Ranch to its westernmost beacon; thence north-westwards along the northern boundaries of Winter Block, Spring Block and the Eland Block to the northern beacon of the Eland Block; thence southwards to the south-western beacon of that property; thence north-westwards direct to the easternmost beacon of Grants Farm; thence north-westwards along the eastern boundaries of Grants Farm, Batley Groote Schuur 2, Umzibani and Franklands Farm to the northernmost beacon of Franklands Farm; thence north-eastwards direct to a point on the southern boundary of Pioneer Block East at map reference 35KPJ276779 on the 1:50 000 map Lake Alice 1928A1, Edition 1; thence south-eastwards along the southern boundary of Pioneer Block East to the starting-point.

The map reference quoted in this description is given to the nearest hundred metres.

Item 5: *Molo* Area: 2900 hectares

The area of land bounded by a line drawn from the south-western beacon of Goodwood Block eastwards along its southern boundary to beacon LE (as shown on plan in Survey Record 8346, filed in the office of the Surveyor-General, Bulawayo); thence proceeding southwards direct to the north-eastern beacon of Beeslack and along its northernmost boundary to the eastern boundary of West-gate; thence northwards along its eastern boundary to its north-eastern beacon and eastwards direct to

the starting-point.

#### Chirumanzu district

Item 6: *Mtao* Area: 8 170 hectares

The area of land bounded by a line drawn from the south-western beacon of Sandfontein generally eastwards along the southern boundary of Sandfontein, the western and southern boundaries of Mooifontein, the western and south-western boundaries of Good Hope and the south-western boundary of Aldeby, so as to exclude them, to the southernmost beacon of Aldeby, thence proceeding south-westwards and generally westwards along the boundaries of the following properties so as to exclude them: the north-western boundary of Rome of Shasha Fountains, the northern boundaries of the Remainder of Grootfontein, Railway Strip of Grootfontein and Ruben Vale of Grootfontein, the north-eastern boundary of the Remainder of Drie Hoek, the northern boundary of Railway Strip of Drie Hoek, the western boundary of Van Zyl and the northern boundaries of Sondags Fontein and Jessmint to its northwestern beacon; thence north-westwards along the eastern boundaries of the following properties so as to exclude them: the Remainder of Requeza, Lot B Fairfield Siding of Requeza and Lot A Fairfield Siding to its northern-most beacon; thence generally westwards and northwards along the boundaries of the following properties so as to exclude them: the northern boundaries of Lot A Fairfield Siding, the north-eastern boundaries of Railway Strip of Murchiston and Railway Strip of Fairview and the south-eastern boundary of the Remainder of Hartebeestfontein to its easternmost beacon; thence generally eastwards along the boundaries of the following properties so as to exclude them: the south-western boundary of Elandsvlei and the south-western and south-eastern boundaries of Stelstand to the starting-point.

Excluded from this area is a portion of the Msavingo-Mvuma railway strip, as shown on plan VU8, filed in the offices of the Surveyor-General, Harare.

#### Chipinge district

Item 7: *Chirindu* Area: 950 hectares

The area of land comprising the surveyed properties Subdivision A of Houtberg and Subdivision A of Mount Selinda, and approximately 92 hectares situated in the south-western corner of Subdivision A of Gungunyana.

Item 8: *Gungunyana* Area: 1 650 hectares

The area of land comprising Subdivision A of Gungunyana, but excluding 92 hectares in the south-western corner, being a portion of Chirinda Forest.

**Gokwe district**

Item 9: *Mafungabusi* Area: 82 100 hectares

The area of land bounded by a line drawn from the intersection of the Sengwa River by the Gokwe-Nkai road at map reference 35KQK052750 on the 1:50 000 map Gwehava Mission 1828B4, Edition 1; generally eastwards up that river to its commencement at map reference 35KQK203711 on the 1:50 000 map Ngondoma 1829A3, Edition 2; thence proceeding due east to a point on the Que Que-Gokwe road at map reference QK211711 on that map; thence southwards along that road to a point on the north-western boundary of the former Chemagora Purchase Land at map reference QK200605 on that map; thence south-westwards along that boundary to a point at map reference 35KQK117492 on the 1:50 000 map Wolverley 1829C1, Edition 2; thence generally westwards along a series of straight lines drawn consecutively through points at map references 35KQK087527, QK053529, PK980492 and PK900530 to a point on a road at map reference PK851530 on the 1:50 000 map Nesikwe 1828D2, Edition 1; thence south-westwards along that road and its prolongation to its intersection by a road at map reference 35KPK833502 on the 1:50 000 map Kana Mission 1828D1, Edition 1; thence westwards direct to the junction of a road and track at map reference PK671528 on that map; thence generally northwards along that track to a point at map reference 35KPK668560 on the 1:50 000 map Mbumbusi Confluence 1828B3, Edition 1; thence down an unnamed valley to the Lutope River at map reference PK657625 on that map; thence eastwards up the Lutope River to a point at map reference PK820601 on that map; thence northwards and generally eastwards along a series of straight lines drawn consecutively through points at map references PK820650 on that map and 35KPK903668 on the 1:50 000 map Gwehava Mission 1828B4, Edition 1, to a point on the Gokwe-Nkai road at map reference QK002658 on that map; thence north-eastwards along that road to the starting-point.

Map references quoted in this description are given to the nearest hundred metres.

Item 10: *Mudzongwe* Area: 1 420 hectares

The area of land bounded by a line drawn from a point at map reference 35KQL333165 on the 1:50 000 map Gowe Pools 1729C3, Edition 2, south-westwards direct to a point at map reference QL317152 on that map; thence proceeding south-westwards direct to a point at map reference QL300143 on that map; thence southwards di-

rect to a point on the Mudzongwe River at map reference QL302133 on that map; thence up that river to a point at map reference QL 290130 on that map; thence northwards direct to a point at map reference QL288138 on that map; thence westwards direct to a point at map reference QL259141 on that map; thence north-westwards direct to the southernmost beacon of Copper Queen 1; thence north-eastwards along the southern boundary of that property to its easternmost beacon; thence generally eastwards and south-eastwards along the southern boundaries of Copper Queen 2, 36, 38, 39 and 45 to the southernmost beacon of Copper Queen 45; thence north-eastwards along the south-eastern boundary of that property to its easternmost beacon; thence eastwards direct to the starting-point.

The map references quoted in this description are given to the nearest hundred metres.

Item 11: *Ungwe* Area: 567 hectares

The area of land bounded by a line drawn from the southernmost beacon of Copper Queen 62 north-eastwards along the south-eastern boundary of that property direct to a point at map reference 35KQL315264 on the 1:50 000 map Gowe Pools 172903, Edition 2; thence proceeding south-eastwards direct to a point at map reference QL320253 on that map; thence southwards direct to a point at map reference QL318244 on that map; thence south-eastwards direct to the northernmost beacon of Copper Queen 72; thence south-westwards along the north-western boundaries of Copper Queen 72 and 73 to the westernmost beacon of the latter property, thence southwards direct to a point at map reference QL312225 on that map; thence south-westwards direct to a point at map reference QL301220 on that map; thence north-westwards direct to a point on the southern boundary of Copper Queen 27 at map reference QL289229 on that map, thence north-eastwards along that boundary and its prolongation to a point at map reference QL304231 on that map; thence north-eastwards direct to a point at map reference QL308249 on that map; thence north-westwards direct to a point at map reference QL307254 on that map; thence north-westwards direct to the starting-point.

The map references quoted in this description are given to the nearest hundred metres.

**Nyanga district**

Item 12: *Nyangu* Area: 16 600 hectares

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# Land Acquisition Act 3/1992

## PART I

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### PRELIMINARY

AN ACT to empower the President and other authorities to acquire land and other immovable property compulsorily in certain circumstances; to provide for the designation of rural land; to provide for the establishment of the Derelict Land Board; to provide for the declaration and acquisition of derelict land; and to provide for matters connected with or incidental to the foregoing.

## PART I

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### PRELIMINARY

#### 1 Short title

This Act may be cited as the Land Acquisition Act [Chapter 20:10].

#### 2 Interpretation

In this Act\_

“**acquiring authority**”, subject to subsections (2) and (4), means the President or any person acting in terms of section *three or four*;

“**agricultural purposes**” includes forestry, fruit-growing and animal husbandry, including the keeping of poultry, bees or fish;

“**Chief Land Officer**” means the Chief Land Officer referred to in section *forty*;

“**Compensation Committee**” means the Compensation Committee established by section *seventeen*;

“**Derelict Land Board**” means the Derelict Land Board established by section *thirty*;

“**designated rural land**” means rural land within an area that has been designated in terms of section *twelve*;

“**fair compensation**”, in relation to designated rural land, means compensation fixed by the Compensation Committee in accordance with such\_

(a) guidelines given to it by the Minister in terms of subsection (3) of section *nineteen*; and

(b) principles prescribed in the Schedule;

as are applicable to the acquisition of the designated rural land concerned;

“**land**” includes\_

(a) anything permanently attached to or growing on land; and

(b) any interest or right in land,

“**member**” means a member of the Derelict Land Board, including the chairman, appointed in terms of section *thirty*;

“**Minister**” means the Minister of Lands and Water Resources or any other Minister to whom the President may, from time to time, assign the administration of this Act;

“**piece of land**” means a piece of land registered as a separate entity in a Deeds Registry, and includes anything permanently attached to or growing on such land and any interest or right in such land;

“**preliminary notice**” means a notice referred to in subsection (1) of section *five*;

“**rural land**” means any land other than land which is\_

(a) Communal Land; or

(b) in a municipal area, town area or local government area;

(c) in a town ward of a rural district council or an area declared to be a specified area in terms of the Rural

District Councils Act [Chapter 29:13]; or

- (d) in the area of any township as defined in the Land Survey Act [Chapter 20:12]; or
- (e) State land the layout of which has been approved in terms of section 43 of the Regional, Town and Country Planning Act [Chapter 29:12]; or
- (f) State land specified in the Third Schedule to the Agricultural and Rural Development Authority Act [Chapter 18:01];

“**structure**” includes any wall, fence, dam, earthwork, well, borehole or other permanent improvement on or to land.

(2) Where any enactment applies any provision of this Act to any acquisition of land, taking of materials from land or payment of compensation by any person, any reference to an acquiring authority in any such provision of this Act shall be construed as including a reference to the person empowered by that enactment to acquire land or take materials or required to pay compensation, as the case may be.

(3) Any reference in this Act to the acquisition of land shall, unless inconsistent with the context, be construed as including a reference to the taking materials from land.

(4) Anything required or permitted to be done by an acquiring authority in terms of this Act may be done by any person truly authorized by the acquiring authority for that purpose.

- (i) for settlement for agricultural or other purposes; or
- (ii) for purposes of land reorganization, forestry, environmental conservation or the utilization of wild life or other natural resources; or
- (iii) for the relocation of persons dispossessed in consequence of the utilization of land for a purpose referred to in subparagraph (i) or (ii).

(2) Subject to this Act, the President may acquire any land that has been declared derelict in terms of section forty-two.

(3) Subsections (1) and (2) shall not empower an acquiring authority to acquire\_

- (a) minerals which are the subject of rights; or
- (b) rights;

acquired in terms of the Mines and Minerals Act [Chapter 21:05].

(4) Notwithstanding subsections (1) and (2), no Communal Land, materials from Communal Land or interest or right in Communal Land may be acquired by an acquiring authority otherwise than in accordance with the Communal Land Act [Chapter 20:04]

**4 Acquisition by resumption of ownership in certain cases**

Nothing in this Act shall preclude the President or any other person from resuming ownership of any land in accordance with any condition contained in a title deed to the land.

**PART II**

**ACQUISITION OF LAND**

**3 Acquisition of land by President**

- (1) Subject to this Act, the President may compulsorily acquire\_
  - (a) any land, where the acquisition is reasonably necessary in the interests of defence, public safety, public order, public morality, public health, town and country planning or the utilization of that or any other property for a purpose beneficial to the public generally or to any section of the public;
  - (b) any rural land, where the acquisition is reasonably necessary for the utilization of that or any other land\_

**PART III**

**PROCEDURE FOR COMPULSORY ACQUISITION OF LAND**

**5 Preliminary notice of compulsory acquisition**

- (1) Where an acquiring authority intends to acquire any land otherwise than by agreement, he shall\_
  - (a) publish once in the *Gazette* and once a week for two consecutive weeks, commencing with the day on which the notice in the *Gazette* is published, in a newspaper circulating in the area in which the land to be acquired is situated and in such other manner as the acquiring authority thinks will best bring the

- notice to the attention of the owner, a preliminary notice:
- (i) describing the nature and extent of the land which he intends to acquire and stating that a plan or map of such land is available for inspection at a specified place and at specified times; and
  - (ii) setting out the purposes for which the land is to be acquired; and
  - (iii) calling upon the owner or occupier or any other person having an interest or right in the land who\_
    - A. wishes to contest the acquisition of the land, to lodge a written objection
 

with the acquiring authority within thirty days from the date of publication of the notice in the *Gazette*; or

      - B. wishes to claim compensation in terms of Part V for the acquisition of the land, to submit a claim in terms of section *twenty-two*, where the land is not designated rural land; and
- (b) serve on:
- (i) the owner of the land to be acquired and the holder of any other registered real right in that land; and
  - (ii) any other person who it appears to the acquiring authority may suffer loss or deprivation of rights by such acquisition.
- whose whereabouts are ascertainable after diligent inquiry, notice in writing providing for the matters referred to in subparagraphs (i), (ii) and (iii) of paragraph (a).
- (2) Where the acquiring authority has published a preliminary notice in the *Gazette* in respect of any land, no person shall, while the notice remains in force in terms of subsection (4)\_
    - (a) subdivide or apply in terms of section 40 of the Regional, Town and Country Planning Act [*Chapter 29:12*] for a permit to subdivide such land; or
    - (b) construct permanent improvements therein or thereon; or
    - (c) dispose of such land;

without the permission in writing of the acquiring authority.

    - (3) The acquiring authority may, by notice in writing served on the owner or occupier of any land specified in a preliminary notice, at any time on or after the date of publication of the preliminary notice in the *Gazette*, prohibit on such land any activity that he may specify.
    - (4) A preliminary notice or a notice in terms of subsection (3) shall remain in force:
      - (a) for a period of one year from the date of publication of the preliminary notice in the *Gazette*; or
      - (b) until withdrawn by the acquiring authority in terms of subsection (7); or
      - (c) until the land is acquired in terms of section *eight*.
    - (5) A copy of the preliminary notice shall be lodged with\_
      - (a) the Registrar of Deeds, who shall thereafter not register any transfer of any land described in such notice to any person other than the acquiring authority unless\_
        - (i) the preliminary notice ceases to be in force in terms of paragraph (a) or (b) of subsection (4); or
        - (ii) in pursuance of a valid contract of sale entered into prior to the date the preliminary notice was published in the *Gazette*, or
        - (iii) the consent in writing of the acquiring authority has been given; and
      - (b) the Director of Physical Planning and the appropriate local planning authority as defined in section 2 of the Regional, Town and Country Planning Act [*Chapter 29:12*].
    - (6) Where, after a preliminary notice has been published in the *Gazette*, the land described in the notice is transferred in pursuance of a valid contract of sale entered into prior to the date of publication of the preliminary notice, in respect of that land nor to serve a further copy of the preliminary notice upon the person to whom the land has been transferred.
    - (7) An acquiring authority may at any time:
      - (a) withdraw a preliminary notice, by publishing notice of its withdrawal in the *Gazette* and serving notice of its withdrawal on every person on whom the preliminary notice was served;
      - (b) withdraw a notice in terms of subsection (3), by

serving written notice of its withdrawal on every person on whom the first-mentioned notice was served.

(8) Any person who, after a preliminary notice has been published in the *Gazette* and while that notice is in force in terms of subsection (4), demolishes, damages, alters or in any other manner impairs the land described in that preliminary notice without the permission in writing of the acquiring authority, otherwise than in the exercise of rights acquired in terms of the Mines and Minerals Act [Chapter 21:05], shall be guilty of an offence and liable to a fine not exceeding two thousand dollars or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment.

**6 Owner may demand acquisition of whole property**

(1) Where:

- (a) an acquiring authority has served a preliminary notice of intention to acquire part only of a piece of land; and
- (b) the owner considers that the acquisition of that part will render the remainder of the piece of land unsuitable for the purpose for which, immediately prior to the date of the service on him of that notice or of a notice in terms of subsection (3) of section seven, whichever is the earlier, it was being used or was *bona fide* intended to be used;

the owner may call upon the acquiring authority to acquire the whole of that piece of land and the acquiring authority shall, subject to subsection (2), comply therewith unless the preliminary notice expires in terms of paragraph (a) of subsection (4) of section five or is withdrawn in terms of subsection (7) of that section.

(2) If the acquiring authority considers that the acquisition of a part of any piece of land referred to in subsection (1) will not render the remainder of such piece of land unsuitable as referred to in that subsection, the matter shall be referred to the Administrative Court, which may make such order as it thinks fit.

**7 Application for authorizing or confirming order where acquisition contested**

(1) Where an objection to a proposed acquisition has been lodged in terms of subparagraph A of subparagraph (iii) of paragraph (a) of subsection (1) of section five, the acquiring authority shall\_

- (a) before any acquisition takes place; or
- (b) not later than thirty days after the coming into force

of an order made in terms of section eight;

apply to the Administrative Court for an order authorizing or confirming the acquisition, as the case may be.

(2) An application in terms of subsection (1) shall be accompanied by a statement setting out the purpose of the acquisition.

(3) Where an acquiring authority intends to apply for an order in terms of subsection (1), he shall, not less than fourteen days before the date on which the application is to be heard by the Administrative Court, give notice of the application to every person on whom the preliminary notice has been served.

(4) The Administrative Court shall not grant an order referred to in subsection (1) unless it is satisfied\_

- (a) that the acquisition of the land is reasonably necessary in the interests of defence, public safety, public order, public morality, public health, town and country planning or the utilization of that or any other property for a purpose beneficial to the public generally or to any section of the public; or
- (b) where the acquisition relates to rural land, that the acquisition is reasonably necessary for the utilization of that or any other land\_
  - (i) for settlement for agricultural or other purposes; or
  - (ii) for purposes of land reorganization; forestry, environmental conservation or the utilization of wild life or other natural resources; or
  - (iii) for the relocation of persons dispossessed in consequence of the utilization of land for a purpose referred to in subparagraph (i) or (ii);
- (c) where the acquisition relates to only part of a piece of land, that the acquisition will not render the remainder of that piece of land unsuitable for the purpose for which it was being used or was *bona fide* intended to be used immediately before the acquisition.

(5) Where the Administrative Court refuses to grant an order referred to in subsection (1), the Administrative Court shall:

- (a) order the acquiring authority to withdraw the preliminary notice and any notice served in terms of subsection (3) of section five; and
- (b) if the acquiring authority has already acted in terms of section eight or nine, order the acquiring authority to return the land acquired.

(6) An application in terms of subsection (1) shall be determined within thirty days of the date thereof unless the Administrative Court is satisfied that there are special reasons, which shall be recorded by the Administrative Court, why a longer period should be allowed for such determination.

### 8 Vesting of land, taking of materials and exercise of rights over land

(1) Subject to section *seven*, the acquiring authority may, not less than thirty days after the date of publication of the preliminary notice in the *Gazette*, acquire, by order describing the nature and extent of the land affected and served on the owner of the land concerned, all or any of the land described in that notice:

Provided that\_

- (i) the acquiring authority may, with the consent of\_
  - (a) the owner of the land to be acquired and the holder of any other registered real right therein; and
  - (b) any other person who it appears to the acquiring authority may suffer loss or deprivation of rights by such acquisition;

whose whereabouts are ascertainable after diligent inquiry, acquire land not specified in the preliminary notice, and, where the land is not designated rural land, any such person shall be given a reasonable opportunity to submit a claim for compensation in terms of section *twenty-two* accordingly;

- (ii) if the whereabouts of the owner of any land to be acquired is unknown to the acquiring authority after diligent inquiry, he may acquire the land concerned by notice in the *Gazette* specifying\_
  - (a) the land that is being acquired; and
  - (b) the name of the registered owner of such land.

(2) An acquiring authority may, immediately after making an order in terms of subsection (1), exercise any right specified in that order if the exercise of that right does not require the eviction of the owner or occupier of the land concerned:

Provided that this subsection shall not permit an acquiring authority, other than the President or a Minister, to do anything which interferes with rights acquired in terms of the Mines and Minerals Act [Chapter 21:05] without the permission in writing of the Minister responsible for mines.

(3) The effect of an order made in terms of subsection

(1) shall be that the ownership of the land specified therein shall, subject to subsection (5) of section *seven*, immediately vest in the acquiring authority whether or not compensation has been agreed upon, fixed or paid in terms of Part V and, subject to section *nine*, shall be free of all rights and encumbrances except, subject to subsection (4)\_

- (a) any interest or right in the land which may be specified in the order as not being extinguished thereby; and
- (b) any right acquired in terms of the Mines and Minerals Act [Chapter 21:05]; and
- (c) any right of the State, a local authority or a statutory body;
- (d) any restriction on the use or occupation of the land which is in force by virtue of the Regional, Town and Country Planning Act [Chapter 29:12];

which were enforceable immediately prior to the serving of the order and which bind the acquiring authority thereafter.

(4) An acquiring authority may state in an order made in terms of subsection (1) that the land acquired in terms of that order is to be free of any right referred to in paragraph (b) or (c) of subsection (3) and the land shall thereupon be acquired free of any such right:

Provided that an acquiring authority other than the President or a Minister shall not interfere with\_

- (a) any right referred to in paragraph (b) of subsection (3) without the permission in writing of the Minister responsible for mines; or
- (b) any right referred to in paragraph (e) of subsection (3) without the consent in writing of a Minister or the local authority or statutory body concerned, as the case may be.

(5) The acquisition by an acquiring authority of part of a piece of land in terms of subsection (1) shall not be construed as a subdivision of that piece of land for the purposes of the Regional, Town and Country Planning Act [Chapter 29:12].

(6) A copy of an order served on the owner of the land referred to in subsection (1) or published in the *Gazette* in terms of proviso (ii) to subsection (1) shall be served on any other person on whom the preliminary notice was served.

### 9 Eviction of owner or occupier

(1) Subject to subsection (5) of section *seven*, subsec-

tions (3) and (4) of section *eight* and this section, any person who, immediately prior to the date an order is made in terms of subsection (1) of section *eight*, was occupying, holding or using the land to which such order relates shall, if so required by notice in writing by the acquiring authority, cease to occupy hold or use that land, and if he fails to do so he shall be liable to be evicted by order of a competent court.

(2) Any person who, immediately prior to the date an order is made in terms of subsection (1) of section *eight*, was leasing land to which such order relates shall not be required to vacate that land unless he has been given at least three months notice or the period of notice provided for in the agreement of lease for the termination thereof by the lessor, whichever is the less.

(3) If the owner or a usufructuary of land which has been acquired in terms of this Part is occupying that land, he shall not be required to vacate that land unless at least three months' notice in writing has been given to him.

#### 10 Registration of land acquired

(1) Where the ownership of any land has vested in an acquiring authority in terms of subsection (1) of section *eight*, the acquiring authority shall, as soon as practicable thereafter, notify the Registrar of Deeds in writing of that fact and lodge with him\_

- (a) a copy of the order made in terms of that subsection; and
- (b) if the ownership of part only of a piece of land has vested in the acquiring authority, a diagram signed by a land surveyor showing the extent of the land acquired.

(2) Where a servitude has vested in an acquiring authority in terms of subsection (1) of section *eight*, the acquiring authority shall notify the Registrar of Deeds of that fact and the Registrar of Deeds shall make such entries in his registers and endorsements on deeds registered in the Deeds Registry as he considers necessary, and for that purpose may require the acquiring authority to lodge with him a diagram of the land affected by the servitude showing the nature and extent of the servitude.

(3) On receiving notification in terms of subsection (1) the Registrar of Deeds shall, subject to subsection (5) of section *seven*\_

- (a) if the whole of a piece of land has vested in the acquiring authority, record the acquisition by making the appropriate entries in his registers and an endorsement on the registry duplicate of the title deed of the piece of land concerned and, if at any

time the owner's copy of such deed is lodged in the Deeds Registry for any purpose, he shall cause a similar endorsement to be made thereon;

- (b) if part only of a piece of land has vested in the acquiring authority and paragraph (b) of subsection (1) has been complied with\_
  - (i) issue and register a title deed in respect of that part in a form approved by the Chief Registrar of Deeds and annex thereto the diagram referred to in paragraph (b) of subsection (1); and
  - (ii) endorse the fact of the acquisition on the registry duplicate of the title deed of the piece of land concerned and, if at any time the owner's copy of such deed is lodged in the Deeds Registry for any purpose, he shall cause a similar endorsement to be made thereon;
- (c) if part only of a piece of land has vested in the acquiring authority, not register any transfer or real right in respect of the remainder of such piece of land until the title deed referred to in subparagraph (i) of paragraph (b) has been registered.
- (4) No duty, fee or other charge of office shall be payable in respect of any entry or endorsement or any cancellation of any entry or endorsement made or title deed issued in terms of this section.

#### 11 Investigation of land to be acquired

(1) Subject to this section, whenever an acquiring authority is empowered to acquire land subject to this Act and it is considered desirable that any land be acquired, any duly authorized representative or employee of the acquiring authority may, whether the acquiring authority has acted in terms of section *five* or not, enter upon the land at all reasonable times with such men, vehicles and equipment and do such acts thereon as are necessary to ascertain\_

- (a) the suitability of the land for the purposes of the acquiring authority; and
- (b) the value and extent of the land.
- (2) Before any powers conferred by subsection (1) are exercised, not less than fourteen days' notice in writing shall be given to the occupier, if any, of the land in question unless such notice is waived by the occupier.
- (3) The acquiring authority shall not have the right to enter any dwelling-house without the permission of the occupant.



(4) As little damage and inconvenience as possible shall be caused by the exercise of any of the powers conferred by subsection (1).

## PART IV

### DESIGNATION OF RURAL LAND FOR RESETTLEMENT AND OTHER PUR- POSES

#### 12 Designation of rural land

(1) Subject to this section, the Minister may at any time designate any area or piece of rural land as land that will be acquired in terms of this Act for any purpose referred to in subsection (1) of section *three*.

(2) When designating any rural land in terms of subsection (1), the Minister shall specify:

- (a) the purpose for which it is intended to acquire the rural land concerned; and
- (b) the acquiring authority that intends to acquire the rural land concerned; and
- (c) the period, not exceeding ten years, within which it is intended to acquire the rural land.

(3) The Minister shall not specify any person or authority, other than the President, in terms of subsection (2) as the acquiring authority that will acquire designated rural land, unless that person or authority has consented to being so specified.

(4) Whenever he has designated any rural land in terms of subsection (1), the Minister shall without delay:

- (a) publish a notice in the Gazette describing the area, situation and extent of the rural land so designated and specifying the particulars referred to in subsection (2) relating to the land; and
- (b) take such reasonable steps as may be necessary to inform the owner of every piece of rural land so designated of the fact that his land has been designated and of the particulars referred to in subsection (2); and
- (c) cause maps, plans and other documents showing\_
  - (i) the area, extent and situation of the rural land so designated; and

(ii) the particulars referred to in subsection (2) relating to the rural land so designated;

to be available for inspection by members of the public during office hours at the head office of his Ministry and at such other places as he may think necessary.

(5) The Minister may at any time amend or revoke any designation in terms of subsection (1):

Provided that the Minister shall not\_

- (a) revoke the designation of any piece of rural land; or
- (b) extend beyond an aggregate of ten years the period specified as the period within which it is intended to acquire any piece of rural land;

without the consent of the owner of that rural land.

#### 13 Representations *re* designation of land

(1) Any owner of designated rural land or holder of a registered real right in designated rural land who objects to the designation of that land may make written representations to the Minister setting out the reasons for his objection.

(2) On receipt of representations in terms of subsection (1), the Minister\_

- (a) may make such investigation into the matter as he thinks necessary; and
- (b) may accord the person who made the representations an opportunity to make further representations, either orally or in writing as the Minister may specify.

(3) After making any investigation in terms of subsection (2) and considering any representations made in terms of that subsection, the Minister may in his absolute discretion amend or revoke the notice designating the rural land concerned, and the Minister's decision in the matter shall be final.

(4) The fact that the Minister is considering representations made in terms of subsection (1) in relation to any rural land shall not:

- (a) invalidate the designation of the rural land concerned; or
- (b) prevent an acquiring authority from acquiring the rural land concerned in terms of this Act.

#### 14 Restriction on sale or disposal of designated rural land

(1) Subject to subsection (4), no person shall sell, lease or otherwise dispose of any designated rural land, except in accordance with the written permission of the Minister given prior to such sale, lease or disposal.

(2) An application for the Minister's permission in terms of subsection (1) shall be made in writing, specifying:

- (a) the person to whom it is proposed to sell, lease or dispose of the designated rural land concerned, and
- (b) the terms and conditions of the proposed sale, lease or disposal; and
- (c) the reasons for the proposed sale, lease or disposal; and
- (d) such other particulars as may be prescribed;

and shall be accompanied by a copy of the title deed of the designated rural land concerned and a statement from the person specified in terms of paragraph (a) to the effect that he is able and willing to buy, lease or otherwise acquire the land on the terms and conditions specified in terms of paragraph (b).

(3) Not later than ninety days after receipt of an application in terms of subsection (2), the Minister shall\_

- (a) grant the applicant his written permission for the sale, lease or other disposal, as the case may be, of the designated rural land concerned; or
- (b) notify the applicant, in writing, that he refuses to grant permission for the sale, lease or other disposal, as the case may be, of the designated rural land concerned;

Provided that, if the applicant proves to the satisfaction of the Minister that an agreement for the sale, lease or other disposal of the designated rural land was concluded before the rural land was designated in terms of section twelve, the Minister shall grant his written permission for the sale, lease or other disposal, as the case may be, of the designated rural land in accordance with the agreement.

(4) Where the Minister has refused to grant permission in terms of this section for the sale, lease or other disposal of any designated rural land, the owner of the land may, by notice in writing to the acquiring authority specified in the notice published in terms of section twelve, call upon the acquiring authority to acquire the land, and the acquiring authority shall forthwith take steps to acquire the land concerned in terms of this Act.

(5) Any purported sale, lease or disposal of designated rural land effected without the permission of the Minister

in terms of this section shall be void.

## 15 Effect of designation of rural land

(1) Where the Minister has designated any rural land in terms of section twelve, the acquiring authority concerned shall acquire the rural land in terms of this Act within the period specified in terms of paragraph (c) of subsection (2) of that section, or, where that period has been extended in terms of subsection (5) of that section, within that extended period.

(2) The designation of any rural land in terms of section twelve shall not\_

- (a) affect the rights of the owner of the designated rural land or the holder of any registered real right in such land to use and occupy the land, pending the issue of any preliminary notice in respect of the land; or
- (b) preclude any acquiring authority from acquiring, in terms of this Act, land which has not been so designated:

Provided that, where any rural land that is not designated rural land is acquired, compensation in respect of the acquisition shall be assessed and paid in terms of section twenty.

## PART V

### CLAIMS FOR AND ASSESSMENT AND PAYMENT OF COMPENSATION

#### 16 Duty to pay compensation

Subject to this Part, an acquiring authority shall pay:

- (a) fair compensation to the owner of any designated rural land and any other person whose right or interest in the designated rural land has been acquired in terms of this Act;
- (b) fair compensation within a reasonable time to the owner of any land which is not designated rural land and to any other person who suffers loss or deprivation of rights as a result of any action taken by the acquiring authority in respect of the acquisition of that land in terms of this Act.

#### 17 Compensation Committee

(1) There is hereby established a committee, to be known as the Compensation Committee, which shall consist of:

- (a) the Secretary of the Ministry for which the Minister is responsible, who shall be the chairman of the Committee; and
- (b) the Director of Agricultural, Technical and Extension Services; and
- (c) the Chief Government Valuation Officer; and
- (d) not more than three other members appointed by the Minister.

(2) The provisions of sections thirty-one to thirty-eight which apply to the Derelict Land Board and its members shall apply, *mutatis mutandis*, to the Compensation Committee and those of its members who are appointed in terms of paragraph (d) of subsection (1).

(3) The functions of the Compensation Committee shall be to determine the compensation payable in respect of the acquisition of designated rural land and to perform such other functions as may be assigned to it by or in terms of this Act or any other enactment.

#### **18 Procedure for assessing compensation for designated rural land**

(1) As soon as possible after a preliminary notice has been published in respect of any designated rural land, a designated valuation officer shall prepare a preliminary estimate of the compensation payable in terms of this Part in respect of the acquisition, and shall transmit his preliminary assessment to the Compensation Committee.

(2) For the purpose of preparing a preliminary estimate of compensation in terms of subsection (1), a designated valuation officer may exercise the powers conferred by section eleven upon an authorized representative of an acquiring authority.

(3) On receipt of a preliminary assessment of compensation in terms of subsection (1), the Compensation Committee, after carrying out such further investigations as it considers necessary, shall without delay—

- (a) prepare its own estimate of the compensation payable in terms of this Part in respect of the acquisition concerned; and
- (b) give written notification of its estimate to every person who is entitled in terms of section sixteen to be paid compensation in respect of the acquisition concerned; and
- (c) invite every person whom it has notified in terms of paragraph (b), if he disputes the Compensation Committee's estimate, to submit, in such manner

and within such reasonable time as the Compensation Committee may specify, any representations, whether in the form of a claim for compensation or otherwise, that he may wish to make in regard to the Compensation Committee's estimate of compensation payable to him.

(4) After considering any representations submitted in response to an invitation in terms of paragraph (c) or subsection (3), the Compensation Committee shall, subject to sections nineteen and twenty-one, fix the compensation payable in respect of the acquisition concerned and shall give written notification of its assessment to the acquiring authority and to the owner of the land concerned and every other person who is entitled in terms of section sixteen to be paid compensation in respect of the acquisition concerned.

#### **19 Assessment of compensation for designated rural land and manner and period of payment**

(1) In assessing or estimating the amount of compensation payable to any person in respect of the acquisition of any designated rural land, the Compensation Committee and every designated valuation officer shall be bound by such of the principles prescribed in the Schedule as are applicable to the acquisition concerned.

(2) Compensation payable for the acquisition of designated rural land shall not extend to compensation for loss suffered or expense incurred by the owner or occupier of the designated rural land arising out of—

- (a) any investigation conducted by or on behalf of the acquiring authority in terms of section eleven; or
- (b) the removal or eviction of the owner or occupier from the designated rural land concerned in terms of section nine; or
- (c) his inability to conduct any activity on the designated rural land concerned, whether as a result of a notice in terms of subsection (3) of section five or otherwise; or
- (d) any other circumstances incidental to the acquisition of the designated rural land concerned.

(3) The Minister, with the approval of the Minister responsible for finance, may from time to time give the Compensation Committee written guidelines as to the fixing of compensation payable in respect of all or any types of classes of designated rural land, and the Compensation Committee shall fix compensation in accordance with any such guidelines.

(4) Guidelines given by the Minister in terms of subsection (3) may relate to the amounts of compensation

payable for any designated rural land or to the principles to be applied in assessing such compensation:

Provided that no such guidelines shall be inconsistent with the principles prescribed in this Act.

(5) The Minister, with the approval of the Minister responsible for finance, may fix the form and manner in which and the period within which compensation shall be paid in respect of the acquisition of designated rural land, or any class of such land, in terms of this Act:

Provided that, unless the person to whom the compensation is paid agrees otherwise\_

- (a) at least one-half of the compensation shall be paid at the time the designated rural land concerned is acquired, or within a reasonable time thereafter; and
  - (b) of the remainder of the compensation payable, at least one-half shall be paid within two years after the designated rural land concerned was acquired; and
  - (c) the balance of the compensation payable shall be paid within five years after the designated rural land was acquired.
- (6) Without derogation from the generality of subsection (5), in fixing the form, manner and period within which compensation shall be paid in terms of that subsection, the Minister may direct that the whole or any part of the compensation payable in respect of the acquisition of designated rural land shall be paid:
- (a) in a lump sum or in instalments; or
  - (b) in cash or in bonds or other securities issued by the Government.

**20 Assessment of compensation for land other than designated rural land**

(1) In respect of any acquisition of land which is not designated rural land, compensation shall be paid in terms of section *sixteen* for\_

- (a) the loss of the land; and
- (b) any actual expense or loss which has been or may reasonably be incurred or suffered directly as a result of the action taken by the acquiring authority and which has not already been taken into account, directly or indirectly, in assessing compensation for the loss referred to in paragraph (a):

Provided that, in relation to any damage to any area of land or any building or structure thereon, compensation

for such damage shall not exceed the value of the area of land, building or structure, as the case may be.

(2) Compensation shall be assessed in terms of subsection (1) so as to endeavour to arrive at compensation that is fair and reasonable, having regard to:

- (a) the right of the claimant to be compensated for his loss; and
- (b) the general public interest in the acquisition of the land concerned;

and, subject to this section and section twenty-one, in assessing such compensation the value of the land shall be taken into account regard being had to its nature, location and quality and any other factor bearing on its value.

(3) Where land that is not designated rural land is acquired temporarily, compensation shall be assessed in terms of subsection (1) on the rental value of the land.

(4) If, immediately before the date of publication of the preliminary notice in the *Gazette*, land that is not designated rural land was used for a purpose and adapted for that purpose in such a way that there is no general demand or market for the land so used and adapted, and if the justice of the case so requires, compensation shall be assessed in terms of subsection (1) on the basis of the reasonable cost of adapting other land in such a way that the claimant is restored as closely as possible to the position in which he was immediately prior to that date or on any other basis which is considered fair.

(5) Where materials are taken from land that is not designated rural land and there is no general demand or market for those materials, compensation shall be assessed in terms of subsection (1) as the amount which would have been payable if the area of land from which the materials were taken had been acquired in terms of this Act.

**21 General considerations regarding assessment of compensation**

(1) In the assessment of compensation in terms of section *nineteen* or *twenty*, regard shall be had to the value of any other property or rights of the claimant, and to any benefit which the claimant will receive, due to any works undertaken by the acquiring authority in connection with the acquisition of the land.

(2) A claimant shall take reasonable steps to mitigate any adverse effect which action taken by the acquiring authority may cause to his rights or interest in the land concerned and, in the assessment of compensation for such loss in terms of section *nineteen* or *twenty*, any fail-

ure so to mitigate his loss shall be taken into account.

(3) Where part only of a piece of land, other than designated rural land, has been acquired, compensation for that part shall be assessed as the difference between the price or value of the whole piece of land determined in terms of section *twenty*, and the price or value so determined of the remainder of that piece of land.

(4) In the assessment of compensation in terms of section *nineteen* or *twenty*, the following factors may be disregarded:

- (a) anything done in contravention of subsection (2) of section *five* or a notice in terms of subsection (3) of that section;
- (b) any change in the price or value of any land resulting from any action taken or to be taken by the acquiring authority connected with the acquisition of the land or resulting from the purpose for which or in connection with which the land is being acquired or taken or is to be used;
- (c) the special suitability or usefulness of any land for the purpose for which it is required by the acquiring authority if it is unlikely that, but for the acquiring authority's requirements, the land would have been purchased for that purpose on the open market;
- (d) any increase in the price or value of any land where such increase is due to the use of the land in a manner which is illegal, detrimental to the land or restrainable;
- (e) the compulsory nature of the acquisition;
- (f) any right in any land which is adequately compensated for in terms of section *twenty-six* or *twenty-seven*;
- (g) any loss of trade resulting from a reduction of traffic over any road due to an alteration of the course of such road or the closure or change of status of such road as a result of any action taken or to be taken by the acquiring authority connected with the acquisition of the land or resulting from the purpose for which or in connection with which any land is being acquired or is to be used;
- (h) any improvement effected *mala fide* on any land in order to increase any compensation payable in terms of this Act;
- (i) any reduction in the price or value of any land resulting from any unusual or extraordinary circumstances existing immediately prior to the acquisition

tion of the land.

## **22 Claims for compensation: land other than designated rural land**

(1) Any person who wishes to claim compensation payable in terms of this Part in respect of the acquisition of land other than designated rural land shall submit a written claim for compensation specifying in detail:

- (a) the nature of his loss or deprivation of rights; and
- (b) the amount of compensation claimed by him and the basis on which he has calculated that amount and any actual expense or loss which has been or may reasonably be incurred or suffered directly as a result of the action taken by the acquiring authority.

(2) A claim for compensation in respect of the acquisition of land other than designated rural land shall be submitted within sixty days, or such longer period as the acquiring authority may for good cause allow, from the date on which the preliminary notice is served on the claimant or, if the preliminary notice is not served on him, from the date of the publication of the preliminary notice in the *Gazette*.

## **23 Review of assessments of compensation for designated rural land**

(1) If a claimant for compensation or an acquiring authority considers that the Compensation Committee, in assessing the compensation payable in respect of the acquisition of any designated rural land, has not observed any of the principles prescribed or referred to in section *nineteen* or *twenty-one*, he may refer the assessment to the Administrative Court for a review of the Compensation Committee's decision.

(2) An assessment may be referred to the Administrative Court in terms of subsection (1) within sixty days after the Compensation Committee's assessment of the compensation payable in respect of the acquisition of the designated rural land concerned.

(3) The Administrative Court may, on the application of the Compensation Committee or an acquiring authority, order a claimant to furnish further particulars of the grounds on which he seeks a review of the Compensation Committee's decision, in order that the Compensation Committee may adjust its assessment and, if necessary, the Administrative Court may postpone or adjourn a hearing for that purpose.

(4) In a review of an assessment in terms of subsection (1), the Administrative Court shall have the same powers as are exercisable by the High Court on a review of a decision of a tribunal:

Provided that neither the Administrative Court nor any other court shall set aside an assessment unless the court is satisfied that the Compensation Committee, in making the assessment, did not observe any of the principles prescribed or referred to in section nineteen or *twenty-one*.

**24 Reference of disputes *re* compensation to Administrative Court: land other than designated rural land**

(1) This section shall apply only in respect of the acquisition of land that is not designated rural land.

(2) If the parties cannot agree upon a claimant's right to compensation in terms of this Act or upon the amount of compensation payable to him in terms of this Part, either party may refer the question to the Administrative Court.

(3) A matter may be referred to the Administrative Court in terms of subsection (1) at any time after the expiry of the period of thirty days calculated from the date of service or publication of the order in terms of subsection (1) of section eight or the date of the granting of the order referred to in subsection (1) of section *seven* authorizing or, as the case may be, confirming the acquisition giving rise to the claim:

Provided that, where the acquiring authority does not acquire the land concerned, either party may refer the question of compensation to the Administrative Court at any time after the lapsing or withdrawal of the preliminary notice or the refusal by the Administrative Court to grant an order authorizing or confirming the acquisition, as the case may be.

(4) The Administrative Court may, on the application of an acquiring authority, order a claimant to furnish further particulars of his claim for compensation in order that the acquiring authority may make an offer of payment in full settlement of the claim, and, if necessary, the Administrative Court may postpone or adjourn a hearing for that purpose.

(5) In determining any question referred to it in terms of subsection (1), the Administrative Court shall ensure that fair compensation is paid within a reasonable time in respect of the acquisition of the land concerned.

**25 Advance payment of compensation**

(1) Where a question regarding compensation is referred to the Administrative Court for review or determination, in terms of section *twenty-three* or *twenty-four*, the acquiring authority shall\_

(a) on or before the date on which the opening day of the hearing is finally fixed, make a final offer of an

amount by way of compensation; and

(b) not later than seven days after the date referred to in paragraph (a):

(i) where the compensation relates to the acquisition of designated rural land, pay to the claimant such proportion, if any, of the amount offered in terms of paragraph (a) as would have been payable in terms of section *nineteen* on the date on which the land was acquired;

(ii) where the compensation relates to the acquisition of land other than designated rural land, pay to the claimant the full amount offered in terms of paragraph (a);

together with interest calculated in terms of section *twenty-nine*:

Provided that, on application by the acquiring authority, the Administrative Court may, on good cause shown, declare that all or any of the provisions of this subsection shall not apply in any particular case.

(2) If after payment of an amount in terms of subsection (1) a different amount is agreed by the parties or finally determined to be payable as compensation and the amount agreed or determined\_

(a) is less than the amount paid in terms of paragraph (b) of subsection (1), the claimant shall, within three months, refund to the acquiring authority the difference together with the interest paid in terms of that paragraph in respect of the amount refunded;

(b) is more than the amount paid in terms of paragraph (b) of subsection (1), the acquiring authority shall, within three months, pay to the claimant the difference together with interest calculated in terms of section *twenty-nine* in respect of the difference paid.

**26 Discharge of debt secured by mortgage bond over land**

Where any land acquired in terms of this Act was, immediately prior to its acquisition, mortgaged or hypothecated, the acquiring authority shall not, subject to section *twenty-seven*, pay out any portion of the compensation payable for that land until he is satisfied that the amount of the debt secured by such mortgage or hypothec will, so far as is possible, be paid or otherwise secured.

**27 Payment of certain taxes and other moneys out of compensation**

Where any land is acquired in terms of this Act, the acquiring authority may, after consultation with the owner

of the land or his representative, utilize a portion of the compensation payable for the land in order to pay any rate, levy, tax or other moneys on behalf of the owner of the land, where production of a receipt or certificate showing the payment of such moneys is a prerequisite for the passing of transfer of the land by the Registrar of Deeds.

**28 Payment of compensation moneys to Master and retention thereof by acquiring authority in certain cases**

- (1) If:
- (a) any land acquired in terms of this Act was burdened with a *fidei commissum*, usufruct or other like interest; or
  - (b) compensation is payable in terms of this Act to a minor or a person incapable of managing his own affairs or whose place of residence is not known;

the acquiring authority may pay the amount of the compensation payable in terms of this Part to the Master of the High Court, and after such payment the acquiring authority shall cease to be liable in respect of that amount.

(2) Any moneys received by the Master in terms of subsection (1) shall, subject to the order of a competent court:

- (a) if the property in question was burdened with a *fidei commissum*, usufruct or other like interest, be subject, *mutatis mutandis*, to all the terms and conditions contained in the will or other instrument by which such *fidei commissum*, usufruct or other like interest was constituted; and
- (b) subject to paragraph (a), be paid into the Guardian's Fund referred to in section 97 of the Administration of Estates Act [Chapter 6:01] for the benefit of the persons who are or may become entitled thereto, and interest shall be payable thereon as if the money had been received in terms of that Act.

(3) Where moneys are paid into the Guardian's Fund in respect of land acquired which is subject to a *fidei commissum*, usufruct or other like interest and all interested parties are majors and consent to the money being withdrawn from the Guardian's Fund, or the High Court consents to such withdrawal on behalf of any interested party who is not a major or who is incapable of managing his affairs, then the Master may pay out such moneys in terms of any such consent.

(4) If a dispute or doubt arises as to the person who is to receive any compensation payable in terms of this Part or if the acquiring authority is not satisfied that the

amount of any debt referred to in section *twenty-six* will, so far as is possible, be paid or otherwise secured, the acquiring authority shall retain the amount of such compensation until the dispute has been settled or the doubt has been resolved or he is so satisfied, as the case may be.

**29 Payment of interest on compensation moneys**

Interest shall be paid by an acquiring authority at a rate, being not less than the current rate of interest prescribed in terms of the Prescribed Rate of Interest Act [Chapter 8:09] on compensation awarded to a claimant in terms of this Part for the period extending from the date on which the land was acquired in terms of this Act to the date the money is paid to the claimant or paid to the Master of the High Court in terms of subsection (1) of section *twenty-eight*.

## PART VI

### DERELICT LAND BOARD

**30 Establishment of Derelict Land Board**

(1) There is hereby established a board, to be known as the Derelict Land Board, which shall consist of not fewer than three and not more than five members who shall be appointed by the Minister, of whom\_

- (a) one shall be appointed from a list of not fewer than three names submitted by such association or associations of farmers as the Minister may determine; and
- (b) the remainder of whom shall be appointed by the Minister;

after consultation with the President and in accordance with such direction as the President may give.

(2) The Minister shall designate one member to be chairman of the Derelict Land Board.

**31 Disqualifications for membership of Derelict Land Board**

(1) A person shall not be appointed as a member, and no person shall be qualified to hold office as a member, if:

- (a) he has been adjudged or otherwise declared insolvent or bankrupt in terms of a law in force in any country and has not been rehabilitated or discharged; or

- (b) he has made an assignment to or arrangement or composition with his creditors in terms of a law in force in any country, and the assignment, arrangement or composition has not been rescinded or set aside; or
- (c) within the period of five years immediately preceding the date of his proposed appointment, he has been sentenced in any country, for conduct which, if committed in Zimbabwe, would have constituted an offence, to a term of imprisonment imposed without the option of a fine, whether or not any portion of the sentence has been suspended, and has not received a free pardon.

(2) A member of Parliament shall not be appointed as a member, nor shall he be qualified to hold office as a member.

### 32 Terms and conditions of office of members

(1) A member shall hold office for such period, not exceeding three years, as the Minister may fix on his appointment.

(2) On the expiry of the period for which a member has been appointed, he shall continue to hold office until he has been reappointed or his successor has been appointed:

Provided that a member shall not continue to hold office in terms of this subsection for a period exceeding six months.

(3) Members shall hold office on such conditions as the Minister, with the approval of the Minister responsible for finance, may fix.

(4) A member who retires shall be eligible for reappointment.

### 33 Vacation of office by members and filling of vacancies

(1) A member shall vacate his office and his office shall become vacant:

- (a) after giving the Minister such period of notice of intention to resign as may be fixed in his conditions of service or, if no such period has been fixed, after the expiry of one month after the date he gives such notice, or after the expiry of such other period of notice as he and the Minister may agree; or
- (b) on the date he begins to serve a sentence of imprisonment the term of which is not less than three months, whether or not any portion has been suspended, imposed in any country; or

(c) if he becomes disqualified in terms of paragraph (a) or (b) of subsection (1) of section thirty-one to hold office as a member; or

(d) if he is required in terms of subsection (2) to vacate his office.

(2) The Minister, after consulting the Derelict Land board, may require a member to vacate his office if the member:

- (a) has been guilty of conduct which renders him unsuitable to continue to hold office as a member; or
- (b) has failed to comply with any conditions of his office fixed in terms of section thirty-two; or
- (c) is mentally or physically incapable of efficiently exercising his functions as a member.

(3) The Minister, on the recommendation of the Derelict Land Board, may require a member to vacate his office if the Minister is satisfied that the member has been absent without the permission of the chairman of the Derelict Land Board from three consecutive meetings of the Board, of which he has been given not less than seven days' notice, and that there was no just cause for the member's absence.

(4) On the death of or the vacation of office by a member, the Minister may, subject to section thirty, appoint a person to fill the vacancy.

### 34 Meetings and procedure of Derelict Land Board

(1) The Derelict Land Board shall hold its first meeting on such date and at such place as the Minister may fix and thereafter the Derelict Land Board shall meet for the dispatch of business and adjourn, close and otherwise regulate its meetings and procedure as it thinks fit.

(2) The chairman of the Derelict Land Board may himself at any time and shall, at the request in writing of not fewer than three members, convene a special meeting of the Board, which meeting shall be convened for a date not sooner than seven days nor later than thirty days after the receipt of such request.

(3) Subject to subsection (4), the chairman of the Derelict Land Board shall preside at meetings of the Board.

(4) If at a meeting of the Derelict Land Board the chairman is absent, the members present may elect one of their number to preside at that meeting as chairman.

(5) A majority of members shall form a quorum at any meeting of the Derelict Land Board.



(6) All acts, matters or things authorized or required to be done by the Derelict Land Board may be decided by a majority vote at a meeting of the Board at which a quorum is present.

(7) At all meetings of the Derelict Land Board each member present shall have one vote on each question before the Board:

Provided that:

- (i) in the event of an equality of votes, the person presiding at the meeting shall have a casting vote in addition to a deliberative vote;
- (ii) no member shall take part in the consideration or decision of, or vote on, any question before the Board which relates to his reappointment or vacation of office as a member.

(8) The Derelict Land Board may, with the approval of the Minister, co-opt any person to assist it as assessor or adviser on any professional or technical question at any of its proceedings, but a co-opted person shall have no vote in any decision by the Board.

(9) No member shall vote upon or take part in a discussion if he has, directly or indirectly, any pecuniary interest in the matter before the Derelict Land Board.

(10) Any proposal circulated among all members and agreed to in writing by a majority of them shall be of the same effect as a resolution passed at a duly constituted meeting of the Derelict Land Board and shall be incorporated in the minutes of the next succeeding meeting of the Board:

Provided that, if a member requires that any such proposal be placed before the Board, this subsection shall not apply to the proposal.

(11) Except as otherwise provided in this Part, the procedure for the convening and conduct of meetings of the Derelict Land Board shall be as fixed from time to time by the Board.

### 35 Minutes of proceedings of Derelict Land Board

- (1) The Derelict Land Board shall cause minutes of all proceedings of and decisions taken at all meetings of the Board to be entered in books kept for the purpose.
- (2) Any minutes referred to in subsection (1) which purport to be signed by the chairman of the meeting to which the minutes relate or by the chairman of the next following meeting of the Derelict Land Board shall be accepted for all purposes as *prima facie* evidence of the proceedings of and decisions taken at the meeting con-

cerned.

### 36 Remuneration and allowances of members

A member who is not in the full-time employment of the State, a statutory corporation or a local authority shall be paid:

- (a) such remuneration as the Minister, with the approval of the Minister responsible for finance, may fix for members generally; and
- (b) such allowances as the Minister, with the approval of the Minister responsible for finance, may fix to meet any reasonable expenses incurred by the member in connection with the business of the Derelict Land Board.

### 37 Expenses of Derelict Land Board

Any expenses incurred by the Derelict Land Board in carrying out its functions in terms of this Act shall be met, on the direction of the Minister, from moneys appropriated for the purpose by Act of Parliament.

### 38. Validity of decisions and acts of Derelict Land Board

No decision or act of the Derelict Land Board and no act done under the authority of the Board shall be invalid solely because, at the time the decision was taken or the act was done or authorized:

- (a) there were one or more vacancies in the membership of the Board; or
- (b) a disqualified person acted as a member of the Board;

if the duly appointed members who were present when the decision was taken or the act was done or authorized by the Board constituted a quorum in terms of subsection (5) of section *thirty-four*.

### 39 Powers of Derelict Land Board

- (1) The powers, rights and privileges of the Derelict Land Board and its members in the exercise of the Board's functions in terms of this Act shall be the same as those conferred upon a commissioner by the Commissions of Inquiry Act [*Chapter 10:07*], other than the power to order a person to be detained in custody, and sections 9 to 13 and 15 to 18 of that Act shall apply, *mutatis mutandis*, in relation to an inquiry or investigation conducted by the Board and to a person summoned to give evidence or giving evidence at the inquiry or investigation.
- (2) If any person summoned to give evidence or to pro-

duce books, plans, accounts or other documents fails to appear before the Derelict Land Board or refuses to be examined on oath or to answer any question or to produce any such document, he shall be guilty of an offence and liable to a fine not exceeding one thousand dollars or to imprisonment for a period not exceeding one year or to both such fine and such imprisonment.

## PART VII

### PROVISIONS RELATING TO DERELICT LAND

#### 40 Appointment of Chief Land Officer and other land officers

(1) There shall be a Chief Land Officer and such other land officers as may be required, whose offices shall be public offices and form part of the Public Service.

(2) Any land officer, when performing the functions of the Chief Land Officer in terms of this Act, shall be subject to the direction of the Chief Land Officer.

(3) The Chief Land Officer and any land officer appointed in terms of subsection (1) may at all reasonable times enter upon any land to ascertain the nature and extent of occupation thereon and for other purposes reasonably connected with their functions in terms of this Act:

Provided that, before any entry is made in terms of this subsection, the owner or occupier of the land shall be given not less than fourteen days' notice unless such notice is waived by such owner or occupier.

#### 41 Reports on derelict land

(1) Where the Chief Land Officer has reason to believe that any land is derelict, he shall investigate the matter and, if satisfied that the land in question is derelict, shall submit a report to the Derelict Land Board accordingly.

(2) The Derelict Land Board shall consider any report submitted to it in terms of subsection (1) and, if it considers that there is substance in the report, shall hold an inquiry in terms of section *forty-two* for the purpose of determining whether or not the land concerned should be declared derelict.

#### 42 Inquiry by Derelict Land Board and declaration of derelict land

(1) If the Derelict Land Board decides to hold an in-

quiry for the purpose of determining whether any land which is the subject of a report by the Chief Land Officer should or should not be declared derelict, it shall give notice of such inquiry:

(a) in writing to any person who appears to the Board to have any interest or right in the land and whose whereabouts are ascertainable after diligent inquiry; and

(b) by publication:

(i) once in the *Gazette*; and

(ii) once a week for three consecutive weeks in a newspaper circulating in the area where the land concerned is situated.

(2) A notice given in terms of subsection (1) shall:

(a) specify the place of the inquiry and the date thereof, which date shall not be less than thirty days from the date of the last publication required to be made in a newspaper in terms of subparagraph (ii) of paragraph (b) of subsection (1); and

(b) call upon any person having an interest or right in the land to show cause at the inquiry why the land concerned should not be declared derelict.

(3) On the day fixed by the Derelict Land Board for the purposes of subsection (2), the Board shall consider the matter and, after hearing evidence from the Chief Land Officer and any land officer and from any person who makes representations, the Derelict Land Board may, subject to subsection (4), determine the land in question to be derelict.

(4) In determining whether or not any land is derelict, the Derelict Land Board shall have regard to—

(a) whether the land is or has been occupied; and

(b) whether the land is being worked or cultivated; and

(c) whether the owner can be found; and

(d) the control which the owner has exercised over the land; and

(e) the extent of compliance with any law regarding the payment of rates, levies or taxes in respect of the land; and

(f) any other matter which the Board may consider appropriate.

(5) Where the Derelict Land Board has determined that

any land is derelict, the Board shall declare it to be such and shall publish notice of its declaration in the Gazette.

(6) Any person who is aggrieved by any notice published in terms of subsection (5) may, within three months of the date of publication of the notice or such longer period as the Administrative Court may for good cause allow, appeal to the Administrative Court.

(7) The Administrative Court may, on an appeal in terms of subsection (6), confirm, vary or set aside the decision appealed against or give such decision as the case may require, and may in respect of any appeal:

- (a) receive such evidence and order the production of such documents as it considers necessary;
- (b) remit the matter to the Derelict Land Board for reconsideration, with such instructions as regards the taking of further evidence or otherwise as the Administrative Court thinks fit;
- (c) take any other course which it considers will lead to the just, speedy and inexpensive settlement of the matter.

(8) Where an appeal in terms of subsection (6) is dismissed or where there is no appeal after the expiry of the period of three months referred to in that subsection, the President may, by order describing the nature and extent of the land affected, acquire the land.

#### 43 Eviction of persons and registration of land

Section *nine* and *ten* shall apply, *mutatis mutandis*, in relation to the eviction of persons from any land acquired by the President in terms of this Part and to the registration of such land.

#### 44 Compensation not to be paid for derelict land

No compensation shall be paid in respect of any land declared to be derelict and acquired in terms of this Part.

## PART VIII

### SPECIAL PROVISIONS RELATING TO ADMINISTRATIVE COURT

#### 45 Composition of Administrative Court for purposes of this Act

(1) Subject to subsection (3), for the purposes of hearing any matter in connection with its functions in terms

of this Act, the Administrative Court shall consist of a President of the Administrative Court and two assessors appointed by the President of the Administrative Court from the list of persons referred to in subsection (2).

(2) The Presidents of the Administrative Court shall, with the approval of the Chief Justice and the Minister, draw up a list of names of not fewer than ten persons who have ability and experience in administration, agriculture or commerce or have professional qualifications and who are otherwise suitable for appointment as assessors, but who are not members of the Public Service.

#### 46 Costs

(1) The Administrative Court shall order the acquiring authority to pay the costs reasonably incurred by any other party in connection with any proceedings before the Administrative Court in terms of this Act:

Provided that, if the Administrative Court is satisfied that any opposition to an application in terms of subsection (1) of section *seven*, or any review or reference of a question in terms of section *twenty-three* or *twenty-four*, is frivolous or unreasonable, it may make such order as to costs in connection with the application or reference as it thinks fit.

(2) Where the Administrative Court, in terms of the proviso to subsection (1), orders any claimant to pay any costs of the acquiring authority, the acquiring authority may deduct the amount so payable by the claimant from the amount of compensation payable to him.

(3) In determining any appeal from a decision of the Administrative Court in terms of section 19 of the Administrative Court Act [*Chapter 7:01*] the Supreme Court shall order the acquiring authority to pay the costs reasonably incurred by any other party in connection with the appeal:

Provided that, if the Supreme Court is satisfied that any such appeal by such other party is frivolous or unreasonable, it may make such order as to costs as it thinks fit.

## PART IX

### GENERAL

#### 47 Regulations

(1) The Minister may by regulation provide for all mat-

ters which by this Act are required or permitted to be prescribed or which, in his opinion, are necessary or convenient to be prescribed for carrying out or giving effect to the provisions of this Act.

(2) Regulations made in terms of subsection (1) may prohibit the sale or disposal of rural land unless the person selling or disposing of the land has offered it for sale to the Minister or such other person or authority as may be specified in the regulations.

#### 48 Designated valuation officers

(1) The Minister may designate as a valuation officer any member of the Public Service who, in the Minister's opinion, is qualified to carry out valuations and to exercise the other functions of a designated valuation officer in terms of this Act.

(2) The Minister shall provide every designated valuation officer with a certificate indicating his appointment and the designated valuation officer shall produce such certificate to any interested person on demand.

#### 49 References to Compensation Court in other enactments and documents

Any reference in any other enactment or deed of title, memorandum, agreement or other document to the Compensation Court shall be construed as a reference to the Administrative Court as constituted in terms of Part VIII exercising, subject to any other enactment, its jurisdiction and powers in terms of this Act.

#### 50 Amendment of Schedule

(1) The Minister may, by statutory instrument, from time to time amend the Schedule by adding any principles thereto or by altering or deleting any principle prescribed therein.

(2) An amendment made to the Schedule in terms of subsection (1) shall not affect the compensation payable for the acquisition of any designated rural land, where the preliminary notice relating to the acquisition was published before the date of commencement of the statutory instrument effecting the amendment.

### SCHEDULE (SECTIONS 19, 23 AND 50)

#### PRINCIPLES REGARDING ASSESSMENT OF COMPENSATION FOR DESIGNATED RURAL LAND

1. Compensation is to be assessed taking the piece of designated rural land concerned as a whole, considera-

tion being given to:

- (a) its size; and
- (b) the nature and condition of the buildings and improvements on it; and
- (c) the agricultural and other activities that are or can be carried out on it.

2. Buildings and other improvements must be taken into account in the valuation of the land.

3. In valuing buildings, the quality of their construction must be assessed according to standards set by the Ministry of Public Construction and National Housing for the types of building concerned. The age and conditions of the buildings must also be taken into account.

4. In valuing land, the following factors must be taken into account:

- (a) the soil types to be found on the land; and
- (b) the extent of cultivation carried out on it; and
- (c) the varieties of crops that are being grown on it and the yield obtainable from those crops; and
- (d) the use to which non-arable parts of the land are being or may be put.

5. For the classification of soil types, Agritex soil classification maps must be used, and these soil types must be linked to the natural regions as shown on the appropriate maps which are available for inspection at the head office of the Ministry of Lands and Water Resources and at all provincial offices of the Ministry.

6. When valuing uncleared virgin land, consideration must be paid to the costs of clearing the land.

7. Grazing veld must be valued according to its carrying capacity for livestock; the highest values may be given only to fully equipped pastures with good water supplies, dips and well-fenced paddocks.

8. The same amounts will be payable for improved pastures as for grazing veld of the same carrying capacity.

9. Land may not be classified as irrigable for the purpose of valuation unless:

- (a) it is capable of being placed under full year-round irrigation; and
- (b) where it can be irrigated only in terms of rights granted under the Water Act [Chapter 20:22] such

rights have been granted:

Provided that, where the piece of designated rural land being valued contains irrigable land in excess of the land that may be irrigated and cultivated under such rights, this additional irrigable land, not exceeding in area the area to which such rights apply, may be classified as irrigable land for the purposes of this paragraph.

10. In valuing land on which there are perennial or plantation crops such as coffee, tea, fruit, timber and sugarcane, regard must be paid to the potential yield of such crops and their marketability, but only where the crops are maintained in a satisfactory condition and are well pruned, fertilized and sprayed.

11. In valuing tobacco curing facilities, the following principles must be applied:

- (a) tobacco curing facilities such as tunnels, chongololos and Dawson systems are to be valued at a rate comparable to the values given to conventional tobacco barns of equivalent output;
- (b) bulk curers which are movable property will not be acquired by the Government except by special agreement with the owner of the land.

12. Equipment relating to grain bulk delivery facilities will not be acquired by Government except by special agreement with the owner of the land.

13. In valuing dip-tanks and spray-races, additional compensation may be paid where the handling facilities are good.

14. In valuing fencing\_

- (a) lower values are to be placed on fences that are not erected to standards prescribed in terms of the Fencing Act [Chapter 20:06] or with pressure-treated poles;
- (b) for boundary fences, half the values will normally be paid;
- (c) regard must be paid to any contribution made by the Government towards the erecting of the fences concerned.

15. Subject to paragraph 2, the value of land should normally be regarded as enhanced by the availability of a mains electricity supply, and regard should be paid to the number of connection points on the land.

## Parks and Wildlife Act

### Chapter 20:14

Acts 14/1975, 42/1976 (s. 39), 48/1976 (s. 82), 4/1977, 22/1977, 19/1978, 5/1979, 4/1981 (s. 19), 46/1981, 20/1982 (s.19) and Part XXVI, 31/1983, 11/1984, 35/1985, 8/1988 (s. 164), 1/1990, 11/1991 (s. 24), 22/1992 (s. 14); R.G.Ns 1135/1975, 52/1977, 126/1979, 294/1979, 265/1979, 294/1979, 748/1979; S.Is 675/1979, 632/1980, 640/1980, 704/1980, 773/1980, 781/1980, 786/1980, 139/1981, 140/1981, 181/1981, 183/1981, 639/1981, 860/1981, 139/1982, 140/1982, 337/1983, 454/1983, 123/1991.

AN ACT to establish a Parks and Wild Life Board; to confer functions and impose duties on the Board; to provide for the establishment of national parks, botanical reserves, botanical gardens, sanctuaries, safari areas and recreational parks; to make provision for the preservation, conservation, propagation or control of the wild life, fish and plants to Zimbabwe and the protection of her natural landscape and scenery; to confer privileges on owners or occupiers of alienated land as custodians of wild life, fish and plants; to give certain powers to intensive conservation area committees; and to provide for matters incidental to or connected with the foregoing.

### PART I

#### PRELIMINARY

##### 1 Short title

This Act may be cited as the Parks and Wild Life Act [Chapter 20:14]

##### 2 Interpretation

In this Act-

“alienated land” means:

- (a) private land; or
- (b) State land held in terms of an agreement of purchase or lease; or
- (c) trust land held in terms of an agreement of lease;

“animal” means any kind of vertebrate animal and the eggs and young thereof, whether live or dead, other than domestic animals and fish;

“appropriate authority”:

- (a) in relation to any land, means:
  - (i) in the case of alienated land:
    - A. the owner thereof; or
    - B. where the land is held under an agreement of purchase or lease, the purchaser or lessee unless the agreement otherwise provides;

and includes any person appointed to be an appropriate authority for the land by such owner, purchaser or lessee, as the case may be;

- (ii) the case of unalienated land which is:

- A. forest land, the Forestry Commission;
- B. parks and wild life land or State land other than forest land, the Director;
- C. an area of Communal Land for which the Minister has, in terms of section one hundred and eight, appointed a rural district council to be the appropriate authority, that rural district council;

- D. an area of Communal Land not referred to in subparagraph C, the Minister;

- (b) in relation to any waters, means:

- (i) the person specified in a notice made in terms of section eighty-three as the appropriate authority for such waters; or
- (ii) if no person has been specified in a notice made in terms of section eighty-three as the appropriate authority for such waters, the appropriate authority for the land riparian to such waters;

**“authority in terms of this Act”** means an authority, permit or licence in terms of this Act;

**“Board”** means the Parks and Wild Life Board established by section three;

**“botanical garden”** means a botanical garden constituted in terms of Part V;

**“botanical reserve”** means a botanical reserve constituted in terms of Part V;

**“Committee”** means a committee established in terms of section eleven;

**“conservation committee”** means:

- (a) a conservation committee appointed for an intensive conservation area in terms of the Natural Resources Act [Chapter 20:13]; or
- (b) a rural district council declared to be a conservation committee for a council area in terms of the Rural District Councils Act [Chapter 29:13];

**“dangerous animal”** means an animal declared to be a dangerous animal in terms of section one hundred and twenty-one;

**“dealer in specially protected indigenous plants”** means any person who sells specially protected indigenous plants in the ordinary course of his business in a shop, stall or other fixed place of business;

**“Department”** means the Department of National Parks and Wild Life Management;

**“designated animal”** means an animal declared in terms of section thirty-one to be a designated animal in a sanctuary;

**“Director”** means the Director of National Parks and Wild Life Management appointed in terms of section one hundred and seven;

**“employee”** means a person designated as a employee in terms of section one hundred and nine;

**“fish”** includes vertebrate fish, and aquatic molluscs and crustaceans, both indigenous and non-indigenous, but does not include the bilharzia snail (*Biomphalaria pfeifferi* and *Bulinus Physopsis globus*) and the liver fluke snail (*Lymnea natalensis*);

**“fishing-net”** means any gill-net, seine-net, draw-net or ring-net, including the open-work material knotted or otherwise formed into meshes which is used to manufacture such nets or any other nets designed or adapted for catching fish, but does not include a throw-net, or keep-net normally used by fishermen;

**“honorary officer”** means a person appointed as an honorary officer in terms of section one hundred and eleven;

**“horn”** includes rhinoceros horn;

**“hotel”** includes a motel or a boatel;

**“hunt”** means:

- (a) to kill, injure, shoot at or capture; or
- (b) with intent to kill, injure, shoot at or capture, to wilfully disturb or molest by any method; or
- (c) with intent to kill, injure, shoot at or capture, to lie in wait for, follow or search for;

**“indigenous plant”** means any plant indigenous to Zimbabwe whether or not it is or has been cultivated or whether it is or is no longer growing in the wild state or has from time to time not been growing in the wild state, and includes any part of such plant but does not include any weed;

**“inspector”** means a person designated as an inspector in terms of section one hundred and nine;

**“Inyanga Estates”** has the meaning assigned to it in the Rhodes Estates Act [Chapter 20:17];

**“Inyanga Fund”** has the meaning assigned to it in the Rhodes Estates Act [Chapter 20:17];

**“Ivory”** means elephant ivory which is a trophy;

**“jig”** means any contrivance, other than a conventional line, to which more than two hooks are attached and which is used for jigging;

**“jigging”** means capturing or attempting to capture fish by dragging or jerking in water, in a manner designed to foul-hook the fish, one or more unbaited hooks attached to a line or other fishing device;

**“learner professional hunter’s licence”** means a learner professional hunter’s licence issued in terms of section sixty-nine;

**“local authority”** means a municipal council, town council, local board or rural district council;

**“Matopos Estates”** has the meaning assigned to it in the Rhodes Estates Act [Chapter 20:17];

**“Matopos Fund”** has the meaning assigned to it in the Rhodes Estates Act [Chapter 20:17];

**“meat”** means the flesh, including the fat, of any animal, whether fresh, dried or tinned or otherwise preserved;

**“member”** means a member of the Board;

**“Minister”** means the Minister of Environment and Tourism or any other Minister to whom the President may, from time to time, assign the administration of this Act;

**“national park”** means a national park constituted in terms of Part IV;

**“night”** means the space of time between half-an-hour after sunset and half-an-hour before sunrise;

**“occupier”**, in relation to land, means the person in lawful occupation of the land who has the right to exercise general control over the land and resides thereon;

**“officer”** means a person designated as an officer in terms of section one hundred and nine;

**“park area”** means any botanical garden, botanical reserve, national park, recreational park, safari area or sanctuary;

**“Parks and Wild Life Estate”** means the Parks and Wild Life Estate specified in section seventeen;

**“parks and wild life land”** means parks and wild life land specified in section eighteen;

**“pick”** includes cut, take, gather, pluck, uproot, break, remove, damage or destroy;

**“plant”** means any vegetation;

**“prescribed road”** means a road declared to be a prescribed road in terms of section one hundred and twenty-two;

**“private land”** means land the ownership of which is

vested in any person other than the President;

**“problem animal”** means an animal declared to be a problem animal in terms of section eighty;

**“professional guide’s licence”** means a professional guide’s licence issued in terms of section sixty-nine;

**“professional hunter’s licence”** means a professional hunter’s licence issued in terms of section sixty-nine;

**“protected animal”** means an animal declared to be a protected animal on land in terms of subparagraph (i) of paragraph (a) of subsection (1) of section seventy-seven;

**“protected indigenous plant”** means an indigenous plant declared to be a protected indigenous plant on land in terms of subparagraph (i) of paragraph (a) of subsection (1) of section seventy-seven;

**“purchase”** includes barter or exchange;

**“recreational park”** means a recreational park constituted in terms of Part VIII;

**“registered dealer in or manufacturer of fishing nets”** means a person who is registered as a dealer in or manufacturer of fishing nets in terms of section *ninety-two*;

**“remove”** includes drive or entice;

**“Rhodes Estates”** means the Inyanga Estates and the Matopos Estates;

**“safari area”** means a safari area constituted in terms of Part VII;

**“sanctuary”** means a sanctuary constituted in terms of Part VI;

**“sell”** includes:

(a) barter, exchange or hawk; or

(b) offer, keep, possess or expose for sale;

**“specially protected animal”** means any animal declared in terms of Part IX to be a specially protected animal;

**“specially protected indigenous plant”** means any indigenous plant declared to be a specially protected indigenous plant in terms of Part X;

**“State land”** means land vested in the President other than Communal Land or trust land vested in the President;



**“State trophy”** means anything which in terms of this Act is deemed or declared to be a State trophy;

**“trophy”** means:

- a) any horn, ivory, tooth, tusk, bone, claw, hoof, hide, skin, hair or other durable portion whatsoever of any animal, whether processed or not, which is recognizable as the durable portion of any animal; and
- (b) the egg of any animal; and
- (c) any thing of which the durable portion of any animal forms a part, which is declared to be a trophy in terms of section *seventy-six*;

**“trust land”** means any land, other than Communal Land held in trust by the President or a statutory body or by a person whether solely or jointly with others, by virtue of his being the holder of some office in a statutory body;

**“unalienated land”** means-

- (a) forest land; or
- (b) State land which is not forest land and which is not held under an agreement of purchase or lease;
- (c) Communal Land;

**“water installation”** means a canal, channel, reservoir, embankment, weir, dam, borehole, well, pipeline, pumping plant, filterbed, filter, purification plant, machinery, appliance, apparatus, fitting or accessory or anything constructed, erected or used for or in connection with the impounding, storage, passage, drainage, control or abstraction of water, the development of water power, the filtration or purification of water, the use of water or the conservation of rainfall;

**“waters”** means any river, stream, watercourse, lake, swamp, pond, dam, reservoir, pan, furrow or other collection of water, whether natural or artificial, together with the foreshores or banks thereof, but does not include:

- (a) water in aquaria or ornamental ponds unconnected with any natural water; or
- (b) water the sole and exclusive use of which under any law belongs to any person;

**“weed”** means any plant defined as a noxious weed in terms of section 2 of the Noxious Weed Act [*Chapter 19:07*];

**“wild life”** means all forms of animal life, vertebrate and invertebrate, which are indigenous to Zimbabwe, and

the eggs or young thereof other than fish.

## PART II

### PARKS AND WILD LIFE BOARD

#### 3 Constitution of Board

(1) There is hereby established a board, to be known as the Parks and Wild Life Board, which shall consist of not less than six and not more than twelve members appointed by the Minister.

(2) The Minister shall designate one member of the Board as Chairman of the Board and another member as vice-chairman of the Board and the vice-chairman shall exercise the functions and powers and perform the duties of the chairman during any period when the chairman is unable to exercise his functions.

(3) The Minister may appoint any person to the Board as an alternate to a member and such person:

- (a) shall act as a member only when a member to whom he is alternate is unable to exercise his functions on the Board by reason of illness, absence from Zimbabwe or other cause;
- (b) when acting as a member shall exercise the functions and powers and perform the duties of a member to whom he is alternate:

Provided that an alternate to the member who has been designated as chairman or vice-chairman of the Board shall not exercise the functions and powers or perform the duties of chairman or vice-chairman, as the case may be.

#### 4 Terms of office of members

(1) A member shall, subject to this Part, hold office upon such terms and conditions and for such period not exceeding four years as the Minister may in each case determine.

(2) A member shall, upon the expiration of the period of his appointment, be eligible for reappointment.

(3) A member who is not in the full-time employment of the State shall be paid out of moneys appropriated for the purpose by Parliament such allowances as the Minister with the consent of the Minister of responsible for finance may determine.

## 5 Disqualification for appointment as member

The Minister shall not appoint a person as a member and no person shall be qualified to hold office as a member who-

- (a) is not a citizen of Zimbabwe and permanently resident therein; or
  - (b) has, in terms of a law in force in any country:
    - (i) been adjudged or otherwise declared insolvent or bankrupt and has not been rehabilitated or discharged; or
    - (ii) made an assignment to or arrangement or composition with his creditors which has not been rescinded or set aside;
- or
- (c) has, within the period of five years immediately preceding the date of his proposed appointment, been convicted:
    - (i) within Zimbabwe of a criminal offence; or
    - (ii) outside Zimbabwe of an offence, by whatever name called, which if committed within Zimbabwe would have been a criminal offence;

and sentenced by a court to imprisonment for a term of six months or more, without the option of a fine, whether or not such sentence has been suspended, and has not received a free pardon.

## 6 Vacation of office by member

A member shall vacate his office and his office shall become vacant-

- (a) one month after the date he gives notice in writing to the Minister of his intention to resign his office or after the expiration of such shorter period as he and the Minister may agree; or
- (b) thirty days after the date he is sentenced by a court to imprisonment referred to in paragraph (c) of section five after conviction of an offence referred to in that paragraph:

Provided that if, during the said period of thirty days, an application for a free pardon is made or an appeal is filed the question whether the member is to vacate his office shall not be determined until the final disposal of such application or appeal, whereupon the member shall forthwith vacate his office and his office shall become vacant unless he is granted a free pardon, his conviction is set

aside, his sentence is reduced to a term of imprisonment of less than six months or a punishment other than imprisonment is substituted; or

- (c) if he becomes disqualified in terms of paragraph (a) or (b) of section five to hold office as a member.

## 7 Minister may require member to vacate office or suspend him

(1) The Minister may require a member to vacate his office if the Minister is satisfied that the member:

- (a) has been guilty of improper conduct as a member, or
- (b) has failed to comply with the conditions of his office determined by the Minister in terms of subsection (1) of section four; or
- (c) is mentally or physically incapable of efficiently performing his duties as a member.

(2) The Minister may suspend from office a member against whom criminal proceedings are instituted for an offence in respect of which a sentence or imprisonment without the option of a fine may be imposed, and whilst that member is so suspended he shall not carry out any duties or be entitled to any allowances as a member.

## 8 Filling of vacancies

On the death of, or vacation of office by, a member the Minister may appoint a person to fill the vacancy until the expiration of the period during which the member would, but for his death or the vacation of his office, have continued in office.

## 9 Meetings and decisions of Board

(1) The Board shall-

- (a) hold its meetings; and
- (b) keep and furnish to the Minister records of its meetings;

in accordance with such directions as may be given by the Minister.

(2) If the chairman of the Board and the vice-chairman are both absent from a meeting of the Board the members present at that meeting shall choose one of their number to be chairman for that meeting and the member so chosen shall exercise all the powers and discharge all the duties of the chairman at that meeting.

(3) At a meeting of the Board fifty per centum of the members shall form a quorum.

(4) The decision of a majority of the members present at any meeting shall constitute the decision of the Board and in the event of an equality of votes, the chairman shall have, in addition to a deliberative vote, a casting vote.

## 10 Committees of Board

(1) The Board may establish one or more committees for any general or special purpose and may, subject to such conditions as the Board may impose, delegate to any such committee such of the functions and duties of the Board as the Board may direct:

Provided that the delegation of any such functions and duties to a committee shall not thereby divest the Board of any such functions and duties and the Board may amend or rescind any decision of any such committee in the exercise of its functions and duties.

(2) A committee appointed in terms of subsection (1) may consist of persons who are not members of the Board and the committee may co-opt any person whether a member of the Board or not as a member of such committee.

(3) A committee appointed in terms of subsection (1) shall elect its own chairman unless the Board itself appoints the chairman.

(4) Any committee appointed in terms of subsection (1) may at any time be dissolved or altered by the Board.

(5) A member of a committee appointed in terms of subsection (1) and any person co-opted to such committee who is not in the full-time employment of the State shall be paid out of moneys appropriated for this purpose by Act of Parliament such allowances as the Minister, with the consent of the Minister of responsible for finance, may determine.

## 11 Rhodes Inyanga and Rhodes Matopos Committees

(1) The Board shall establish:

- (a) a committee, to be known as the Rhodes Nyanga Committee, with special responsibility for the Inyanga Estates; and
- (b) a committee, to be known as the Rhodes Matopos Committee, with special responsibility for the Matopos Estates.

(2) The Rhodes Nyanga Committee shall consist of-

- (a) two members of the Board, one of whom shall be appointed as chairman; and

(b) two members who shall be chosen from a panel of names of persons resident in Zimbabwe submitted by the Nyanga Rural District Council; and

(c) not more than four members chosen for their special interest in or knowledge of the Nyanga Estates of whom:

- (i) two shall be nominated by the Minister; and
- (ii) one shall represent the interests of the rural community.

(3) The Rhodes Matopos Committee shall consist of-

(a) two members of the Board, one of whom shall be appointed as chairman; and

(b) one member who shall be chosen from a panel of names of persons resident in Zimbabwe submitted by the City Council of Bulawayo; and

(c) one member who shall be chosen from a panel of names of persons resident in Zimbabwe submitted by the Bulawayo Publicity Association or any organization which replaces it; and

(d) not more than four members chosen for their special interest in or knowledge of the Matopos Estates of whom:

- (i) two shall be nominated by the Minister; and
- (ii) one shall represent the interests of the rural community.

(4) No person shall be a member of a Committee unless he is qualified to hold office as a member of the Board.

(5) Subsection (5) of section ten shall apply, *mutatis mutandis*, in relation to any member of a Committee.

## 12 Functions of Committee

The functions of a Committee shall be:

- (a) to examine and report from time to time upon the policy which should be adopted in respect of that portion of the Rhodes Estates for which it has special responsibility;
- (b) to examine and report upon any proposal which has been referred to it in terms of the Rhodes Estates Act [Chapter 20:17], or any other enactment;
- (c) to do such other things as it may be required to do by the Board or by or in terms of any enactment.

### 13 Reports of Committees

(1) Where a Committee has prepared a report in respect of any matter mentioned in section *twelve*, the committee shall forward the report to the Board.

(2) The Board shall, after consideration of a report referred to in subsection (1), forward it to the Minister and may attach such statement thereto indicating whether or not it accepts the report, and making such recommendations in regard thereto, as it deems fit:

Provided that the chairman of the Board may, if he thinks fit, circulate any report referred to in subsection (1), together with any proposed statement or recommendation, to each member of the Board and, unless any member objects thereto, may thereafter forward the report, with any statement or recommendation, in terms of this subsection on behalf of the Board.

### 14 Functions and duties of Board

(1) Subject to this Act, the functions and duties of the Board shall be-

- (a) to examine and report from time to time upon-
  - (i) the policy which should be adopted to give effect to the objects and purposes of this act; and
  - (ii) the conservation and utilization of the wild life resource of Zimbabwe; and
  - (iii) the conservation and utilization of the fish resource of Zimbabwe; and
  - (iv) the preservation and protection of natural landscapes, wild life and plants and the natural ecological stability of wild life and plant communities in national parks; and
  - (v) the preservation and protection of rare or endangered plant communities growing naturally in the wild in botanical reserves; and
  - (vi) the propagation and cultivation of exotic and indigenous plants in botanical gardens; and
  - (vii) the protection of animals or particular species of animals in sanctuaries; and
  - (viii) the preservation and protection of the natural habitat and wild life in safari areas and the facilities and opportunities given to the public for camping, hunting, fishing, photography, viewing of animals, bird watching and such other pursuits that may be permitted therein in terms of this Act; and

(ix) the preservation and protection of the natural features of recreational parks; and

(x) plans for the development of national parks, botanical reserves, botanical gardens, sanctuaries, safari areas and recreational parks;

taking into account in particular the geography and geology of each area reported upon, research and management therein, the enjoyment, education, inspiration, benefit and recreation afforded to the public thereby, progress in implementation of development plans and the impact on such areas of land use in surrounding areas;

(b) to consider and forward to the Minister any report of a Committee submitted to it in terms of subsection (1) of section thirteen and to attach thereto any statement or recommendation referred to in subsection (2) of that section as it deems fit;

(c) to determine whether the President should exercise any of his powers in terms of subsection (2) of section *twenty-two*, subsection (2) of section *twenty-six*, subsection (2) of section *thirty-one*, subsection (2) of section *thirty-six* or subsection (2) of section *forty-one*;

(d) to investigate any matter relating to the use or occupation of the Parks and Wild Life Estate and to make a recommendation thereon to the President where it considers such use or occupation is inconsistent with this Act; and

(e) to do such other things, not inconsistent with this Act, as may be required by the Minister.

(2) In the exercise of its functions referred to in subsection (1) the Board shall, when examining and reporting upon any particular national park, botanical reserve, botanical garden, sanctuary, safari area or recreational park, have regard to the policy determined by the Minister in respect thereof.

(3) As soon as possible after the 1st January in each year the Board shall submit to the Minister a report upon its working during the preceding year.

(4) In addition to the report submitted in terms of subsection (3), the Board shall submit to the Minister such other reports as he may require in regard to the work of the Board.

### 15 Recommendation for constitution of parks, etc.

The Board shall not recommend to the President that he exercise his powers to constitute any land a park area or a part thereof where the recommendation relates to land which is:

- (a) forest land, unless the Forestry Commission has been consulted;
- (b) Communal Land, unless the Minister responsible for the administration of the Communal Land Act [Chapter 20:04] has been consulted;
- (c) within the area under the jurisdiction of a local authority, unless the local authority has been consulted.

#### 16 Recommendations concerning improper use of Parks and Wild Life Estate

Where any recommendation has been made to him in terms of paragraph (d) of subsection (1) of section *fourteen* the President may-

- (a) direct any Minister to take such action as may be necessary to comply with the recommendations of the Board; or
- (b) reject the recommendation and, in such event, the reasons therefor shall be communicated in writing to that Board.

### PART III

#### PARKS AND WILD LIFE ESTATE AND PARKS AND WILD LIFE

##### LAND

#### 17 Parks and Wild Life Estate

- (1) The Parks and Wild Life Estate shall consist of all land which is a park area.
- (2) The Parks and Wild Life Estate shall be used for the purposes described in this Act.

#### 18 Parks and wild life land

- (1) Parks and wild life land shall consist of State land which is a park area and private land within an area which has been designated in terms of section *forty-two*.
- (2) The total extent of parks and wild life land shall not be reduced by more than one per *centum* of the total extent of parks and wild life land on the appointed day.

#### 19 Amendment of First, Second, Third, Fourth and Fifth Schedules

- (1) The Minister may, by notice in a statutory instrument, amend the First, Second, Third, Fourth or Fifth

Schedules in order to-

- (a) more clearly describe such land; or
  - (b) correct any error in the description of or statement of extent of such land.
- (2) No notice made in terms of subsection (1) shall have the effect of transferring any land to or from the Parks and Wild Life Estate.

#### 20 Minister may fix full supply level of lakes

- (1) Where the land inundated by any lake or part of a lake has been declared to be part of the Parks and Wild Life Estate, the Minister may, by notice in a statutory instrument, fix the height above mean sea level of the full supply level of such lake and may, in like manner, amend such height.
- (2) Any land surface which is exposed at any time between a height fixed in terms of subsection (1) and the edge of the water of the lake concerned shall, for so long as it is exposed, be deemed to be part of the land abutting on to the lake and shall be subject to any enactment relating to such land.

### PART IV

#### NATIONAL PARKS

#### 21 Purposes of national parks and duties of Minister in relation thereto

- (1) The purposes for which national parks are or may be constituted under this Act shall be-
  - (a) to preserve and protect the natural landscape and scenery therein; and
  - (b) to preserve and protect wild life and plants and the natural ecological stability of wild life and plant communities therein; for the enjoyment, education and inspiration of the public.

- (2) It shall be the function and duty of the Minister to control, manage and maintain national parks for the purposes set out in subsection (1) and, so far as is reasonable, practicable and compatible with such purposes, to provide facilities for visitors thereto.

#### 22 National parks

- (1) Each of the areas described in the First Schedule is hereby constituted a national park which shall be known by the name specified in the First Schedule.

(2) Subject to this Act the President may, on the recommendation of the Board, by notice in a statutory instrument, amend the First Schedule for the purpose of:

- (a) constituting a new national park and specifying the name thereof;
- (b) changing the name of any national park;
- (c) adding any area to a national park
- (d) subtracting any area from a national park;
- (e) abolishing any national park.

(3) No land shall be constituted as a national park or part of a national park in terms of subsection (2) unless it is:

- (a) State land; or
- (b) trust land and the trustees thereof have consented thereto.

(4) Any notice made in terms of paragraph (a), (b) or (c) of subsection (2) shall be laid before Parliament as soon as may be after it has been published in a statutory instrument and, if a resolution is passed within the next twenty-eight days on which Parliament has sat next after the notice is laid before it requesting the President to rescind or vary the notice, it shall forthwith be rescinded or varied, as the case may be, by further notice in a statutory instrument but without prejudice to the validity of anything previously done thereunder.

(5) No notice may be made in terms of paragraph (d) or (e) of subsection (2) unless the proposal to make such notice has been approved by Parliament.

### 23 Powers of Minister in relation to national parks

(1) For the purpose of giving effect to the provisions section *twenty-one* the Minister shall, subject to of this Act, have power-

- (a) to undertake scientific investigations within a national park; and
- (b) to take or collect and remove for export or otherwise any specimen of wild life, fish or plant from a national park; and
- (c) to authorize any person-
  - (i) to undertake any scientific investigations within a national park; and
  - (ii) for the purposes of scientific investigations, to take

or collect and remove any specimen of wild life, fish or plant from a national park; and

- (d) to set aside any area of a national park for special purposes, and
- (e) to sell, donate or otherwise dispose of, any specimen of wild life, fish or plant taken from a national park; and
- (f) to introduce into a national park any specimen of wild life, fish or plant:

Provided that the Minister shall not introduce into a national park any wild life or plant which is not indigenous to the area in which the park is situated except into a development area set aside in terms of paragraph (k); and

- (g) to do all such things and to take all such steps as he may consider necessary or desirable, including management of the soil and plants, the construction of fireguards and the controlled reduction of wild life and fish populations, to ensure the security of the wild life, fish and plants within a national park and the maintenance of the wild life, fish and plants therein in a natural state; and
- (h) to authorize the removal of any wild life, fish or plants which may be captured, killed or picked, as the case may be, as the result of any steps taken in terms of paragraph (g); and
- (i) if satisfied that it will not endanger the security of the wild life, fish or plants in a national park or the maintenance of the wild life, fish or plants therein in their natural state, and that it is in the interests of management of or facilities for visitors within the park:

- (i) to construct air strips, roads, bridges, soil conservation works and water installations, buildings, viewing platforms, harbours and fences and to carry out such other works as he may consider necessary or desirable;

- (ii) to pick plants for use within the park;

and

- (j) to authorize:

- (i) such measures as he may consider necessary or desirable for-

A. the prevention and control of human and animal, including domestic animal diseases; or

B. the control and limitation of quelea birds and locusts; or

C. the eradication of weeds;

within a national park;

(ii) the killing or capture of any animal within a national park which is:

A. injured or sick; or

B. causing damage to property; or

C. considered to be a danger to humans; and the disposal of such animal in such manner as he may in any particular case approve;

and

(k) to set aside areas within a national park as development areas for:

(i) the housing of officers, employees and other persons lawfully residing in the park;

(ii) gardening, recreation and other like requirements and facilities;

(iii) the construction of offices, workshops, stables, pens, schools, clinics, churches and other buildings or installations that may be required in connection with the administration or maintenance of the park;

(iv) the construction of hotels, restaurants, rest camps, caravan parks, camping grounds, shops, service stations and other buildings and facilities for the accommodation, benefit or enjoyment of visitors;

and to restrict such housing, structures, buildings, installations or facilities in the park to such development area; and

(l) to authorize officers, employees or other persons lawfully residing in a national park:

(i) to keep domestic or domesticated animals of such classes as he may authorize in a development area referred to in paragraph (k); and

(ii) to use domestic animals of such classes as he may authorize for the purpose of travel or transport within the park or for such other purposes as he may specify;

and

(m) to regulate or restrict the construction and design of any building that may be constructed within a na-

tional park; and

(n) to restrict the use of vehicles and the speed at which vehicles may travel within a national park.

(2) For the purpose of providing facilities in a park for visitors the Minister may:

(a) within a development area set aside in terms of paragraph (k) of subsection (1):

(i) construct, maintain and operate hotels, restaurants, rest camps, caravan parks, camping grounds, shops, service stations and other buildings and facilities and let accommodation therein; and

(ii) let hotels, restaurants, shops, service stations and other buildings and facilities and control the charges which may be made by the lessee thereof;

and

(b) provide interpretative service; and

(c) do all such other things and take all such other steps as he may consider necessary or desirable to provide facilities for visitors thereto.

(3) Where the Minister considers it necessary or desirable in order to preserve the security of the plants or wild life in a national park or the maintenance in the natural state of the plants or wild life therein or to ensure the enjoyment, education and inspiration of visitors to the park or any part thereof, he may:

(a) direct that no further facilities shall be provided;

(b) restrict or limit the number of persons or vehicles or types of vehicles which may be permitted entry at any one time and may, by regulation, impose such restrictions or fix such limits.

#### **24. Prohibition and regulation of certain acts in national parks**

(1) Unless authorized thereto in terms of section *twenty-three*, no person shall:

(a) pick any plant in a national park; or

(b) hunt any wild life or take or destroy the nest thereof in a national park; or

(c) sell:

(i) any animal or any part of an animal which has been hunted in or has died in or has been removed from a national park; or

- (ii) any fish caught in a national park; or
  - (iii) any plant picked in a national park; or
  - (d) except in terms of such regulations as may be prescribed-
  - (i) introduce into or convey in a national park any weapon or explosive or any prescribed article; or
  - (ii) introduce into or convey or allow in a national park any animal, including a domestic or domesticated animal; or
  - (iii) remove from a national park any animal or any part of an animal; or
  - (iv) fish in any waters in a national park or remove from the park any fish caught in the waters of the park.
- (2) Any person who contravenes subsection (1) shall be guilty of an offence.

## PART V

### BOTANICAL RESERVES AND BOTANICAL GARDENS

#### **25 Purposes of botanical reserves and botanical gardens and powers and duties of Minister in relation thereto**

- (1) The purposes for which botanical reserves are or may be constituted in terms of this Act shall be to preserve and protect rare or endangered indigenous plants or representative plant communities growing naturally in the wild for the enjoyment, education and benefit of the public.
- (2) The purposes for which botanical gardens are or may be constituted in terms of this Act shall be to propagate and cultivate exotic and indigenous plants for the enjoyment, education and benefit of the public.
- (3) Subject to this section, it shall be the function and duty of the Minister to control, manage and maintain botanical reserves and botanical gardens for the appropriate purposes set out in subsections (1) and (2) and, so far as is reasonable, practicable and compatible with such purposes, to provide facilities for visitors thereto.
- (4) The Minister shall, subject to this Act, have power in respect of botanical reserves and botanical gardens to take such measures and to do such things which he con-

siders necessary or desirable to give effect to subsections (1), (2) and (3).

(5) The Minister may, where he considers it necessary or desirable in the circumstances of a particular botanical reserve or botanical garden, after consultation with any other Minister, by notice in a statutory instrument, cede his powers, functions and duties in relation to that botanical reserve or botanical garden to any other Minister who shall thereafter have in relation to the botanical reserve or botanical garden concerned all the powers, functions and duties which are conferred or imposed upon the Minister in terms of this Act.

(6) The Minister may, with the consent of the Minister to whom a cession in terms of subsection (5) has been made, at any time, by notice in a statutory instrument, revoke the cession.

(7) Where any cession has been revoked in terms of subsection (6):

- (a) the powers, functions and duties which were ceded shall revert to the Minister; and
- (b) the revocation shall not affect any thing done in terms of the cession and any such thing shall be deemed to have been done by the Minister.

#### **26 Botanical reserves and botanical gardens**

(1) Each of the areas described in-

- (a) Part I of the Second Schedule is hereby constituted a botanical reserve;
- (b) Part I of the Second Schedule is hereby constituted a botanical garden;

which shall be known by the name specified in the Second Schedule.

(2) Subject to this Act the President may, on the recommendation of the Board, by notice in a statutory instrument, amend the Second Schedule for the purpose of-

- (a) constituting a new botanical reserve or a new botanical garden and specifying the name thereof;
- (b) changing the name of any botanical reserve or botanical garden;
- (c) adding any area to a botanical reserve or botanical garden;
- (d) subtracting any area from a botanical reserve or botanical garden;



(e) abolishing any botanical reserve or botanical garden.

(3) No land shall be constituted as a botanical reserve or botanical garden or as part of a botanical reserve or botanical garden in terms of subsection (2) unless it is-

(a) State land; or

(b) trust land and the trustees thereof have consented thereto.

(4) Any notice made in terms of subsection (2) shall be laid before Parliament as soon as may be after it has been published in a statutory instrument and, if a resolution is passed within the next twenty-eight days on which Parliament has sat next after the notice is laid before it requesting the President to rescind or vary the notice, it shall forthwith be rescinded or varied, as the case may be, by further notice in a statutory instrument, but without prejudice to the validity of anything previously done thereunder.

#### **27. Buildings may be let in botanical reserve or botanical gardens**

The trustees of any trust land with the consent of the Minister may let any buildings in a botanical reserve or botanical garden.

#### **28. Control of, introduction into or removal of plants from a botanical reserve or botanical garden**

(1) No person shall-

(a) introduce any plant into a botanical reserve or a botanical garden; or

(b) pick any plant in a botanical reserve or a botanical garden;

except in terms of a permit issued in terms of section *twenty-nine*:

Provided that any person working on a road in a botanical reserve or a botanical garden may pick any plant on such road if it is necessary in the lawful performance of his duties.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

#### **29 Permit to introduce plants into or pick plants in a botanical reserve or botanical garden**

The Minister may issue a permit authorizing the holder thereof-

(a) to introduce any plant into or pick any plant in a botanical reserve:

Provided that no such permit shall authorize-

(a) the introduction of any plant of a species not native to such reserve;

(b) the picking of a plant unless such picking is necessary, whether for export or otherwise, for-

(i) scientific purposes; or

(ii) providing specimens for a museum, herbarium or similar institution; or

(iii) introduction into another botanical reserve, botanical garden or similar such plant or into horticulture; or

(iv) purposes connected with the management and control of such reserve;

(b) to introduce any plant into or pick any plant in a botanical garden for any purpose specified in the permit.

## **PART VI**

### **SANCTUARIES**

#### **30 Purposes of sanctuaries and duties of Minister in relation thereto**

(1) The purposes for which sanctuaries are or may be constituted under this Act shall be to afford special protection to all animals or particular species of animals in the sanctuary concerned for the enjoyment and benefit of the public.

(2) It shall be the function and duty of the Minister to control, manage and maintain sanctuaries for the purposes set out in subsection (1) and, so far as is reasonable, practicable and compatible with such purposes, to provide facilities for visitors thereto.

#### **31 Sanctuaries and designated animals**

(1) Each of the areas described in the Third Schedule is hereby constituted a sanctuary which shall be known by the name specified in the Third Schedule and in which the animals specified in the second column opposite the sanctuary shall be designated animals.

(2) Subject to this Act the President may, on the recommendation of the Board, by notice in a statutory instrument, amend the Third Schedule for the purpose of-

- (a) constituting a new sanctuary and specifying the name thereof;
- (b) changing the name of any sanctuary;
- (c) adding any area to a sanctuary;
- (d) subtracting any area from a sanctuary;
- (e) abolishing any sanctuary;
- (f) specifying any animals as being designated animals in relation to a particular sanctuary or removing any animal from the list of animals specially protected in a particular sanctuary.

(3) No land shall be constituted as a sanctuary or as part of a sanctuary in terms of subsection (2) unless it is-

- (a) State land; or
- (b) trust land and the trustees thereof have consented thereto.

### 32 Powers of Minister in relation to sanctuaries

(1) The Minister shall, subject to this Act, have power in respect of sanctuaries to take such measures and to do such things which he considers necessary or desirable to give effect to section thirty.

(2) For the purposes of providing facilities for visitors the Minister may, within an area set aside for the purpose in a sanctuary-

- (a) construct, maintain and administer hotels, restaurants, rest camps, caravan parks, camping grounds, shops, service stations and other buildings and facilities and let accommodation therein; and
- (b) let hotels, restaurants, shops, service stations and other buildings and facilities and control the charges which may be made by the lessees thereof.

(3) Where the Minister considers it necessary or desirable, he may-

- (a) direct that no further facilities shall be provided in a sanctuary;
- (b) restrict or limit the number of persons which may be permitted entry into a sanctuary at any one time and may, by regulation, impose such restriction or such limits.

### 33 Control of hunting in and removal of animals or animal products from a sanctuary and sale of animals or animal products

(1) No person shall-

- (a) hunt any animal in a sanctuary; or
- (b) remove any animal or any part of an animal from a sanctuary; or
- (c) sell any animal or any part of an animal which has been hunted in or has died in or has been removed from a sanctuary;

except in terms of a permit issued in terms of section thirty-four.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

### 34 Permit to hunt in or remove animals or animal products from a sanctuary and to sell animals or animal products

Subject to this Act, the Minister may issue a permit to any person to-

- (a) hunt any animal in a sanctuary; or
- (b) remove any animal or any part of an animal from a sanctuary; or
- (c) sell any animal or any part of an animal which has been hunted in or has died in or has been removed from a sanctuary:

Provided that the Minister shall not issue any such permit-

- (a) to hunt or remove any designated animal or any part of such animal unless he is satisfied that the hunting or removal is necessary for-
  - (i) scientific purposes; or
  - (ii) the protection of human life or property;
- (b) to hunt or remove any animal or any part of an animal other than a designated animal unless he is satisfied that the hunting or removal is necessary for-
  - (i) scientific purposes; or
  - (ii) educational purposes; or
  - (iii) providing specimens for a museum, zoological garden or similar institution or

- (iv) the taking of animals live for the purpose of export or restocking; or
- (v) the management and control of animal populations; or
- (vi) the protection of human life or property; or
- (vii) any other purpose which, in the opinion of the Minister, is in the interests of the conservation of animals.

## PART VII

### SAFARI AREAS

#### **35- Purposes of safari areas and powers and duties of Minister in relation thereto**

(1) The purposes for which safari areas are or may be constituted under this Act shall be to preserve and protect the natural habitat and the wild life therein in order that facilities and opportunities may be afforded to the public for camping, hunting, fishing, photography, viewing of animals, bird-watching or such other pursuits that may be permitted therein in terms of this Act.

(2) It shall be the function and duty of the Minister to control, manage and maintain safari areas for the purposes set out in subsection (1) and, so far as is reasonable, practicable and compatible with such purposes, to provide facilities for visitors thereto.

(3) The Minister shall, subject to this Act, have power in respect of safari areas to take such measures and to do such things which he considers necessary or desirable to give effect to subsections (1) and (2).

#### **36 Safari areas**

(1) Each of the areas described in the Fourth Schedule is hereby constituted a safari area which shall be known by the name specified in the Fourth Schedule.

(2) Subject to this Act the President may, on the recommendation of the Board, by notice in a statutory instrument, amend the Fourth Schedule for the purpose of-

- (a) constituting a new safari area and specifying the name thereof;
- (b) changing the name of any safari area;

- (c) adding any area to a safari area;
- (d) subtracting any area from a safari area;
- (e) abolishing any safari area.

(3) No land shall be constituted as a safari area or as part of a safari area in terms of subsection (2) unless it is:

- (a) State land; or
- (b) trust land and the trustees thereof have consented thereto.

#### **37 Lease of sites and grant of hunting rights in safari areas**

The Minister may:

- (a) lease sites in a safari area to such persons and for such purposes as he deems fit;
- (b) grant hunting or other rights over or in a safari area to such persons as he deems fit;

subject to such terms and conditions as he may impose:

Provided that:

- (a) the period of a lease in terms of paragraph (a) shall not exceed twenty-five years;
- (b) the period of hunting or other rights in terms of paragraph (b) shall not exceed ten years;
- (c) a grant of hunting or other rights in terms of paragraph (b) shall not prohibit persons from entering into the safari area concerned for purposes other than those for which the rights have been granted.

#### **38 Control of hunting in and removal of animals or animal products from a safari area and sale of animals or animal products**

(1) No person shall:

- (a) hunt any animal in a safari area; or
- (b) remove any animal or any part of an animal from a safari area; or
- (c) sell any animal or any part of an animal which has been hunted in or which has died in or which has been removed from a safari area;

except in terms of:

- (i) such regulations as may be prescribed for such safari area; or
- (ii) a permit issued in terms of section thirty-nine.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

**39. Permit to hunt in or remove animals or animal products from a safari area and to sell animals or animal products**

- (1) Subject to this Act, the Minister may issue a permit-
  - (a) to any person to:
    - (i) hunt any animal in a safari area; or
    - (ii) remove any animal or any part of an animal from a safari area; or
    - (iii) sell any animal or any part of an animal which has been hunted in or which has died in or which has been removed from a safari area:

Provided that the Minister shall not issue any such permit to hunt or remove any animal or any part of an animal unless he is satisfied that the hunting or removal is necessary for:

- (a) scientific purposes; or
- (b) educational purposes; or
- (c) providing specimens for a museum, zoological garden or similar institution; or
- (d) the taking of animals live for the purpose of export or restocking; or
- (e) the management and control of animal populations; or
- (f) the protection of human life or property; or
- (g) any other purpose which, in the opinion of the Minister, is in the interests of the conservation of animals.
- (b) to any person as the guest of the State to:
  - (i) hunt any animal in a safari area; or
  - (ii) remove any animal or any part of an animal from a safari area; or
  - (iii) sell any animal or any part of an animal which has been hunted in or which has died in or which has

been removed from a safari area.

(2) A permit issued in terms of subsection (1) may authorize the holder thereof to allow any person nominated by him to do in his stead, but subject to his direction or the direction of his deputy, anything which the holder may do in terms of the permit.

**PART VIII**

**RECREATIONAL PARKS**

**40 Purposes of recreational parks and powers and duties of Minister in relation thereto**

(1) The purposes for which recreational parks are or may be constituted under this Act shall be to preserve and protect the natural features therein for the enjoyment, benefit and recreation of the public.

(2) It shall be the function and duty of the Minister to control, manage and maintain recreational parks for the purposes set out in subsection (1) and, so far as is reasonable, practicable and compatible with such purposes, to provide facilities for visitors thereto.

(3) The Minister shall, subject to this Act, have power in respect of recreational parks to take such measures and to do such things which he considers necessary or desirable to give effect to subsections (1) and (2).

**41 Recreational parks**

(1) Each of the areas described in the Fifth Schedule is hereby constituted a recreational park which shall be known by the name specified in the Fifth Schedule.

2) Subject to this Act the President may, on the recommendation of the Board, by notice in a statutory instrument, amend the Fifth Schedule for the purpose of:

- (a) constituting any new recreational park and specifying the name thereof;
- (b) changing the name of any recreational park;
- (c) adding any area to a recreational park;
- (d) subtracting any area from a recreational park;
- (e) abolishing any recreational park.

(3) No land shall be constituted as a recreational park or as part of a recreational park in terms of subsection

(2) unless it is:

- (a) State land; or
- (b) trust land and the trustees thereof have consented thereto.

(4) Any notice made in terms of subsection (2) shall be laid before Parliament as soon as may be after it has been published in a statutory instrument and, if a resolution is passed within the next twenty-eight days on which Parliament has sat next after the notice is laid before it requesting the Minister to rescind or vary the notice, it shall forthwith be rescinded or varied, as the case may be, by further notice in a statutory instrument, but without prejudice to the validity of anything previously done thereunder.

#### **42 Designation of land within recreational park which may be alienated or leased**

(1) Subject to subsections (2) and (3), the Minister, on the recommendation of the Board may, by notice in a statutory instrument, designate within a recreational park any area or areas of land which may be alienated or leased for the erection of hotels, restaurants, rest camps, caravan parks, camping grounds, shops, service stations and other buildings and facilities for the accommodation, recreation, enjoyment or convenience of visitors or for such other purpose as he deems fit and may in like manner revoke such designation.

(2) The layout of any development within a designated area referred to in subsection (1) shall be approved in terms of the Regional, Town and County Planning Act [Chapter 29:12].

(3) No notice involving any designated area referred to in subsection (1) shall affect the right of any person who, before the date of such revocation, acquired title to or a lease over any land therein.

(4) Notwithstanding the alienation or lease of any land within a designated area referred to in subsection (1) such land shall continue to form part of the recreational park concerned.

## **PART IX**

### **SPECIALLY PROTECTED ANIMALS**

#### **43 Specially protected animals**

The animals specified in the Sixth Schedule are hereby

declared to be specially protected animals.

#### **44 Minister may amend Sixth Schedule by notice in statutory instrument**

The Minister may, by notice in a statutory instrument, amend the Sixth Schedule by adding thereto or removing therefrom the name of any animal.

#### **45 Control of hunting of specially protected animals and possession or sale of specially protected animals and products thereof**

(1) No person shall:

- (a) hunt any specially protected animal; or
- (b) keep, have in his possession or sell or otherwise dispose of any live specially protected animal or the meat or trophy of any such animal;

except in terms of a permit issued in terms of section forth-six.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

#### **46 Permit to hunt and to sell live specially protected animals and products thereof**

Subject to this Act, the Minister may issue a permit to any person-

- (a) to hunt any specially protected animal on any land other than in a national park; or
- (b) to keep, have in his possession or sell any live specially protected animal or the meat or trophy of any such animal:

Provided that the Minister shall not issue a permit in terms of paragraph (a) unless he is satisfied that the hunting is necessary for-

- (a) scientific purposes; or
- (b) educational purposes; or
- (c) providing specimens for a museum, zoological garden or similar institution; or
- (d) the taking of animals live for the purpose of falconry, captive breeding, export or restocking; or
- (e) the management and control of animal populations; or
- (f) the protection of human life or property; or

(g) any other purpose which, in the opinion of the Minister, is in the interests of the conservation of animals.

**47 Trophies of specially protected animals which are State trophies**

(1) Subject to subsection (2), the trophy of any specially protected animal killed or found dead shall be deemed to be a State trophy.

(2) Subsection (1) shall not apply in respect of the trophy of any specially protected animal which-

(a) has been killed in terms of a permit issued in terms of section forty-six; or

(b) was in lawful captivity immediately before its death.

(3) Subject to the proviso to subsection (1) of section sixty-three, any person who takes possession of any trophy which is a State trophy in terms of subsection (1) shall, as soon as possible and in any event within seven days, surrender such trophy to the appropriate authority for the land on which it was found or to the nearest convenient office of the Department of police station or to the local authority for the area concerned.

(4) Any person who contravenes subsection (3) shall be guilty of an offence.

(5) The burden of proof of any matter referred to in subsection (2) which would make lawful the failure to surrender any trophy in terms of subsection (3) shall, in any prosecution relating to such failure, lie upon the person charged.

**PART X**

**SPECIALLY PROTECTED INDIGENOUS PLANTS**

**48 Specially protected indigenous plants**

The plants specified in the first column of the Seventh Schedule are hereby declared to be specially protected indigenous plants.

**49 Minister may amend Seventh Schedule by notice a statutory instrument**

The Minister may, by notice in a statutory instrument, amend the Seventh Schedule:

(a) in the first column, by adding thereto or by removing therefrom the name of any indigenous plant;

(b) in the second column, by adding thereto, opposite the name of any indigenous plant specified in the first column, any area, or by removing therefrom any area.

**50. Control of picking of specially protected indigenous plants**

(1) Subject to subsections (2), (3) and (4), no person shall pick any specially protected indigenous plant except in terms of a permit issued in terms of section fifty-one.

(2) Subsection (1) shall not apply to the picking of any specially protected indigenous plant in any area which may be specified opposite the name of such plant in the second column of the Seventh Schedule.

(3) An owner or occupier of land or a person acting under his authority may cut or gather the flower of a specially protected indigenous plant on the land for use in the home of such owner or occupier.

(4) An owner or occupier of land or a person acting under his authority may pick a specially protected indigenous plant on the land which is-

(a) needed for cultivation, forestry operations, the erection of a building or structure, the construction of a fireguard, road or airport or other development, or the extraction of sand, stone, gravel or other materials; or

(b) used for the cultivation of such specially protected indigenous plants.

(5) Any person, who contravenes subsection (1) shall be guilty of an offence.

**51. Permit to pick specially protected indigenous plants**

Subject to this Act, the Minister may issue a permit authorizing the holder thereof to pick a specially protected indigenous plant for-

(a) export;

(b) cultivation and propagation;

(c) scientific purposes;

(d) providing specimens for a museum, herbarium, botanical garden or similar institution;

(e) such other purpose as the Minister deems fit.

## **52. Sale of specially protected indigenous plants controlled**

(1) No person shall sell any specially protected indigenous plant-

(a) except in terms of a permit issued to him in terms of section fifty-three; or

(b) unless he is a dealer in specially protected indigenous plants; or

(c) unless he is a member of a recognized horticultural society and the sale is to a member of the same or any other recognized horticultural society.

(2) No person shall purchase a specially protected indigenous plant-

(a) except from a person who is the holder of a permit issued in terms of section fifty-three; or

(b) except from a dealer in specially protected indigenous plants; or

(c) except from a stall at any fete, bazaar or other like function open to the public; or

(d) unless he is a member of a recognized horticultural society and the purchase is from a member of the same or any other recognized horticultural society.

(3) Any person who contravenes subsection (1) or (2) shall be guilty of an offence.

(4) In this section-

“recognized horticultural society” means a society, club, association or body of persons which is formed for the purpose of propagation of plants and which is recognized for the purposes of this section by the Minister.

## **53 Permit to sell specially protected indigenous plants**

The Minister may issue-

(a) a permit to a cultivator of specially protected indigenous plants to sell specially protected indigenous plants;

(b) a temporary permit, free of charge-

(i) to an owner or occupier of any land or a person nominated by such owner or occupier to sell to a person who is the holder of a permit issued in terms of para-

graph (a) a specially protected indigenous plant which has been picked on the land in terms of paragraph (a) of subsection (4) of section fifty; or

(ii) to any other person to sell specially protected indigenous plants in such other cases and for such other purposes as may be specified in the permit.

## **PART XI**

### **INDIGENOUS PLANTS**

#### **54 Application of this Part**

This Part shall not apply to national parks or botanical reserves or botanical gardens,

#### **55 Control of picking of indigenous plants**

(1) Subject to section fifty-six, no person shall-

(a) without reasonable excuse, the proof whereof lies on him, pick any indigenous plant on any land; or

(b) sell any indigenous plant picked on any land;

except in terms of a permit issued in terms of paragraph (c) of section fifty-six.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

#### **56 Permission to pick indigenous plants**

Subject to this Act and Part VI of the Forest Act [Chapter 19:05] the appropriate authority for any land may-

(a) pick any indigenous plant on the land; or

(b) sell any indigenous plant picked on the land; or

(c) issue a permit to any person-

(i) to pick any indigenous plant on the land; and

(ii) to sell any indigenous plant picked in terms of the permit.

#### **57. Minister may prohibit persons from picking indigenous plants**

(1) If the Minister considers it necessary or desirable to do so in the interests of the preservation, conservation, propagation or control of any indigenous plants within Zimbabwe or any area of Zimbabwe, he may, by notice in writing served on any person, specifying such

indigenous plants, prohibit that person, either absolutely or subject to specified conditions and either indefinitely or for a specified period, from doing any or all of the following-

- (a) picking such indigenous plants;
- (b) selling such indigenous plants;
- (c) authorizing any person to do anything referred to in paragraph (a) or (b);

whether on alienated or unalienated land, within the area specified in the notice.

- (2) The Minister may at any time, by further notice in writing served on the person concerned, amend or revoke any notice issued in terms of subsection (1).
- (3) The Minister shall not be obliged to give any reason for issuing a notice in terms of subsection (1) or (2).
- (4) Any person who contravenes a notice issued in terms of subsection (1) or (2) shall be guilty of an offence.

**58. Appointment of commissioner**

- (1) If a person upon whom a notice has been served in terms of subsection (1) or (2) of section fifty-seven requests an inquiry within thirty days after such notice, the Minister shall, within twenty-one days of such request, refer the matter for inquiry to a commissioner appointed by the Minister for the purpose.
- (2) For the purposes of an inquiry held in terms of subsection (1), the Minister may appoint as a commissioner any person who:
  - (a) is or is qualified to be a registered legal practitioner;
  - or
  - (b) in the opinion of the Minister has knowledge and experience in the preservation, conservation, propagation or control of indigenous plants.
- (3) A commissioner appointed in terms of subsection (1) shall:
  - (a) subject to any regulations made in terms of section one hundred and twenty-nine, conduct due inquiry into the matter; and
  - (b) report to the Minister on the existence of grounds that might justify the retention, revocation or amendment of the notice that is the subject of the inquiry.
- (4) The powers, rights and privileges of a commissioner

appointed in terms of subsection (1) shall be the same as those conferred upon a commissioner by the Commissions of Inquiry Act [Chapter 10:07], other than the power to order a person to be detained in custody, and sections 9 to 13 and 15 to 18 of that Act shall apply, *mutatis mutandis*, in relation to an inquiry in terms of this section and to a person summoned to give evidence at the inquiry.

(5) The identity of any police officer or any officer, inspector, employee or honorary officer by whom a report is made concerning a person upon whom a notice has been served in terms of subsection (1) or (2) of section fifty-seven shall not be disclosed at an inquiry held in terms of this section to any person other than the commissioner, if the Minister certifies that its disclosure would not be in the public interest.

(6) Upon receiving the report of a commissioner appointed in terms of subsection (1), the Minister may, after giving due consideration to the recommendations contained therein-

- (a) confirm the notice that was the subject of the inquiry; or
- (b) amend or revoke the notice; or
- (c) give such other direction in the matter as he thinks appropriate;

and the decision of the Minister shall be final.

(7) Where a person who is-

- (a) the appropriate authority for any land; or
- (b) the holder of an authority in terms of this Act;

is served with a notice in terms of subsection (1) or (2) of section fifty-seven, his rights as such appropriate authority or holder shall be suspended, to the extent that they are inconsistent with the notice, while the notice remains in force.

**PART XII**

**HUNTING, REMOVAL, VIEWING AND SALE OF ANIMALS AND ANIMAL PRODUCTS**

**59 Control of hunting, removal and sale of live animals and animal products**

(1) This section shall not apply to national parks, sanctuaries or safari areas.



(2) Subject to subsection (4), no person shall-

- (a) hunt any animal on any land; or
- (b) remove any animal or any part of an animal from any land or from one place to another on any land;

except in terms of a permit issued in terms of paragraph (c) of subsection (4).

(3) Subject to this Act, no person shall sell any live animal or the trophy of any animal except in terms of a permit issued in terms of section seventy-five.

(4) Subject to this Act, the appropriate authority for any land may-

- (a) hunt any animal on the land; or
- (b) remove any animal or any part of an animal from the land or from one place to another on the land; or
- (c) issue a permit to any person allowing him or any other person or any class of persons to hunt any animal on the land or to remove any animal or any part of an animal from the land or from one place to another on the land.

(5) Any person who contravenes subsection (2) or (3) shall be guilty of an offence.

#### **60 Minister may prohibit or restrict hunting and removal of animals in defined areas**

(1) The Minister may, by notice in a statutory instrument, prohibit or restrict either indefinitely or for such period as may be specified in the notice the hunting or removal of any animal or any specimen or sex of any animal or any part thereof in or from any area or areas which are defined in the notice where he deems it necessary to do so for all or any of the following purposes-

- (a) the control of the spread of disease;
- (b) the protection of human life and property;
- (c) conservation or management of animal populations;
- (d) administrative purposes.

(2) Where the area or any part thereof to which a notice referred to in subsection (1) relates is alienated land, the Minister shall, in addition to the publication of such notice in a statutory instrument, publish such notice in three consecutive issues of a newspaper circulating in the area in which such land is situated.

(3) The Minister may, by notice in a statutory instru-

ment, amend or revoke any notice referred to in subsection (1) and if such notice related in whole or in part to any area of alienated land, subsection (2) shall apply, *mutatis mutandis*.

(4) If the Minister considers it necessary or desirable to do so in the interests of the preservation, conservation, propagation or control of any wild life within Zimbabwe or any area of Zimbabwe, he may, by notice in writing served on any person, specifying such wild life, prohibit that person, either absolutely or subject to specified conditions, and either indefinitely or for a specified period, from doing any or all of the following-

- (a) hunting such wild life;
- (b) conducting or taking part in any hunting, photographic or viewing safari;
- (c) being in possession of or using any weapon ordinarily used for hunting, save for the defence of himself or any other person or for the protection of any live-stock, crop or property on land owned, leased or occupied by him;
- (d) authorizing any other person to do anything referred to in paragraph (a), (b) or (c);

whether on alienated or unalienated land, within the area specified in the notice.

(5) The Minister may at any time, by further notice in writing served on the person concerned, amend or revoke any notice issued in terms of subsection (4).

(6) The Minister shall not be obliged to give any reason for issuing a notice in terms of subsection (4) or (5).

(7) Section fifty-eight shall apply, *mutatis mutandis*, in relation to a notice issued in terms of subsection (4) or (5) and the person affected thereby.

(8) Any person who contravenes a notice issued in terms of subsection (1), (3), (4) or (5) shall be guilty of an offence.

#### **61 Killing or injury of animals in self-defence**

(1) Notwithstanding this Act, it shall be lawful for any person to kill or injure any animal on any land in defence of himself or any other person if immediately and absolutely necessary.

(2) The burden of proving that any animal has been killed or injured in accordance with subsection (1) shall lie on the person who killed or injured such animal.

#### **62. Destruction of dogs**

(1) Subject to subsection (3), it shall be lawful for the appropriate authority for alienated land on which there are any animals to kill any dog found on such land if such dog is not in the keeping of or accompanied by a person who is lawfully upon such land.

(2) Subject to subsection (3), it shall be lawful for an officer to kill any dog found hunting any animal on unalienated land if such dog is not in the keeping of or accompanied by a person who is lawfully upon such land.

(3) Subsections (1) and (2) shall not apply in respect of land within-

- (a) the area of a municipality or town or local government area in terms of the Urban Councils Act [Chapter 29:15]; or
  - (b) the town ward of a rural district council or an area that has been declared in terms of the Rural District Councils Act [Chapter 29:13] to be a specified area;
  - (c) the area of any township, village or business centre established in terms of any enactment.
- (4) Nothing in this section contained shall be construed as in any way affecting or derogating from the right of any person to kill a dog in terms of any other law.

**63 Report of killing of animals or injury of animals other than dangerous animals**

(1) Where:

(a) any animal, other than specially protected animals, is killed or any animal, other than a dangerous animal or specially protected animals, is injured by any person:

- (i) in the circumstances specified in section sixty-one; or
- (ii) by accident or in error whilst he is hunting and he has no authority in terms of this Act to hunt such animal;

or

(b) any specially protected animal is killed or injured by any person and he has no authority in terms of this Act to hunt or kill such animal;

that person shall as soon as possible and in any event within seven days make a report in person:

- (i) to the appropriate authority for the land on which the animal was last sighted; or

- (ii) at the nearest convenient office of the Department or police station or at the office of the local authority for the area concerned;

that an animal has been killed or injured, as the case may be, on the land and where it was last sighted and shall, if so requested by the appropriate authority to which any such report is made, personally deliver to the appropriate authority so much of the meat or trophy of the animal concerned as is in his possession and as the appropriate authority may require:

Provided that, in the case of a specially protected animal, any meat or trophy thereof which is in such person's possession shall be delivered to the appropriate authority or the person in charge of the office or police station to which or at which, as the case may be, the report is made.

(2) Where a report relating to a specially protected animal has been made in terms of subsection (1) to an appropriate authority other than the Director, the appropriate authority shall report the occurrence at the nearest office of the Department, police station or museum or at the office of the local authority for the area concerned and, if so requested by the person in charge of the office or place at which the report is made:

- (a) accompany him or his representative to, and indicate there, the place of the occurrence and render such assistance in recovering the meat or trophy of the animal killed as may be required by that person or his representative;
- (b) deliver to him so much of the meat or trophy of the animal as is in his possession and as may be required by the latter.

(3) Where any animal is killed by accident or in error by any person while he is hunting and that person has been authorized in terms of this Act to hunt such animal, the animal shall be counted as an animal killed in accordance with such authority.

(4) Where any animal is killed by accident or in error by any person while he is driving a vehicle on any road, that person shall, if he retrieves the animal or any part thereof, in person report the killing at the nearest office of the Department, police station or museum or at the office of the local authority for the area concerned and shall, if so requested by the person in charge of the office or place at which the report is made, surrender to him the animal or such part thereof retrieved by him.

(5) The meat or trophy of any animal which has been delivered to any office, station or museum in terms of subsection (1), (2) or (4) or which has been recovered by the person in charge of any such office, station or mu-

seum or by his representative following upon a report made in terms of this section shall be a State trophy and shall be disposed of in the prescribed manner.

(6) Any person who contravenes subsection (1), (2) or (4) shall be guilty of an offence.

#### 64. Report of injury of dangerous animals

(1) Where a dangerous animal has been injured on any land by any person, that person shall, as soon as possible and in any case within twenty-four hours, make a report in person:

- (a) to the appropriate authority for the land on which it was last sighted; or
- (b) at the nearest convenient office of the Department, or police station or at the office of the local authority for the area concerned;

that there is an injured dangerous animal on the land and where the animal was last sighted.

(2) Where a report has been made in terms of subsection (1) to an appropriate authority, the appropriate authority shall, as soon as possible and in any case within twenty-four hours, report the occurrence at the nearest office of the Department, or police station or at the office of the local authority for the area concerned.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

#### 65. Control of safaris

(1) Subject to subsection (2), no person shall:

- (a) conduct for reward:
  - (i) any hunting safari on any land; or
  - (ii) any photographic or viewing safari, either on foot or on horse-back, within any national park, sanctuary or safari area or on forest land or within any Communal Land for which the Minister is the appropriate authority/

unless he is the holder of a professional hunter's licence, learner professional hunter's licence or professional guide's licence authorizing such conduct;

or

(b) offer to conduct for reward any safari referred to in paragraph (a) unless he is the holder of an appropri-

ate licence authorizing such conduct; or

(c) publish or cause to be published in any, way whatsoever any false or misleading statement relating to any hunting, photographic or viewing safari conducted or to be conducted in Zimbabwe.

(2) Paragraphs (a) and (b) of subsection (1) shall not apply in respect of such area or areas as the Minister may, by notice in a statutory instrument, specify for the purposes of this subsection.

(3) It shall be sufficient defence to a charge of contravening paragraph (c) of subsection (1) for the person charged to prove that he published or caused to be published the statement concerned in good faith and without having any reason to believe it was false or misleading.

(4) Paragraph (b) and (c) of subsection (1) shall extend to:

- (a) acts, omissions, matters or things outside Zimbabwe;
- (b) all persons irrespective of their nationality or citizenship.

(5) Notwithstanding anything to the contrary contained in any law relating to magistrates courts, any magistrates court shall have jurisdiction in respect of any contravention of paragraph (b) or (c) of subsection (1) or any act, omission, matter or thing forming part of or connected with such contravention wherever committed, whether in or outside Zimbabwe.

(6) Any person who contravenes subsection (1) shall be guilty of an offence.

#### 66. Professional hunter's licence

(1) A professional hunter's licence shall authorize the holder thereof, subject to this Act:

- (a) to conduct for reward:
  - (i) in such national park, sanctuary or safari area or on such forest land or in such area of Communal Land for which the Minister is the appropriate authority if any, as may be specified in the licence, a photographic or viewing safari on foot or on horseback;
  - (ii) on such land as may be specified in the licence, a hunting safari;
- (b) to offer to conduct for reward any safari referred to in paragraph (a).

(2) The holder of a professional hunter's licence shall-

(a) supervise and control the hunting by every person who hunts during safaris conducted by him in terms of his licence; and

(b) take all reasonable steps-

(i) to ensure that every person who hunts during hunting safaris conducted by him clearly understands the terms and conditions of any permit or right which entitles him to hunt; and

(ii) to prevent any unlawful hunting by any person who hunts during safaris conducted by him.

(3) Any person who contravenes subsection (2) shall be guilty of an offence.

(4) Where in any prosecution for an offence in terms of this section it is proved that a person hunted any animal in contravention of this Act during a safari conducted by the holder of a professional hunter's licence, the holder of the professional hunter's licence shall be presumed to have failed to take all reasonable steps to prevent the unlawful hunting of the animal unless the contrary is proved.

#### 67. Learner professional hunter's licence

A learner professional hunter's licence shall authorize the holder thereof, subject to this Act:

(a) to conduct for reward under the instructions of the holder of a professional hunter's licence:

(i) in such national park, sanctuary or safari area or on such forest land or in such area of Communal Land for which the Minister is the appropriate authority, if any, as may be specified in the licence, a photographic or viewing safari on foot or on horseback;

(ii) on such land as may be specified in the licence, a hunting safari;

(b) to offer to conduct for reward any safari referred to in paragraph (a).

#### 68. Professional guide's licence

A professional guide's licence shall authorize the holder thereof, subject to this Act:

(a) to conduct for reward, in such national park, sanctuary or safari area or in such area of Communal Land for which the Minister is the appropriate authority if any, as may be specified in the licence, a photographic or viewing safari on foot or on horseback;

(b) to offer to conduct for reward any safari referred to in paragraph (a).

#### 69 Minister may issue professional hunter's, learner professional hunter's and professional guide's licence

Subject to this Act, the Minister may issue a professional hunter's licence, learner professional hunter's licence or professional guide's licence to any person whom he deems fit.

#### 70 Lawful hunter may ask other hunter to produce authority

(1) Any person, who is lawfully hunting on any land may require any other person found by him apparently hunting on such land either to produce evidence of his authority in terms of this Act to hunt on such land or to furnish him with his full name and address.

(2) Any person who:

(a) fails to comply with a request made in terms of subsection (1); or

(b) in response to a request made in terms of subsection (1) furnishes a false or incomplete name or address;

shall be guilty of an offence.

#### 71 Prohibition of sale of meat of animal unlawfully hunted

(1) Subject to this Act, no person shall sell the meat of any animal which:

(a) he has hunted; or

(b) he knows or has reason to believe has been hunted;

in contravention of this Act.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

#### 72 Sale of animal born or hatched and held in captivity

(1) Subject to this Act, any person may:

(a) kill any animal;

(b) sell any live animal, or the meat or trophy of any animal;

which was born or hatched and has remained in captivity.

(2) The burden of proof of the matters referred to in subsection (1) which would make lawful a killing or sale referred to in that subsection shall, in any prosecution relating to such killing or sale, lie upon the person charged.

### **73 Sale and manufacture of articles from trophies**

- (1) No person shall:
- (a) manufacture any article from a trophy or process any trophy; or
  - (b) sell, donate or otherwise dispose of any trophy or any article manufactured from a trophy;

which has been obtained from an animal which has been hunted in contravention of this Act:

Provided that this subsection shall not apply in respect of trophies lawfully acquired from the State.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

### **74 Purchase of live animals and trophies**

(1) Subject to subsection (2), no person shall purchase any live animal or trophy unless he is satisfied that:

- (a) the seller has authority in terms of this Act authorizing him to make the sale; or
- (b) in the case of alive animal, the animal was born or hatched and has remained in captivity; or
- (c) in the case of a trophy, the trophy has been obtained from an animal which was born or hatched and has remained in captivity.

(2) Subsection (1) shall not apply to the purchase of a trophy:

- (a) from a stall at a fete, bazaar or other like function open to the public; or
- (b) in the ordinary course of business from a person who carries on business in a shop, store or other fixed place of business other than domestic premises.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

### **75 General permit to sell live animal or trophy**

Subject to this Act, the Minister may issue a permit to any person to sell any live animal or the trophy of any animal.

### **76 Declaration of trophy**

The Minister may, by notice in a statutory instrument, declare any thing of which the durable portion of any animal forms a part to be a trophy.

## **PART XIII**

### **PROTECTION OF ANIMALS AND INDIGENOUS PLANTS ON ALIENATED LAND**

#### **77 Minister may declare protected animals or plants or cessation of hunting of animals and picking of plants, authorize reduction of animals and specify hunting periods**

(1) Subject to subsection (2), the Minister may, after consultation with the Natural Resources Board and the conservation committee concerned, by notice in a statutory instrument:

- (a) declare:
  - (i) any animal, other than a specially protected animal which, in his opinion by reason of its scarcity or value deserves to be further protected, to be a protected animal;

or

- (ii) any indigenous plant which, in his opinion by reason of its scarcity, over-utilization, utility or value deserves to be further protected, to be a protected indigenous plant;

within the area of a conservation committee;

- (b) order that the hunting of animals or the picking of indigenous plants which, in his opinion, are being hunted or picked, as the case may be, on any alienated land within the area of a conservation committee on a scale which, in his opinion, is likely to be injurious to animal or indigenous plant populations in the area of the conservation committee, shall be restricted to the extent specified in such notice on the whole or part of the land concerned;
- (c) authorize a conservation committee, notwithstanding subsection (2) of section fifty-nine, to reduce on any alienated land within its area to such extent as may be specified in the notice any problem animal where, in his opinion, the number of such animals on the land is such as to cause excessive damage or nuisance;

(d) specify periods during which any animal specified in such notice may not be hunted in the area of a conservation committee.

(2) No notice referred to in paragraph (b) or (c) of subsection (1) shall be made in terms of that subsection unless prior to the making of the notice the appropriate authority for the land concerned has been notified of the proposal to make the notice and afforded a reasonable opportunity of making representation in relation thereto.

(3) The Minister may, by notice in a statutory instrument, amend or revoke any notice made in terms of subsection (1).

(4) The Minister shall cause a copy of any notice which made-

- (a) in terms of subsection (1) or (3) to be published in three consecutive issues of a newspaper circulating in the area where any land to which the notice applies is situated;
- (b) in terms of paragraph (b) or (c) of subsection (1) to be served on the appropriate authority for any land affected by the notice;

and any amendment or revocation of such a notice shall be published or served accordingly.

(5) Subject to subsections (6) and (7), no person shall-

- (a) hunt a protected animal or pick a protected indigenous plant or permit any other person to do so on any land on which it has been declared a protected animal or protected indigenous plant, as the case may be, except in terms of a licence issued in terms of subsection (9); or
- (b) hunt any animal or pick any plant or permit any other person to do so in contravention of a notice made in terms of paragraph (b) or (d) of subsection (1).

(6) An owner or occupier of land or a person acting under his authority may cut or gather the flower of a protected indigenous plant on the land for use in the home of such owner or occupier.

(7) An owner or occupier of land or a person acting under his authority may pick a protected indigenous plant on the land which is-

- (a) needed for cultivation, forestry operations, the erection of a building or structure, the construction of a fireguard, road or airport or other development, or the extraction of sand, stone, gravel or other materials; or

(b) used for the cultivation of such protected indigenous plants.

(8) An owner or occupier of land who wishes to obtain a licence to hunt a protected animal or pick a protected indigenous plant on his land may apply therefor in writing to the conservation committee for the area within which his land is situated specifying the land on which he wishes to hunt such animal or pick such plant, his reasons therefor and by whom the hunting or picking will be done.

(9) A conservation committee to which an application in terms of subsection (8) has been made may issue the applicant with an appropriate licence.

(10) Any person who is aggrieved by the refusal of a conservation committee to issue a licence in terms of subsection (9) or by the imposition of any terms or conditions upon such licence may appeal to the Natural Resources Board which may-

- (a) confirm the decision of the conservation committee;

or

- (b) direct the conservation committee to issue a licence on such terms and conditions as the Natural Resources Board may specify;

and the decision of the Natural Resources Board shall be final.

(11) A conservation committee shall forthwith comply with any direction given to it in terms of paragraph (b) or subsection (10).

(12) A conservation committee shall appoint a person as its agent for the purpose of exercising any powers conferred on the committee in terms of paragraph (c) of subsection (1) and such person may for that purpose enter upon the land concerned with such assistants, vehicles, materials and apparatus as he may require.

(13) A conservation committee shall provide an agent appointed in terms of subsection (12) with a certificate of appointment.

(14) Any person who contravenes subsection (5) shall be guilty of an offence.

#### **78 Powers of conservation committees and Natural Resources Board**

(1) Any member of a conservation committee or any other person appointed by such committee for the purpose may-

- (a) on giving notice to the occupier of alienated land within the area of the conservation committee, or if there is no such occupier, to the owner thereof, enter upon such land for the purpose of investigating and reporting upon animals and indigenous plants on that land:

Provided that this paragraph shall not authorize the entry of any dwelling-house without the consent of the occupier thereof:

- (b) require the occupier of alienated land within the area of the conservation committee or, if there is no such occupier, the owner thereof, to answer any question relating to animals or indigenous plants on his land:

Provided that no person shall be required to answer any question put to him in terms of this paragraph if he would be entitled to decline to answer that question were he a witness giving evidence in a court of law.

(2) Any member of the Natural Resources Board or any other person appointed by the Natural Resources Board for the purpose may exercise the powers conferred upon a conservation committee in terms of subsection (1) in respect of any alienated land.

#### **79 Conservation committee may order cessation of hunting**

(1) Where a conservation committee is of the opinion that on any alienated land within its area the hunting of animals is taking place on a scale which is, in its opinion, likely to be injurious to animal populations in the area, it may serve notice in writing on the appropriate authority for the land that-

- (a) it proposes to recommend to the Natural Resources Board that measures be taken in terms of paragraph (b) of subsection (1) of section *seventy-seven* to restrict hunting on such land of animals generally or of the animals specified in the notice; and
- (b) it prohibits, for a period not exceeding fourteen days from the date when the notice is served, the hunting of animals generally or of the animals specified in the notice, as the case may be, on the land concerned.

(2) If so directed by the Natural Resources Board, a conservation committee shall, by notice in writing served on the appropriate authority for the land concerned, extend the period of any prohibition on the hunting of animals on the land concerned in terms of paragraph (b) of subsection (1) for a further period not exceeding fourteen days.

(3) Any person who hunts any animal on any land in contravention of any notice served on him in terms of

subsection (1) or (2) shall be guilty of an offence.

#### **80 Problem animals**

(1) The animals specified in the Eighth Schedule are hereby declared to be problem animals.

(2) The Minister may, by notice in a statutory instrument, amend the Eighth Schedule by:

- (a) removing the name of any animal therefrom; or
- (b) adding the name of any animal thereto.

#### **81 Obstruction, etc., of conservation committee and Natural Resources Board**

Any person who:

- (a) hinders or obstructs a member of a conservation committee, the Natural Resources Board or any person appointed by a conservation committee or the Board in the exercise of the powers conferred upon it or him, as the case may be, by or in terms of this Part; or
- (b) fails to answer or gives any answer which he knows to be false or which he does not reasonably believe to be true to any question which he may be required to answer in terms of section *seventy-eight*;

shall be guilty of an offence.

## **PART XIV**

### **FISH CONSERVATION**

#### **82 Interpretation in Part XIV**

In this Part-

“controlled fishing waters” means waters which have been declared in terms of section *eighty-four* to be controlled fishing waters.

#### **83 Appropriate authority for waters**

(1) The Minister may, by notice in a statutory instrument, declare any person to be the appropriate authority for any waters and may in like manner amend or revoke any such notice:

Provided that before making any notice in terms of this section the Minister shall:

- (a) cause notice of his intention to do so to be published in a statutory instrument and shall in such notice invite any person who wishes to make representations in regard to the matter to do so to him, in writing, on or before a date to be specified in the notice;

and

- (b) consider every representation made in terms of paragraph (a).

(2) Where, by virtue of a notice made in terms of subsection (1), the appropriate authority for any waters is changed, any permit issued by the previous appropriate authority which was of force and effect immediately before the date of commencement of the notice shall remain in force and effect and be subject to amendment or cancellation as if it had been issued by the new appropriate authority for the waters.

#### **84 Controlled fishing waters and powers of Minister in relation thereto**

(1) If the Minister is of the opinion that such action is necessary or desirable in the interests of fish conservation he may, by notice in a statutory instrument, declare any waters to be controlled fishing waters and may in like manner amend or revoke any such notice:

Provided that before making any notice in terms of this subsection, the Minister shall:

- (a) cause notice of his intention to do so to be published in a statutory instrument and shall in such notice invite any person who wishes to make representations in regard to the matter to do so to him, in writing, on or before a date to be specified in the notice and

- (b) consider every representation made in terms of paragraph (a).

(2) For the purposes of fish conservation within any controlled fishing waters the Minister may:

- (a) make regulations in terms of section one hundred and *twenty-nine* regulating, controlling, restricting or prohibiting fishing in such waters;
- (b) take such measures as he may deem necessary or desirable to-
  - (i) reduce or increase fish populations in such waters;
  - (ii) eradicate or encourage plant growth within such waters or on the banks thereof.

#### **85. Control of fishing**

(1) Subject to section *eighty-six*, no person shall fish in any waters, other than those specified in a notice made in terms of subsection (2), except in terms of a permit issued in terms of section *eighty-six* by the appropriate authority for the waters.

(2) The Minister may, by notice in a statutory instrument, specify any waters for which a permit to fish, issued in terms of section *eighty-six*, shall not be required and may in like manner amend or revoke any such notice.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

#### **86. Permission to fish**

Subject to this Act, the appropriate authority for any waters may-

- (a) fish at any time in the waters; or
- (b) issue a permit to any person allowing him or any other person or any class of persons to fish in the waters.

#### **87. Use of explosives, etc., for fishing prohibited**

(1) Subject to subsection (2), no person shall in any waters-

- (a) without reasonable excuse, the proof whereof lies on him, kill any fish by means of an explosive charge, the discharge of a firearm or the introduction into the waters of any chemical, poison or intoxicating substance; or
- (b) fish by jigging or by means of any jig or an electrical device; or
- (c) wilfully injure or disturb the spawn of any fish or any spawning bed, bank or shallow whereon or wherein such spawn is deposited;

except in terms of a permit issued in terms of section *ninety-four*

(2) Subject to this Act, the appropriate authority for any waters may introduce any chemical into such waters for the purpose of-

- (a) rendering the water fit for human or animal consumption; or



(b) preventing and controlling human and animal diseases; or

(c) destroying aquatic growth.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

### **88 Control of introduction to waters of fish and aquatic growth and importation of live fish and fish ova**

(1) No person shall-

(a) without reasonable excuse, the proof whereof lies on him, introduce into any waters any species of fish or any aquatic plant which is not native to such waters;

or

(b) import any live fish or the ova of any fish; except in terms of a permit issued in terms of section ninety-four.

(2) Paragraph (a) of subsection (1) shall not apply to the return to any waters of any fish immediately after it has been caught.

(3) Any person who contravenes subsection (1) shall be guilty of an offence.

### **89 Control of fish and aquatic growth**

(1) Whenever the Minister is of the opinion that any fish or aquatic plant in any waters is injurious to fish populations in such waters, he may:

(a) by order in writing require the appropriate authority for such waters to take such steps as he may specify to kill such fish or such aquatic plant; or

(b) render to the appropriate authority for such waters such assistance as he may deem necessary to kill such fish or such aquatic plant; or

(c) take such steps as he may deem necessary to kill such fish or such aquatic plant.

(2) Where the appropriate authority for any waters fails to comply with any order issued in terms of paragraph (a) of subsection (1), the Minister, after serving seven days notice on such appropriate authority of his intention to do so, may at any time thereafter authorize an officer or inspector to enter upon such waters and the land riparian thereto with such assistants, vehicles and apparatus as he may require and carry out the steps specified in the order on behalf of and at the exp

(3) The Minister may, for the purposes of paragraph (c) of subsection (1) authorize an officer or inspector to enter upon any waters and the land riparian thereto with such assistants, vehicles and apparatus as he may require.

(4) Any person who contravenes any order made in terms of paragraph (a) of subsection (1) shall be guilty of an offence.

### **90 Control of business of catching and selling fish**

(1) No person shall carry on the business of catching fish in any waters and selling such fish except in terms of a permit issued in terms of section ninety-four:

Provided that the appropriate authority for any waters that are wholly surrounded by the land of that authority shall not be required to hold a permit in respect of the business of catching fish in such waters and selling such fish.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

### **91 Control of fishing nets**

(1) No person shall possess a fishing net-

(a) unless he is a registered dealer in or manufacturer of fishing nets; or

(b) except in terms of a permit issued in terms of paragraph (a) or (e) of section ninety-four; or

(c) unless such person is an appropriate authority for any waters.

(2) Any person who contravenes subsection (1) shall be guilty of an offence.

### **92 Registration as dealer in or manufacturer of fishing nets**

(1) The Minister may register as a dealer in or a manufacturer of fishing nets any person whom he deems fit.

(2) The Minister may refuse to register or cancel the registration of any person as a dealer in or manufacturer of fishing nets.

### **93 Authorized fishing gear**

(1) No person shall, in any waters, use any fishing gear other than-

(a) a rod and line or hand line to which-

(i) not more than three single hooks are attached;

or

- (ii) not more than one conventional lure, having not more than three single, double or treble hooks, is attached;

or

- (b) a spear; or
- (c) a spear gun; or
- (d) a basket trap;

except in terms of a permit issued in terms of section ninety-four:

Provided that an appropriate authority for any waters may use a fishing net in the waters for which it is the appropriate authority.

(2) The appropriate authority for any waters may, when issuing a permit to any person to fish, restrict the gear by which such fishing may be undertaken to one or more of the gear specified in subsection (1).

(3) Nothing in this section contained shall be deemed to prohibit the use of:

- (a) any gaff or landing net to remove from the water any fish lawfully taken; or
- (b) any form of keep-net to retain any fish lawfully taken;

or

- (c) any throw-net or trap designed to catch bait.

(4) Any person who contravenes subsection (1) shall be guilty of an offence.

#### **94 Permits to carry on business of catching and selling fish, etc.**

Subject to this Act, the Minister may issue a permit to any person to-

- (a) carry on the business of catching fish by means of a fishing-net or by other means in any waters and selling such fish;
- (b) use an explosive charge, firearm, chemical, poison, intoxicating substance, jig or electrical device for the killing of fish:

Provided that such permit shall not be issued unless the Minister is satisfied that-

- (a) the killing of the fish cannot effectively be achieved by any means other than by the means for which the permit is required; or
- (b) is necessary for research purposes or scientific management of fish populations;
- (c) introduce into any waters any fish or aquatic plant of a species which is not native to such waters or to water naturally connected thereto:

Provided that no such permit shall be issued in respect of any aquatic plant which is a weed;

- (d) import live fish or the ova of any fish;
- (e) catch fish in any waters by means of a fishing-net or by other means for scientific or other purposes.

#### **95 Possession of fish caught in contravention of this Act**

Any person who-

- (a) is found in possession of fish in circumstances which give rise, either at the time of possession or at any time thereafter, to a reasonable suspicion that such fish-

- (i) were caught in contravention of this Act; and
- (ii) are intended to be sold;
- (b) is unable at any time to establish that-

- (i) such fish were not caught in contravention of this Act; or
- (ii) he had reasonable grounds for believing that such fish were not caught in contravention of this Act;

shall be guilty of an offence.

#### **96 Minister may prohibit persons from fishing**

(1) If the Minister considers it necessary or desirable to do so in the interests of the preservation, conservation, propagation or control of any fish within Zimbabwe or any area of Zimbabwe, he may, by notice in writing served on any person, specifying such fish, prohibit that person, either absolutely or subject to specified conditions, and either indefinitely or for a specified period, from doing any or all of the following:

- (a) fishing in any waters for such fish;
- (b) being in possession of any equipment ordinarily used for fishing such fish on, in or near any waters;

- (c) authorizing any person to do anything referred to in paragraph (a) or (b);

within the area specified in the notice.

(2) The Minister may at any time, by further notice in writing served on the person concerned, amend or revoke any notice issued in terms of subsection (1).

(3) The Minister shall not be obliged to give any reason for issuing a notice in terms of subsection (1) or (2).

(4) The provisions of section fifty-eight shall apply, *mutatis mutandis*, in relation to a notice issued in terms of subsection (1) or (2) and the person affected thereby.

(5) Any person who contravenes a notice issued in terms of subsection (1) or (2) shall be guilty of an offence.

(5) If, outside a botanical reserve or botanical garden, a person is found in possession of any freshly picked specially protected indigenous plant or is proved to have been in possession thereof, he shall, unless the contrary is proved, be deemed to have acquired such plant in contravention of this Act.

(6) Where any animal, fish or plant is found upon or in any vehicle, boat or aircraft or at any camping place, every person who is upon or in any way associated with such vehicle, boat or aircraft or who is at or in any way associated with such camping place, shall be presumed, unless the contrary is proved, to be in possession of such animal, fish or plant.

(7) Any person charged with doing any act which is an offence if done without authority in terms of this Act shall be presumed to have done such act without such authority unless it is proved that he had such authority when he performed the act in question.

(8) The burden of proving any fact which would be a defence to a charge of committing an offence in terms of this Act shall lie upon the person charged.

(9) Whenever in any prosecution in respect of an offence in terms of this Act-

(a) the question whether any flesh, whether fresh, dried, unprocessed or partly processed, is or was the flesh of any particular species of animal or fish, is relevant to the issue, such flesh shall be presumed to be or to have been the flesh of the species of animal or fish stated in the indictment or charge, unless the contrary is proved;

(b) the question whether any unprocessed or partly processed hide or skin which has been rendered unidentifiable is or was the hide or skin of any particular species of animal, is relevant to the issue, such hide or skin shall be presumed to be or to have been the hide or skin of the species of animal stated in the indictment or charge, unless the contrary is proved.

(10) Any live animal, fish or trophy found in any shop, store or other fixed place or business shall be deemed to have been acquired for the purpose of sale and the person in whose possession such animal, fish or trophy is found shall be presumed unlawfully to have dealt therein unless the contrary is proved.

(11) Whenever in any proceedings against any person upon a charge alleging that he committed upon any particular piece of land or within any particular area any offence in terms of this Act, it is proved that any act constituting or forming an element of such offence was committed in or near the locality wherein such piece of land or area, as the case may be, is situated, such act

## PART XV

### EVIDENCE, PREVENTION AND DETECTION OF OFFENCES AND ADDITIONAL PENALTIES AND FORFEITURES

#### 97 Evidence and presumptions

(1) The possession of any animal or fish or the meat or trophy of a freshly killed animal shall be *prima facie* evidence against a person accused of contravening any provision of this Act that he has hunted such animal or caught such fish.

(2) The possession by any person of any ivory or rhinoceros horn shall, unless the contrary is proved, be evidence against such person that such ivory or rhinoceros horn was not registered under any regulation made in terms of paragraph (t) of subsection (2) of section one hundred and twenty-nine.

(3) If any person who has authority to hunt or fish in terms of this Act is found in possession of animals or fish in excess of the numbers so authorized or of any species or sex not so authorized, he shall be presumed, unless the contrary is proved, to have hunted such animals or caught such fish in contravention of this Act.

(4) If, within a botanical reserve or botanical garden, a person is found in possession of any plant or part of a plant it shall be presumed, unless the contrary is proved, that he picked such plant or part thereof in such reserve or garden.

shall be presumed, unless the contrary is proved, to have been committed upon such piece of land or area.

(12) Whenever the hunting of one or other sex or of any particular class of any species of animal is unlawful and the hunting of the other sex or of any other class of such animal is lawful, any carcass of such animal from which the distinguishing features of sex or of such particular class have been removed shall be presumed, unless the contrary is proved, to be the carcass of an animal of the sex or of a class which it is unlawful to hunt.

(13) Whenever in any prosecution in respect of an offence in terms of this Act it is alleged in any indictment or charge that the offence was committed in connection with or in respect of any species of animal, fish or plant stated in such indictment or charge, it shall be presumed that the offence was committed in connection with or in respect of such species of animal, fish or plant unless the contrary is proved.

(14) Whenever in any prosecution in respect of an offence in terms of this Act it is alleged in any indictment or charge that the offence was committed in, at or upon any place or area stated in the indictment or charge, it shall be presumed that the offence was committed in, at or upon such place or area unless the contrary is proved.

(15) Whenever in any prosecution in respect of an offence in terms of this Act it is alleged in any indictment or charge that the person charged has failed to report any matter or to deliver any article or thing at the nearest office of the Department, police station, or museum or at the office of the local authority for any land, it shall be presumed, unless the contrary is proved, that such person has so failed to report such matter or to deliver such article or thing, as the case may be.

(16) If any person is seen or found:

- (a) on any land, on which there are animals, in possession of any weapon capable of killing any animal by the discharge of any missile or with a free ranging dog; or
- (b) within one hundred metres of any waters in possession of any gear, device or appliance capable of being used for fishing;

he shall be deemed to have entered upon such land for the purpose of hunting or fishing, as the case may be, without authority in terms of this Act unless it is proved that he:

- (i) had such authority to enter upon such land for the purpose of hunting or fishing; or
- (ii) was not upon such land for that purpose.

(17) In any prosecution in respect of an offence in terms of this Act, any prescribed record, book or document kept by any person authorized by this Act in the course of his duty shall be prima facie evidence of the facts recorded therein upon its production by the person in whose custody it is.

(18) If the driver of any vehicle fails to stop when required to do so by any person authorized by this Act, it shall be presumed, unless the contrary is proved, that the person in whose name such vehicle is registered was the driver thereof at the time.

#### **98 Powers of police officers, officers, inspectors and employees**

(1) A police officer, officer or inspector or an employee authorized thereto by the Minister may:

- (a) at all reasonable times enter upon and search any land, premises or place on or in which there is or is on reasonable grounds suspected to be any animal, fish, plant, meat, trophy, weapon, fishing net, article or thing which may afford evidence of the commission of an offence in terms of this Act;
- (b) require any person found to be in possession of or using any animal, fish, plant, meat, trophy, weapon or fishing net to produce to him any authority required in terms of this Act in respect of the possession or use of such animal, fish, plant, meat, trophy, weapon or fishing net;
- (c) subject to subsection (2), seize any animal, fish, plant, meat, trophy, weapon, fishing net or other thing of any nature whatsoever which appears on reasonable grounds to afford evidence of the commission of an offence in terms of this Act:

Provided that the police officer, officer, inspector or authorized employee shall issue a receipt for any thing seized in terms of this paragraph to the person from whom such thing was seized;

- (d) undertake any other inspection which he may deem necessary to determine whether this Act are being complied with;
- (e) subject to subsection (2), arrest and detain any person who is suspected on reasonable grounds of having committed any offence in terms of this Act unless he is satisfied that such person will appear and answer any charge which may be preferred against him.

(2) Every person who is detained and every thing which is seized in terms of subsection (1) shall, subject to section one hundred and twenty-five, be taken as soon as

possible before a court of competent jurisdiction to be dealt with according to law.

(3) Every police officer, officer, inspector or authorized employee shall exercise his powers in terms of this section in such manner as is likely to cause as little interference with the rights of the public and to cause as little inconvenience to the public as is reasonably possible in the circumstances.

(4) Any search undertaken in terms of this section shall be conducted with strict regard to decency and order.

#### **99 Powers of search of appropriate authority for alienated land**

(1) The appropriate authority for alienated land or any person authorized thereto by it may, without warrant, search any premises, hut, tent, camping place, vehicle, boat, aircraft or receptacle whatsoever on such land if such appropriate authority or authorized person has reasonable grounds to suspect that there is contained therein any animal, fish, plant, meat, trophy or article or thing which may afford evidence of the commission of an offence in terms of this Act and may seize any such animal, fish, plant, meat, trophy, article or thing found by him.

(2) Any person who hinders, obstructs or resists any person in the exercise of his powers in terms of subsection (1) shall be guilty of an offence.

(3) For the purposes of this section-

land" includes any road, other than a prescribed road, crossing the land of the appropriate authority.

#### **100 Special jurisdiction of magistrates courts**

Notwithstanding anything to the contrary contained in any law relating to magistrates courts, a magistrates court shall have special jurisdiction to impose, in respect of an offence in terms of this Act, the maximum penalty which may be imposed for that offence in terms of this Act or any other law.

#### **101 Powers to stop persons and vehicles**

(1) An officer, inspector or employee may-

(a) stop any person whom he sees doing or believes on reasonable grounds to have done any act for which authority in terms of this Act is required and require such person to produce evidence of such authority;

(b) stop any boat or except on a prescribed road, any vehicle for the purpose of searching such boat or vehicle;

(c) require any person in a boat or vehicle stopped in terms of paragraph (b) to furnish his full name and address.

(2) An appropriate authority may, in respect of its land or waters, as the case may be, exercise the powers conferred upon an officer in terms of subsection (1).

(3) An officer or inspector may direct any person found entering, travelling through or present in a national park, botanical reserve, botanical garden, sanctuary, safari area or recreational park, or using any facility therein, in contravention of this Act not to enter, to depart from or to cease using the facility in such national park, botanical reserve, botanical garden, sanctuary, safari area or recreational park, as the case may be, and may eject any such person therefrom if he fails to comply with such direction.

(4) Any person who fails to comply with any request or direction made or given in terms of subsection (1), (2) or (3) or who obstructs any officer, inspector, employee or appropriate authority in the exercise of the powers conferred upon him or it in terms of subsection (1), (2) or (3) or knowingly gives false information to an officer, inspector, employee or appropriate authority who is exercising those powers shall be guilty of an offence.

#### **102 Erection of barriers on roads**

(1) For the effective carrying out of this Act and notwithstanding any other law, an officer or inspector may, subject to subsection (2), erect a temporary barrier across any road other than a prescribed road.

(2) Where a barrier is erected in terms of subsection (1), the officer or inspector concerned shall erect or cause to be erected signs or notices in the prescribed form and manner and shall take all such other steps as may be reasonably necessary to protect the users of the road from injury to themselves or their property.

(3) For the purposes of this section, any officer, inspector or employee may:

(a) signal any person or vehicle to stop;

(b) give any other direction that he considers necessary to any person or vehicle.

(4) Any person who fails to comply with any signal or direction given by an officer, inspector or employee in terms of subsection (3) shall be guilty of an offence.

#### **103 Payment of fine without appearing in court**

(1) Where, in respect of an offence in terms of this Act:

- (a) any person has been:
- (i) warned by an officer or inspector to appear in a magistrates court; or
  - (ii) arrested by an officer or inspector; or
  - (iii) informed by an officer or inspector that it is intended to institute criminal proceedings against him for such offence;

and

- (b) an officer or inspector has reasonable grounds for believing that the magistrates court which will try the person referred to in paragraph (a) for such offence will, on convicting that person of such offence, not impose a sentence of imprisonment or a fine exceeding five hundred dollars;

the person referred to in paragraph (a) may sign and deliver to the officer or inspector referred to in paragraph (b) a document admitting that he is guilty of the said offence and deposit with such officer or inspector such sum of money as the latter may fix, not exceeding five hundred dollars, and such person shall thereupon, subject to subsection (5), not be required to appear in court to answer the charge of having committed the said offence.

(2) The document referred to in subsection (1), when signed and delivered in terms of subsection (1), shall forthwith be transmitted to the clerk of the magistrates court before which such person would otherwise have appeared and shall be entered by him in the records of the court.

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