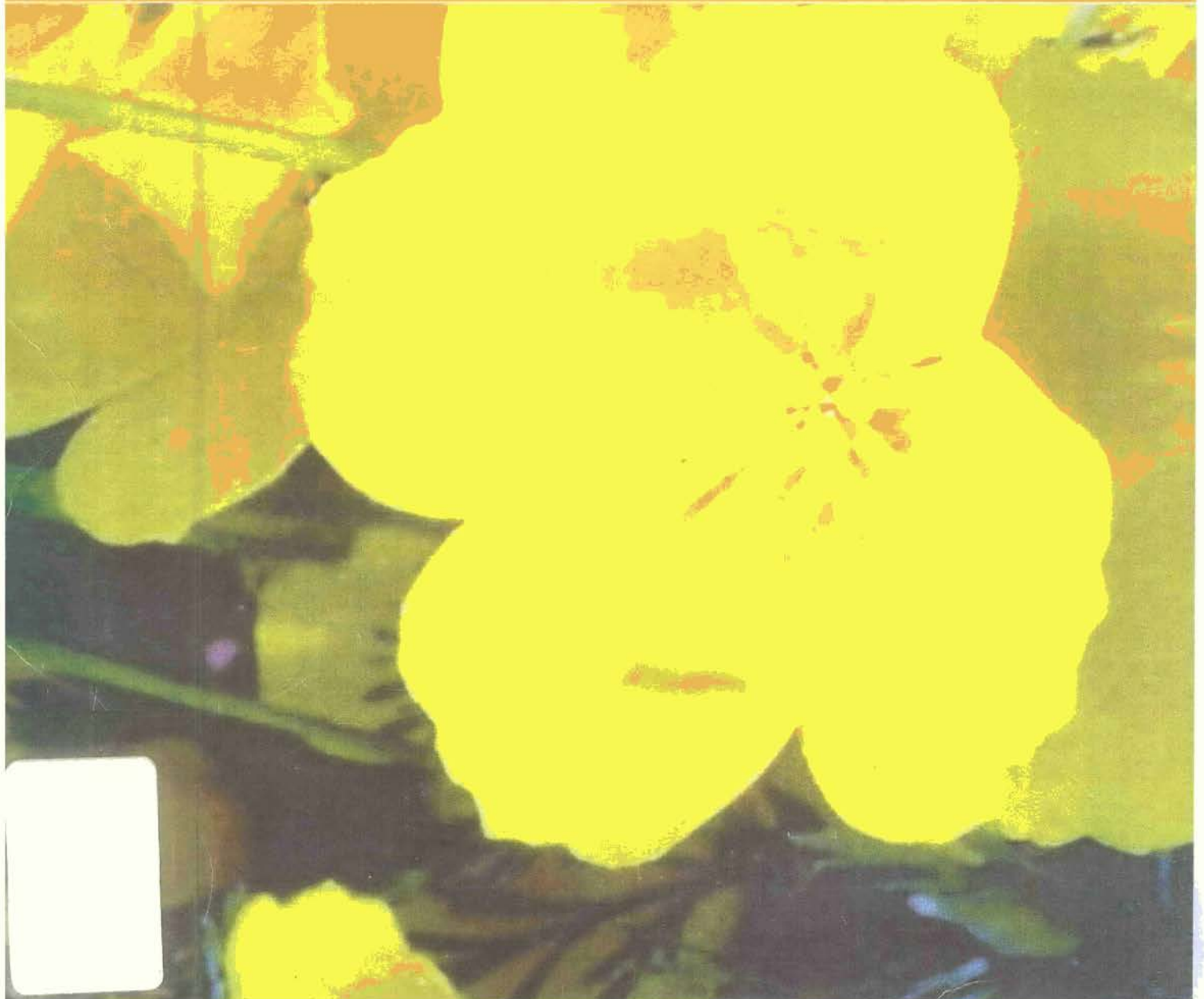




UNEP/UNDP/DUTCH Joint Project on
Environmental Law and Institutions in Africa

STUDIES IN ENVIRONMENTAL POLICY AND LAW IN MALAWI

JUNE 2001



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IN AFRICA**

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TABLE OF CONTENTS

Introduction	iii
Part I: Report on the Land Use and Management Study	1
Part II: Review of the Draft Fisheries Conservation and Management Bill, 1997	23
Part III: Sanitation and Waste in Malawi: Institutional Review	51
Part IV: Draft Regulations on Sanitation and Waste	85
Part V: Draft Toxic Substances and Chemicals Policy	127
Part VI: Toxic Substances and Chemicals: Legal Component Report and Proposed Draft Regulations	139

INTRODUCTION

The activities in Malawi under the Project on Environmental Law and Institutions in Africa, were country-specific. Priority issues, identified by the National Task Force, were reviewed and, where possible, draft laws were proposed for processing according to the national legislative procedures. Even where laws were not eventually developed and/or enacted, the reviews remain useful materials for eventual work in the country or for comparative studies in development of environmental law. The important point is that the materials reflect the way Malawians viewed issues in environmental law in the country and the solutions which they proposed. This volume presents such reviews for land use and management; fisheries conservation and management; management of wastes; and management of toxic substances and chemicals.

Part I is devoted to land use and management. The study was intended as a prelude to development of a framework legal instrument on land use and management. However, that ultimate objective was suspended pending completion of the work of a Presidential Commission on Land Policy which had been initiated with the assistance of the Food and Agriculture Organization of the United Nations (FAO). The study in this volume provides a fairly comprehensive picture of the problems related to land use in Malawi. It describes the laws and practices pertaining to land tenure, public and private land, freehold and leasehold and customary land. The study addresses the traditional modes of use, conservation and management in relation to land and its resources and considers the special circumstances of sensitive ecological areas such as water catchment areas, wetlands and mountainous and hilly areas.

Part II presents a Review of the Draft Fisheries Conservation and Management Bill, 1997, and proposes changes to it. The study identifies and outlines the defects in the Bill as it was and presents a draft which addresses the shortcomings. The new draft bill became the basis of Fisheries Conservation and Management Act (Act No. 25 of 1997), which received Presidential Assent on 13th November 1997.

Part III is a study of Malawi's institutions responsible for sanitation and waste disposal. It discusses the pertinent concepts which are, thereafter, related to actual operational scene in Malawi's main cities. The role of donor institutions and non-governmental organizations in sanitation and waste management in Malawi are also outlined.

The corresponding Draft Regulations on Sanitation and Waste follow in Part IV. It provides a synoptic review of pertinent

existing statutes, in order to show inter-relationships before offering the proposed text. One of the statutes reviewed is the Local Government Act of 1988 which had extensive provisions on sanitation and waste management within local authorities. Coincidentally, the Government adopted a major policy shift with decentralization of governance which was expressed in the new Local Government Act (Act No. 42 of 1998) which came into effect on 30 December 1998. Therefore, the draft Regulations were never promulgated. A fresh study will need to be undertaken to produce draft regulations in line with the decentralized governance. The study will, nevertheless, form the basis of the new initiatives.

Part V presents an analysis of the policy regime for toxic and chemical substances in Malawi. The final part proposes the Draft Regulations for dealing with them. The latter has not been promulgated into law.

This volume comprises one of the efforts to operationalize the concept of capacity building. Malawian nationals prepared the reports, and where there is necessity for follow up work, they can be called upon to follow up and complete the process. Where laws have been enacted, nationals of Malawi know the background and why the provisions were made. At the same time the volume may be useful to students of environmental policy and law as well as other countries which may consider comparable topics for themselves.

The Malawi nationals who have contributed to this volume are G.Z. Banda, K. Nyirenda, S.A. Mapila, G.C. Jabu, J. Banda, A.M. Banda and G.I.C. Hiwa. Their contributions are gratefully acknowledged.

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**PART I:
REPORT OF THE LAND USE AND
MANAGEMENT STUDY**

TABLE OF CONTENTS

- 1. Executive Summary**
 - 1.1 Introduction
 - 1.2 Background
- 2. Land Tenure**
 - 2.1 Public Land
 - 2.2 Private Land
 - 2.2.1 Freehold Land
 - 2.2.2 Leasehold Land
 - 2.2.3 Other Freeholds and Leaseholds
 - 2.3 Customary Land
- 3. The Use and Management of Customary Land**
 - 3.1 Customary Tenure and Rights of User
 - 3.2 Customary Inheritance
 - 3.2.1 Matrilineal Inheritance
 - 3.3 Authority of Traditional Leaders
 - 3.4 Customary Land and Conservation
 - 3.4.1 Involvement of Traditional Leaders
 - 3.4.2 Incentives for Compliance
 - 3.4.3 Reaching the farmer
 - 3.5 Observations
- 4. The Use of Management of Leasehold Land**
 - 4.1 Government Lease Covenants
 - 4.2 Enforcement of Covenants
 - 4.3 Institutional Co-ordination
 - 4.4 A Co-ordinating Stature
 - 4.5 Lease Covenants and other land Use Practices
 - 4.6 Customary Land Leases
- 5. The Use of Management of Freehold Land**
 - 5.1 The Minister's Power over Freeholds
 - 5.2 The Town and Country Planning act, 1988
 - 5.3 Extension Services on Freehold
 - 5.4 Local Authorities and Control of Freeholds
 - 5.5 Observations
- 6. The Use of Management of Public Land**
 - 6.1 Government Facilities on Customary Land
 - 6.2 Regulating Public Land
- 7. The Use and Management of Fragile Lands**
 - 7.1 Definition of Fragile Lands
 - 7.2 Catchment Areas
 - 7.3 Mountainous and Hilly Areas
 - 7.4 Wetlands
 - 7.5 Other Land use Practise
- 8. Institutional Framework**
 - 8.1 Central Government
 - 8.2 Local Government
 - 8.3 Community Participation
 - 8.4 Efficacy of Community Institutions
- 9. General Observations**
 - 9.1 Customary Land
 - 9.2 Freehold Land
 - 9.3 Leasehold Land
 - 9.4 Public Land
 - 9.5 Fragile Lands
 - 9.6 Institutional Framework
 - 9.7 An act or Regulations?
- 10. General Recommendations**
- 11. References**
 - Terms of Reference
 - Questionnaire

EXECUTIVE SUMMARY

In 1997 a review of environmental legislation in Malawi was carried out with the aim of determining the scope and need for sectoral reviews (Banda, 1997). This review revealed, amongst other findings, that there were identifiable gaps and weaknesses in much of the legislation pertaining to the environment, especially with regard to institutional and enforcement mechanisms, and the most glaring gap is in relation to land use and management. The Land Act, 1965 which regulates land in general and touches on land use and management in particular does not have any regulatory framework for customary land which is the largest single category of land in Malawi. This is land principally under agricultural cultivation, supporting not less than 85% of the population, which is mostly poor and illiterate. Private land under leasehold is subject to a regulatory framework under the Land Act Regulations. Although this regulatory framework is not wholly effective, it would seem that private land receives adequate attention and care, as the owners have the resources, facilities and incentives to practice good land husbandry.

This study was initiated to examine land use and management problems in Malawi with special emphasis on customary land, with a view to determining what, if any, amendments to existing legislation or new legislation should be put in place to arrest current problems facing land use and management. Interviews were conducted to solicit views from smallholder farmers on customary land, agricultural officers and traditional leaders. The aim was to identify perceived problems and what solutions may be offered from the various interested groups.

It was discovered that there exists no mechanism for compelling farmers who do not comply with good land husbandry practices. The department of agriculture is merely responsible for voluntary extension services which farmers may ignore. While efforts by the department through on-site demonstrations and provision of incentives do yield results in certain areas the overwhelming conclusion is that current levels of soil degradation, siltation of wetlands and deforestation cannot be arrested without a workable regulatory mechanism.

This study recognizes that regulation of land use and management is inadequate in many sectors other than agriculture. For example, the provisions relating to the building and infrastructure sectors, mining and brick making, waste management and sanitation in rural and urban areas under the Local Government (Urban Areas) Act 1966, the Local Government (District Councils) act, 1954, the Town and Country Planning Act, 1988 and the Public Health Act,

1948 and the mines and Minerals Act, 1981 have problems of enforcement. However, such problems have little or nothing to do with absence of regulations; rather it is the lack of enforcement of existing legislation. It is only in very few cases that there are no regulations. The same cannot be said of agricultural land use and management. There are no regulations in this particular sector. Yet this is the single most important use of land as it is not only the backbone of the economy but it is the only source of food.

The study also observed that while the Land Act, 1965 has a provision which may be used by the Minister responsible for Land matters to promulgate appropriate regulations in agricultural land use and in the management sector, the said Act is inappropriate for the agriculture sector. It is provided that the minister of lands may delegate his powers under the Act to any person including the departmental officers. However, we observe that it would be less appropriate in the circumstance, considering the scope of the regulations that may have to be promulgated, and the problem associated with one Ministry having to report to another Ministry.

Thus we have recommended that a new Agricultural Land Use and Management Act be passed to cover the glaring gaps in agricultural land use and management. This Act will be the responsibility of the department of agriculture with some powers of monitoring and policing being given to local communities through the traditional leaders, in consultation with village natural resource committees or village development committees. The Minister will, however, retain strong enforcement powers through issuance of control measures and the conduct of prosecution of offenders. We recommend that the current extension programmes be strengthened to ensure that they reach most of the users of agricultural land, so that prosecution of offenders should only be resorted to in cases of deliberate default. Control of extension workers at the local level may enhance vigilance, but the growth of local enforcement mechanisms requires careful nurturing and support.

A draft copy of the proposed Agricultural Land Use and management Act has been prepared. Powers have been given to the Minister to make regulations specific to problems coming to his attention and to enable him take into account technological, topographical and other variations in the land in question. There are also powers given to traditional authorities in consultation with the village natural resources committee to take up policing, monitoring and enforcement responsibilities in agricultural land use and management.

1. BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Following the adoption of the National Environmental Action Plan (NEAP) 1994 a number of studies initiatives and activities have been undertaken to implement several recommendations which the NEAP made. The NEAP specifically outlined, amongst several environmental problems Malawi is facing, rapid soil erosion, rapid deforestation resulting in massive problems of siltation in rivers and other water courses and declining soil fertility. As a predominantly agricultural economy Malawi stands to lose a lot if there is no check on current levels of soil degradation. A number of studies and activities have thus been undertaken which aim at identifying the most important causes of soil degradation and the methods that can effectively arrest those causes, as well as the institutional framework that can support, monitor and enforce the various mechanisms that may be put in place to curb the problem. The following are some of the activities and studies that have been carried out;

- (a) The Estate Land Utilization Study;
- (b) The Customary Land Utilization Study;
- (c) The Presidential Commission on Land Policy Reform.

Legislative measures have also been taken in response to the recommendations of the NEAP, 1994. Prominent among these are the Environment Management Act, 1992, the Water Resources Act, 1995, and the Forestry Act, 1996. The Environment Management Act, 1996, in particular, empowers the Minister responsible for environment to take appropriate measures for the promotion of land use methods, which are compatible with the conservation of biological diversity. These provisions together with others, which are found in the other statutes, seek to protect land from mismanagement and abuse.

Further, in 1997 a study was undertaken to review all legislation touching on environment. A report of the study entitled *Reform and Environmental Legislation in Malawi: Determining the Scope and Need for Sectoral Reviews* recommended, among other things, the need to regulate the use and management of land. In particular, that report singled out customary land as being unregulated and hence requiring urgent attention. Amongst some alternative strategies the report suggested that there might be need to enact an entirely new Land Use and Management Act to deal with the problem of regulating issues of land use and management. It was noted that apart from gaps in the sectoral statutes such as the Land Act, 1965, the Town and Country Planning Act, 1988, among others, there is little or no sectoral coordination among the several agencies that are responsible for issues of land use and management. This, it was felt, hampers any efforts and

strategies in land use and management from bearing tangible results.

The report on Reform of Environmental Legislation aforesaid was, however, merely a bird's-eye-view of environmental statutes and policies. It did not review in detail the problems that are encountered in land use and management, and did not offer concrete solutions in the way of legislative enactment and/or policy changes in this particular sector. The present study is meant as a follow-up to that report. In particular it seeks to review in details the main legislation touching on land use and management, and to determine what, if any, amendments to existing legislation and/or new legislation should be drafted to strengthen land use and management programmes. In particular it seeks to review what, if any, customary practices of land conservation still obtain in Malawi and how those practices, methods, techniques can be modified, changed or strengthened in order to promote the enforcement of sound practices of land use and management.

1.2 STUDY DESIGN

The study is a three man-month study. The first part of the study was intended to be used for literature review. In this respect a number of reports and policy documents were made available to the consultant. These were:

- (a) Report of the Socio-Economic Study on land Tenure;
- (b) Report of the Land Use survey of Tobacco Estates in Malawi;
- (c) Report on Reform of Environmental Legislation in Malawi: Determining the Scope and Need for Sectoral Reviews.

A preliminary report of the Presidential Commission on Land Policy was not readily available at this point. It was, therefore, agreed with the sponsoring agencies to proceed to the next phase of the study without this particular report. This report only became available very late into the third phase when the writing of the report should have been done.

The second phase involved a survey of some districts in Malawi. This survey was intended to elicit information from farmers, traditional leaders and agricultural officers on how land is utilized and managed in their areas. It was also the aim of the survey to find out any customary practices or norms of land use and management that have been or are in use in their areas, and the extent to which they are being applied. Since there was not much time and resources available it was decided that a small sample be taken from two districts in the Northern Region, three districts in the Central Region and three districts in the Southern Region. The districts

eventually chosen were Mzimba, Nkhata Bay, Lilongwe, Mchinji, Mulanje, Thyolo, Chiradzulu and Mwanza. A short questionnaire to guide the interviews was prepared and questions for each group of interviewees namely, farmers, traditional leaders and agricultural officers were specially designed to ensure the various interests in the land use and management sector were captured.

The third phase of the study is the drafting of the report and/or new legislation to incorporate the findings of the study. The procedure is that the report and/or draft legislation will be discussed with sponsoring agencies, with a view to eliciting their views before a final draft is prepared for presentation to relevant bodies involved in the study.

2. LAND TENURE

The word "tenure" comes from the Latin *tenere*, meaning "to hold". Thus land tenure describes the manner in which land is held. In Malawi three regime of tenure can be identified. These are customary tenure, freehold tenure and leasehold tenure. However, before a description of these types-of tenure can be made it is necessary to distinguish tenure from what may be called categories of land in Malawi. Land in Malawi is classified into three categories, namely public land, private land and customary land. Thus while tenure answers the question as to how land is held, the three categories of land indicate the level and type of control which various groups and interests especially the State, have over a particular category of land. The distinction is, however, not so clear since both tenure and land classification describe the kind of interests that exist in a particular piece of land.

The Land Act, 1965 divides land into three broad categories as follows:

2.1 PUBLIC LAND

This is defined as land which is occupied used or acquired, by the Government but does not include private land or customary land. Thus in essence public land is land owned or held by Government in the public interest and, according to section 8 of the act, all public land is vested in perpetuity in the President. This vesting is observably for purposes of titling only. The President holds no disposable title in his personal capacity. The President is a bare trustee for the Government.

Section 8 of the Land Act must now be read subject to the provisions of section 207 of the Constitution, 1995 which declares that "subject to the provisions of this Constitution all lands and territories of Malawi are vested in the Republic". It follows that all land, including public land, is vested in the

Republic. The definition of republic as given in section 2 of the General Interpretation Act, 1966 means the Republic of Malawi and, in the same section, the Republic of Malawi means the territories comprising the Republic. In terms of public international law this means the State. Thus according to the Constitution the lands and territories of Malawi are vested in the State. They are neither vested in the Government nor the President.

It may be wondered as to how land can be vested, in strict legal terms, in a non-entity such as the State which has no legal capacity in municipal law. Be that as it may, it is clear that land, including public land is not vested in the President under the Constitution. Is section 8 of the Land Act, 1965, therefore, an exception, or has it been superseded by the constitutional provision?

Our view is that section 8 of the Land Act, 1965 has been superseded by section 207 of the Constitution 1995. As will be pointed out below, if it found necessary to vest public land in the President then a provision similar to that of section 25 of the Land Act, 1965 would better serve the purpose, as the vesting is thereunder clearly declared to be for the purposes of that Act only but that the land belongs to the people of Malawi and the President is a mere trustee. We would, therefore, recommend that section 8 of the Land Act 1965 be amended to reflect these observations.

Public land is not Government land. According to section 2 "Government land" means all public land other than public roads. Public roads are defined by section 3 as read with section 4 of the Public Roads Act, 1962 as "main roads, being the inter-territorial roads in respect of which the Government is responsible for expenses of planning, designing, construction care and maintenance". These roads are part of public land but are not Government land. Entry into Government land is expressly prohibited under section 9 of the Land Act, 1965 and unauthorized use and occupation thereof is an offence under section 10 of the said Act. These prohibitions obviously do not apply in relation to public roads whose user by the public can only be restricted where it is necessary for purposes of maintenance and control of traffic or other public emergencies.

Finally it can be said that public land includes all land occupied, used or acquired by Government, such as Government offices, schools, hospitals, public roads, wildlife reserves. All these are also Government land except public roads. It can also be said that all public land is vested in the Republic. For this reason it is the property of the people of Malawi, save that the Government has power to control the user and management thereof including imposing restrictions on its acquisition, user, disposal and occupation.

2.2 PRIVATE LAND

This is defined by section 2 of the Land Act, 1965 as 'land which is owned, held or occupied under a freehold title, or a leasehold title, or a Certificate of Claim, or which is registered as private land under the Registered Land Act, 1967'. This definition is based on the tenurial arrangements under which a particular piece of land is held. Thus recourse to the received law of England, which brought it into Malawi concepts of freehold and leasehold land, is necessary.

2.2.1 Freehold Land

In this respect we can only adopt the observations of the preliminary report of the Presidential Commission of Inquiring on Land Policy Reform (the Commission report) that 'The freehold is an estate obtained by grant from the sovereign who in turn retains radical (or original) title to such land'. It is, just like a leasehold estate, an estate subject to a superior title, the only difference being that, unlike a leasehold estate in which the superior landlord retains some title, 'freehold estates are granted free of any condition repugnant to title' (the Commission report: 51). The Commission report observes that in the public hearings it heard evidence suggesting that freeholders in Thyolo, Mulanje and Chiradzulu interpret freehold grants as having unlimited rights of user, including abuse, of such land.

Again we can only agree with the Commission that the Constitution, 1995 vests all land, including freehold land, in the state, which, therefore, has superior title or eminent domain. In that regard it still retains the right to enact legislation to ensure the proper use and management of freehold land. Further, under the concept of eminent domain the state retains overall control power over all land and, therefore, has capacity to superintend managerial powers especially in matters of public interest. Thus, in case of environmental conservation the state must exercise authority as sovereign responsible for the public interest. Thus, just like in English jurisprudence from which our law draws inspiration 'there is no allodial land' All land belongs to the state.

2.2.2 Leasehold Land

Leasehold land is not property defined by the Land act, 1965. section 2 of the act, however, states that a lease includes 'an agreement for a lease and any reference to a lease shall be construed as a reference to a lease granted under this act or the existing laws'. A leasehold title is a contractual grant for a specified or definable period subject to express or implied conditions or covenants stipulated in the lease. These leases can be created out of public land or private land and,

it seems out of customary Land. As contractual grants the use and management practices in this categories of Land are subject to agreement by the parties. Observably, the Landlord will invariably have a stronger bargaining position than the tenant and it is therefore relatively easier for the landlord to impose conditions which can ensure that the Land in question is properly used managed and conserved in a manner that preserves the reversionary interest that the landlord retains.

2.2.3 Other Freeholds and Leaseholds

Titles acquired under a certificate of claim are freehold titles. Those registered under the Registered Land act may either be leaseholds or freeholds. The Ndunda system which is a combined creature of the Customary Land (Development) Act, 1967 and the Registered Land Act, 1967 and is confined to the Lilongwe West Land Development Project introduced a form of freehold title through conversion of customary land. The observations made above in relation to freehold and leasehold tenure should equally apply to these tenurial arrangements.

2.3 CUSTOMARY LAND

This is defined by section 2 of the Land Act as 'all land which is held occupied or used under customary law but does not include public land'. Section 25 of the act vests customary land in perpetuity in the President. The provision, however, expressly declares customary land to be the lawful and undoubted property of the people of Malawi. Thus the vesting of customary land in the President is *virtute officii*. The President, is therefore a mere trustee of customary and for the people of Malawi.

It is interesting to note that unlike the definition of public land which simply vests, public land in perpetuity in the President, section 25 clearly creates a trust relationship between the President and the People of Malawi. One inference that can be drawn from this is that public land is not property of the people of Malawi. This conclusion cannot be right because all property held, used or acquired by Government belongs to the people of Malawi. Section 12 of the constitution, 1995 clearly stipulates that all persons exercising legal and political authority of the state do so on trust and to protect and serve the interests of the people of Malawi. Secondly, section 207 clearly vests all land in the Republic (the State) of Malawi and, therefore, the people of Malawi. Thus public land is property of the people of Malawi. Does this then mean that the people of Malawi can take, use and abuse state property, including customary land, without regard to governmental authority? The answer is clearly in the negative since as beneficiaries, the people of Malawi can only acquire and use state property subject to the terms of

the trust and unless and until that trust is terminated or varied the people must act in accordance with the directions of the trust. Thus so long as the Constitution, 1995 together with the Acts of Parliament and all other laws which draw their validity from it remain in force, the people of Malawi must comply with them.

Indeed section 2 of the Land Act, 1965 defines customary land as land which is held, occupied or used under customary law. And customary law is defined again under section 2 of the said Act as the customary law applicable in the area concerned. Thus customary land must be used subject to the customary law of the area in which the land is situated. Does this mean then that customary land is beyond the control of the state in its legislative functions? Section 26 of the Land Act, 1965 states that:

The Minister shall subject to this Act, and to any law for the time being in force, administer and control all customary land and all minerals in, under or upon any customary land, for the use or common benefit, direct or indirect, of the inhabitants of Malawi: Provided that a Chief may, subject to the general or special directions of the Minister, authorise the use and occupation of any customary land within his area, in accordance with customary law.

It would seem from this provision that the State retains powers of administration and control over customary land. The Chief merely has powers to authorize 'use and occupation of customary land within his area, in accordance with customary law'. It is also clear that in terms of section 26 of the Land Act, the operation of customary law is only in relation to powers of allocation of customary land. The Minister may assumably use his legislative powers under section 31 of the Land Act, 1965 to regulate the use and management of customary land.

It is precisely because of this conclusion, we believe, that almost all chiefs and village headmen who were interviewed in all the three regions of the country said that all they have are powers of allocation of virgin customary land (if any) and where there is no virgin land, their only powers lie in dispute resolution regarding rights of occupation to allocated customary land. It was also consistently submitted that the only point at which traditional authorities could exercise authority over already allocated land is where the land is abandoned or the allocatee has been expelled from the village for misconduct, in which cases the land can be reallocated to another person. In any case, in terms of customary law, the power of traditional authorities goes so far as allocating portions to village lineages. It is up to the family heads to reallocate the land to individual family members. It can be

said, therefore, that the power of traditional authorities diminishes upon allocation of land to family heads until a dispute arises requiring attention of the traditional authority.

It is clear from the Land Act, 1965 that the intention of Parliament has been that the state should be in total control of both public land and customary land. There is probably little surprise that the state should be in control of public land, but it would appear that the state has gone so much further as to treat customary land as a mere species of public land (Msisha, 1998). This is very clear from the provisions of section 26 of the Land Act, 1965 which gives very wide power to the Minister to control the use and management of customary land. The Act merely pays lip service to community rights when it declares that customary land is land that is acquired or used in accordance with customary law applicable in the area. In fact the provision should have stated that customary land is land which is acquired or used in accordance with the directions orders of the Minister.

On the other hand although the Minister is given power under section 31 of the Land Act, 1965 to make regulations relating to the use and management customary land, nothing has been done in the way of promulgating regulation relating to use and management of customary land in general. In fact, it seems the only observable activity the Minister has been involved in is in relation to acquisition of customary land, converting it into leasehold land and hence effectively putting it away from communal hands (Msisha, 1998). From the 1970s through to the 1990s Malawi has witnessed a tremendous increase in lucrative burley tobacco estates land primarily because it was up to 1990 a condition precedent that one could not grow the lucrative burley tobacco unless they had a lease.

3. THE USE AND MANAGEMENT OF CUSTOMARY LAND

The amount of land held under customary tenure varies from 70% to 80% of the total land area of Malawi. It is, however, clear that land held under customary tenure occupies the single largest category. This is the tenure under which most smallholder farmers hold their land. They produce mainly subsistence crops such as maize, beans and groundnuts, although some do produce cash crops such as tobacco.

3.1 CUSTOMARY TENURE AND RIGHTS OF USER

The conventional view of tenure at customary law is that it consists of no more than usufruct rights granted to present occupiers to use and occupy during their lifetime. It is said that customary land has no inheritable right, it can neither

be sold, mortgaged, Leased nor dealt with in any other way beyond the usufruct right of the present occupiers; and that in the event of the demise of the current occupiers the property reverts to the community which through the traditional authorities has the right reallocate the land to other persons, although in the normal course of events the traditional authorities would just allow the dependants and/or next of kin of the deceased holder to continue using the land. The emphasis is, however, on the transient nature of the tenure. In fact, customary law seems to have held that if the present occupier committed an offence against the community, such as, the offence of witchcraft, the traditional authorities would expel him from the community and hence forfeit his usufruct rights over the piece of land.

If this indeed represented the unadulterated customary law then so much has change It is now widely recognized that customary land is inheritable in the sense at least that the dependants and next of kin of the deceased holder now automatically assume the usufruct rights the deceased had on the piece of land. This has been recognized by number of studies, namely, Nankumba and Machika (1988) and the Customary Law, Utilisation Study (1997). Further, in the interviews that were conducted in the present study it was consistently observed that most holders of customary land obtained their pieces of land from their parents whether living or deceased. In fact we did not encounter any case where the traditional authority had actually allocated a piece land to a present occupier. Of course this is a reflection of the fact that at customary law the chief allocates to family heads and not individual members of the family, but also shows quite clearly that the chiefs powers over the piece of land usually ends the initial allocation to family heads and lineages who thereafter reallocate among themselves. With the acute shortage of virgin land in most parts of the country it clear the chief's powers are decreasing rapidly. The communal ownership concept only subsists to the extent that ultimately the traditional authorities retain residuary powers to reallocate forfeited or abandoned land.

During the interviews it was also clearly observed that where a traditional authority allocates land, his responsibility ended at demarcating the extent of the piece allocated. No instructions are given on where and how to build the homestead or to cultivate crops and/or graze animals. It is left entirely to the discretion of the allocatee to decide depending on factors such as the terrain, the fertility of the land and whether or not it is damboland or otherwise. It seems that at customary law, it was possible to open up gardens and cultivate on the hills or within the riverbanks without any conservation measures. This *laissez faire* attitude seems to have stemmed from the days of abundance when land, water and fertile soils were in plentiful supply, and little

need was felt for evolving a jurisprudence that restricted and/or controlled user and management of land. And it was precisely because of this attitude that people strongly resisted colonial attempts to introduce conservation measures. It is from these days of plenty that the often deprecated "slash and burn" method of cultivation which is associated with millet cultivation started. No wonder this system is no longer common save in very few areas of the Northern region where there is still some virgin land to spare. When we asked questions in Mzimba regarding this system of cultivation we were told it is still practised in some areas, and it is felt that the millet from virgin lands brews better beer than that from already used land. Agricultural personnel in the district have mounted campaigns to eradicate this wasteful practice, but it seems it has deep cultural roots. They were quick to point out, however, that virgin land that is cleared for millet cultivation quickly regenerates and the practice is not, therefore, as harmful.

3.2 CUSTOMARY INHERITANCE

3.2.1 Matrilineal Inheritance

In the matrilineal societies of Central and Southern Region of Malawi husbands are theory expected to live at their wives' homestead and use land allocated to the wife by her lineage. Inheritance of land is through the female line. Upon the demise of the wife or divorce the husband has no right to the land he was given to use and occur during the subsistence of the marriage. The system has been criticised for demotivating men in developing the land, and, in view of the perceived impermanence marriages in the Southern Region, there is little incentive for investing in such an environment. It has been rightly pointed out that the argument against *Chikamwini* assumes that only men invest and that there is more loss when a man has to lose the land, as compared to where it is the woman losing the land (Kishindo, 1995). Current studies show that the productive capacity of women is acknowledged, and that where they have the necessary resources and facilities they can perform equally as men. In fact it seems there is more security on the part of the children if the mother has usufruct rights over a piece of land, as compared to the case with the father who can easily remarry, leaving the children of the previous marriage exposed to hardship. Further, it seems that customary law in the *Chikamwini* system does allow *Chitengwa*, whereby the husband is allowed to take his wife to his own homestead after a period of residence at the wife's village and where the wife's people are satisfied the their daughter will be properly taken care of. In fact, in our interviews in the Central Region and from observations, it would seem that the norm is now for the wife to go *Chitengwa* at the husband's place. Further as society is getting more and more monetised and

individualistic and away from the core values of the extended family there is a clear shift from emphasis on one's nephews and nieces as one's natural heirs in matrilineal societies, towards one's children as heirs. This change has not been brought about by any conscious effort in customary jurisprudence; rather it is an evolution dictated by factors beyond the confines of customary law. Of course, it is not being suggested that there is a wholesale change in every matrilineal community in the respect. Chieftaincy, for example, is still handed down through the female line in all matrilineal communities.

The other criticism leveled against customary inheritance of land is that it leads to wasteful subdivision of parcels of land in a manner that is not environmentally sustainable. As the family population increases and family members start their own families, they are allocated portions of the same family land which are intensively cultivated to the extent that it leaves little room for maintenance of soil fertility through fallowing. In the absence of proper conservation measures, soil erosion as well as deforestation are rampant as each new family opens new land for cultivation, including land on steep slopes and along streams and river banks.

3.2.2. Patrilineal Inheritance

In patrilineal communities of the Northern Region and Nsanje district in the Southern Region inheritance to land is through the male line. Upon *lobola* (bride price) having been paid the wife has to stay at the husband's homestead. The children born in the marriage belong to the husband. The wife uses her husband's land until divorce or the demise of the husband. In the former case the wife has to go back to her village and will use the family land, if available. In case of death of the husband, the widow may elect to stay at the husband's home or leave and stay and continue using the family land at her home village.

3.3 AUTHORITY OF TRADITIONAL LEADERS

Just as in matrilineal communities, land in patrilineal communities is allocated to family heads/lineages by the chiefs or village headmen who then distribute the land to the members of the lineages for their use and occupation. Interviews conducted in Mzimba and Nkhata Bay revealed that upon allocation of land to family heads the chiefs do not normally supervise the use and management of land. There were however, indications during interviews with Traditional Authority Kampingo Sibande of Mzimba district and sub Traditional Authority Fukamalaza of Nkhata Bay district that in the case of virgin and forest lands, as well as dambo lands, they retain powers to order their subject not to destroy trees or cultivate right up to the river banks. Whether this is a norm

of customary law is not easy to discern, Traditional Authority Kampingo Sibande is a retired agricultural officer and his answer could have been influenced by his technical knowledge. Regarding powers of, enforcement of such orders the answers provided by these traditional leaders were markedly different. On the one hand Traditional Authority Kampingo Sibande said that no subject of his would dare defy his instructions advice or order. The only problem that he has is that of monitoring compliance since his area of jurisdiction covers a vast area which he cannot properly supervise without transport facilities. Fukamalaza on the other hand said, that in cases of non-compliance, he tries to reason with the culprit and in "these days of democracy one hopes they will take heed and comply".

Fukamalaza's sentiments were also confirmed in most parts of Central and Southern Regions where traditional leaders such as Chief Kadewere in Chiradzulu, Mazengeru in Lilongwe and Mlonjeni in Mchinji pointed out that as chiefs they do not have powers to enforce any instructions, directions or orders they may issue to or against their subjects. Chief Kadewere specifically pointed out that politicians are the worst culprits in encouraging disobedience amongst his subjects. They deliberately tell people to continue to cut trees in hills and dambos just to be popular and win votes. He also specifically bemoaned the current legal system which allows his subjects to appeal against his decision in his own court (formerly traditional courts situated at chiefs' headquarters). He recalled that during the colonial period chiefs were responsible for enforcing natural resources legislation. The forest guards, for example, were responsible to the chiefs and the Chief heard cases of violation of natural resources legislation and fined or jailed the culprits, and monies realised from such fines were used within the communities for the protection and conservation of natural resources. That system, according to Chief Kadewere, ensured that the authority of traditional leaders was respected.

Our observation is that there is need to empower traditional leaders with legislative enactments which will give chiefs powers either of arrest or of a judicial nature to ensure effective policing of natural resources legislation. Traditional Authority Kampingo Sibande emphasised that Government should consider introducing local governance through traditional leaders in matters of natural resources. He went on to say that this must, however, be accompanied with appropriate facilities such as transport and training, to make traditional leaders aware of issues of environmental governance.

Thus in summary it can be concluded that there is growing outcry among traditional leaders about lack of powers of enforcement of laws governing natural resources. They point

out that government is merely paying lip service to a problem that is both urgent and potentially damaging to environmental governance. Subject to issues of administrative law regarding chiefs combining both executive and judicial functions, it seems reasonable to give traditional leaders powers to enforce natural resources legislation.

3.4 CUSTOMARY LAND AND CONSERVATION

Conservation measures on customary land are carried out with the advice instructions directions and guidance of the department of agriculture which has a long term programme aimed at providing extension services to smallholder farmers. The services, which are given free of charge, are aimed at controlling, reducing and/or preventing soil degradation; conservation of catchment areas; maintenance of soil fertility and generally, enhancement of the productive capacity of the land and cultivation. Some of the techniques used in this programme include agro-forestry, which involves the planting of vegetative plants aimed at not only checking soil erosion but also increasing the fertility of the land. The trees or grass planted provide canopy which reduces runoffs, while the leaves that shed off these trees provide manure. Our interviews noted that the districts of Mzimba and Nkhata Bay had a much higher uptake of these technologies than the other districts. We were informed by a number of respondent, in almost all the districts we visited, that they did not have access to agricultural extension services. While this problem was present in all the three region it seems the Central and Southern Regions are much more affected. Interviews with the extension personnel revealed that some of them lacked resources for training. They observed that the construction of conservation works is a labour-intensive exercise and most smallholder farmers lack the resources to carry out the tasks expected of them.

3.4.1. Involvement of Traditional Leaders

When asked about the involvement of traditional leaders in encouraging adoption extension services, most extension workers indicated that they have had most success where the traditional leaders have been involved. They, however, remarked that sort traditional leaders are yet to be motivated to actively assist extension staff encouraging farmers to adopt these techniques. They observed that the matter also depends on the level of respect that a particular traditional leader is given in the community. Thus, where people have little respect for the chief or village headman they are less likely to take heed of his appeals and/or orders regarding the uptake of new technologies. We learnt, for example, in Chiradzulu that some traditional leader were responsible for destruction of village forests, in that they participated in illegally selling trees for timber. Some of the traditional leaders are also involved

in bribery in relation to allocation of land. Their subjects are not likely to respect them when they learn of such misdeeds. It follows, therefore, that such chiefs cannot effectively assist in implementing good land husbandry practices and may even provide their subjects with the excuse for non-compliance.

3.4.2. Incentives for compliance

We also asked farmers, extension workers and traditional leaders if there are any, incentives which are given to farmers to induce them to adopt the conservation techniques which extension personnel teach them. We were informed that in general there are no such incentives. However, there are donor funded conservation programmes such as PROSCAP, in parts of almost every district in which incentive such as free radios, seeds and fertilisers may be given to farmers who have carried out conservation measures, It is clear, though, that this programme is not intended to reach and has not reached every farmer.

3.4.3. Reaching the Farmer

We also discovered a worrying trend in the provision of extension services: it appeared that extension staff concentrate their efforts either on farmers' clubs which receive credit facilities and are well organized, or on farmers who are successful and or are eager to adopt the technologies. There is generally little effort in following up on laggard and less successful farmers. Extension staff give two explanations for this conduct. Firstly, they argue that successful farmers are used as models for other farmers in the community. Secondly, it is easier to communicate messages through an organised group than through individual farmers. While these explanations appear persuasive, the problem is that those who are not successful and/or do not qualify for farmer's clubs feel alienated and cannot be persuaded by observing what the well-to-do are doing.

3.5 OBSERVATIONS

In general we observed the following in relation to use and management of customary land in general, and uptake of conservation measures by smallholder farmers o customary land in particular:

- There is no legislation to govern the allocation of customary land by tradition leaders. Customary law understandably did not deal with issues of whether land in hilly areas or dambos should be allocated and, if allocated, how it should be utilised and managed.
- There is no legislation to regulate the use and management of customary land. While customary law

may have prohibited the cutting of trees from graveyards for example, it had no restrictions on use of forest products and on land use and management in general.

- There are various conservation techniques which the department of Agriculture is teaching customary landholders to adopt. The policy of the ministry is to persuade farmers through teaching, demonstration and incentives to adopt these techniques rather than using coercive legislative measures.
- There is, however, no mechanism for dealing with farmers who fail, neglect and/or refuse to adopt the techniques. It is clear that if some farmers fail, refuse and/or neglect to adopt the technologies, they will frustrate the efforts of neighbouring farmers. There is need for legislation which will combine several enforcement techniques including extension, compulsion and incentive provisions.
- There is generally nothing in the nature of customary land tenure itself which hampers agricultural development. There are clearly demarcated boundaries such as footpaths, streams, hills, and any disputes that arise have little or nothing to do with customary land tenure as such.
- The involvement of traditional leaders in promoting land conservation is a necessity. There is room for providing chiefs with necessary power whether executive or judicial, with regard to natural resources conservation. In particular it appears there is ample reason for encouraging local governance, including local resource benefit-sharing, to induce communities through village natural resource committees, or village development committees to participate in natural resource use and management programmes.
- Although section 31 of the Land Act, 1965 gives power to the Minister to administer and control the use and management of land through promulgation of regulations, orders or directions, that power has not been properly used. In fact it seems that this power is misdirected, as one would have expected it to have been given to the Minister responsible for Agriculture rather than to the Minister responsible for land matters.

4. THE USE AND MANAGEMENT OF LEASEHOLD LAND

Leasehold land can be created out of public land, customary land or freehold land or out of another lease. The essence of a lease of land is that the grantor grants a term out of us

interest, and retains a reversionary interest such that at the expiration of the term granted, the remainder reverts to the lessor. The reversionary interest is what provides the lessor with powers of control on the lessee, to ensure that such interest will not have been abused or have depreciated in value when the term granted expires. Thus the lessor has power to insert clauses in the lease agreement relating to the use and management of his land, non-compliance with which may invite penalties including forfeiture of the lease.

4.1 GOVERNMENT LEASE COVENANTS

The authority to grant leases out of public or customary land is provided for under Section 5 of the Land Act, 1965; and under this the Minister is empowered to grant the lease subject to such conditions and terms as he may think fit. Further, under Section 13 of the Act, the Minister may prescribe covenants which shall be implied in every lease granted under section 5. The Minister has discretion to expressly exempt, modify or vary the operation of the covenants so prescribed. This provision is obviously intended to provide flexibility that is necessary in regulating user and management of pieces of land in different environmental settings. Land in fragile areas will obviously require different and perhaps more exacting covenants than that in arable areas, and there may be need for different regulations in relation to land whose use is unique, such as pasture land.

The Land Regulations made under the Land Act, 1965 contain a number of covenants which may be implied in a lease made between the Minister (the lessor) and the lessee. Some of the regulations made under Section 39 of the Act, which may be implied in every lease and which are relevant to land use and management are as follows:

- (e) *to erect the buildings in a substantial and workmanlike manner with the best materials of their several kinds with all necessary fences, boundary walls, sewers and drains*
- (g) *to keep and maintain all buildings and drains on the demised premises clean and in a good and substantial state of repair and condition and also to keep and maintain in good and substantial repair and condition all (if any) private roads, tracks or ways, bridges, ... and to clean out and keep open and free and in a good working order all (if any) ditches, gutters, drains, sewers, pipes, culverts, streams, springs and water courses for the time being on the demised premises, and not to divert any rivers, streams or water courses thereon or suffer the same to be diverted or to overflow so as to cause*

soil erosion to any land whatsoever, or injury or damage to adjoining or neighbouring occupiers of land.

- (b) *not to sell any indigenous timber or trees growing on the demised premises or cut the same for sale or for use otherwise than on the demised premises, except where otherwise approved by an authorised officer, and upon conditions under which any such approval may be given or for any purpose in any circumstances whatsoever to cut any timber or trees within eight yards of any river or stream without the written consent of an authorised officer, or without similar consent to cut any trees of the species known as "mbawa" (kbaya nyasica) and except as aforesaid to preserve all timber and trees from all injury and damage.'*

Regulations (e) and (g) substantially deal with the care and maintenance of building on the demised premises to ensure there is good drainage and sanitation. While these may apply to agricultural leases their main aim seems to be for building leases. They also deal with the prevention of soil erosion which may be caused as a result of diversion of streams and rivers on the demised premises, as well as the prevention of nuisance against occupiers of neighbouring land.

Regulation (g) on the other hand deals with forest matters. It prohibits cutting of trees for sale or for use other than on the demised premises, or the cutting of mbawa trees without the written consent of an authorised officer. It also prohibits cutting of trees within 8 yards of any stream or river without the written consent of an authorised officer. A 1988 amendment introduced a reforestation clause such that every lessee is obliged to commit 10% of his land to afforestation. These regulations do not deal with the question whether a lessee can cultivate his land on steep slopes and, if so, what measures should be taken to reduce soil erosion. Further, although the regulations prohibit the cutting of trees within 8 yards of a river or stream, it does not prohibit cultivation within 8 yards of rivers or streams. The regulations are also silent on conservation measures in general such as the construction of terracing, box ridges, contour ridges or the use of agro-forestry methods to enhance soil fertility and/or reduce soil erosion.

The Law (Development of Lake Shore Plots) (Control) Order, 1988 made under sections 26 and 31 of the Land Act, 1965 seeks to control tourist infrastructural development along the lake shore. It imposes conditions which a developer is obliged to comply with for any development along the scheduled lands. Only Mangochi lakeshore area is scheduled.

Again it can be noted that the control order does not deal with agricultural leases along the lakeshore.

In general, it would seem that the bulk of the regulations were meant for leases other than agricultural leases. It seems the main area of concentration was on residential leases. This is a major defect and needs to be rectified. A majority of agricultural leases are on land that requires conservation measures. It would appear the best solution would be to promulgate regulations dealing with agricultural leases separate from the other types of leases, and make them as comprehensive as possible.

The Registered Land Act, 1967 also contains provisions for covenants to be implied in every lease in Section 46. This Act was passed to simplify conveyancing, such that land which was transferable by deed is now transferable by an entrance of the interest in the land register. The only covenant that is relevant to land use and management is contained in section 46 (b). It requires the lessor:

not to use or permit to be used any adjoining or neighbouring land of which he is the proprietor or lessee in any way which would render the premises unfit or materially less fit for the purpose for which they were leased.

Thus, if a lessor retains land adjoining leased land he is prohibited from doing acts on his land that would materially reduce the value of leased land. This would presumably include acts that increase soil erosion on the leased land. It is not clear why no such covenant is implied against the lessee under the section 47 of the Registered Land Act, 1967 which stipulates the obligations of the lessee as is the case under the Land Act Regulations. The lease will, however, be subject to any covenants the Minister may have prescribed prior to the execution of the lease.

4.2 ENFORCEMENT OF COVENANTS

While the covenants do not exhaust all necessary concerns relating to land use and management, they provide a good benchmark from which further regulations whether specific or general, can be developed. The NEAP, however, observed that most of the regulations are not being complied with. The Estate Land Utilisation Study also observed that enforcement of these regulations in estate lands is not being undertaken. The lack of enforcement is mainly due to lack of adequate resources to provide for the necessary manpower transport and other capacities. Thus although there may be need to provide for other regulations and or covenants to deal with the use and management of land, primary consideration must be given to the enforcement mechanisms. In particular, it

would seem that the administration of the provisions of the Act requires restructuring to take into account various sectoral responsibilities that various departments carry out in relation to land use and management.

4.3. INSTITUTIONAL CO-ORDINATION

The Land Act, which contains most of the covenants and regulations on land use and management, is under the direct responsibility of the ministry responsible for land matters. Yet it is the departments of Agriculture and that of Physical Planning which have the expertise and, perhaps, the facilities for monitoring and enforcing compliance with the various covenants and regulations which touch on land use and management. Some amendments have been made to deal with cross-sectoral issues relating to land use and management. Thus, the Town and Country Planning Act, 1988 amended Section 13 of the Land Act, 1965, to include provision that a lessee should not undertake any development of leased land without obtaining development permission from a planning committee or the Commissioner to Physical Planning, as the case may be. Further, the Town and Country Planning Act 1988 also amended Section 41 of the Land Act to require that any officer who is responsible for allocating land for leases must take into account the views of the Commissioner for Physical Planning before making the allocations. These provisions are intended to cater for inputs from various interest groups, in the use and management of land. If such consultations were indeed taking place, they would provide the necessary expertise in the regulation of use and management of land. Appropriate covenants would be fashioned for

particular pieces of land and necessary advice would be given to enable the lessees to take necessary steps to comply. Of course the process of consultation is likely to cause more delays in initiating development programmes but it is a necessary cost to reduce future environment costs.

4.4 A CO-ORDINATING STATUTE

A notable feature of the legislation which deals with use and management of leasehold land is that it is contained in a large number of statutes some of which seem to have little or no relation to land use and management. The question would be whether consolidation of all the provisions relating to land use and management would resolve the problem. Would a Land Use and Management Act comprehensively deal with an enhanced enforcement capacity with physical planning, forestry, water, land agriculture, mining, petroleum exploration, among other issues? One consequence, of course, would be that the various departments would have to actively work together in the implementation of the legislation.

Secondly, some departments would lose a little of their powers for purposes of accommodating others. Thirdly, the involvement of several departments would delay implementation of the legislation. Against these disadvantages would be the advantage that a developer seeking to find out what rule he should comply with in relation to his land would only have to look at one statute. The statute would also remove overlaps and gaps in legislation relating to land use and management. It is our view, however, that the best solution would be to enact land use and management amendments, or new regulations or Acts, which are sector-specific.

4.5 LEASE COVENANTS AND OTHER LAND USE PRACTICES

There are other pieces of legislation which would need this process of consultation to ensure that appropriate land use and management practices are incorporated in the development of leased land. The Mines and Minerals Act, 1981 requires that a person who seeks to prospect or mine minerals should apply for a mineral right or mineral permit in accordance with the Act, and any grant of a mining licence will be made subject to conditions relating to pollution control, regrassing and reforestation. The Mining Safety Regulations made under the Act provide further protection with respect to environmental health and safety. These are provisions whose ramifications would touch a number of other agencies such as the departments of forestry, physical planning, land and water. There is, however, no institutional co-ordination between the department responsible for mining and the other agencies.

A similar observation can be made with respect to the Petroleum (Exploration and Production) Act, 1983 which makes provision for good land use and management practices in relation to petroleum exploration and production. No co-ordination mechanism is provided for to ensure that the departments of water, land or physical planning are involved in the process of granting licenses for petroleum exploration and production.

4.6 CUSTOMARY LAND LEASES

Leases may be created out of customary land under Section 5 of the Land Act. However, the process begins with the conversion of customary land into public land such that when the lease is created it is not out of customary land but rather, public land. The covenants and regulations made under Sections 13 and 31, as read with Section 39 of the Land Act, 1965 of course apply to such leases to the extent expressed in the lease document.

Further, in the course of interviews for the present study, it was noted that customary occupiers of land do also let out

their land to other persons, in some cases, on a yearly tenancy. The Customary Land Utilisation Study also noted this phenomenon. This development of course defies original customary jurisprudence which did not know of sales of land and much less, leasing of land. It is, however, a manifestation of the increasing problem of landlessness which has brought in the change in perception, and it seems that this stark reality may continue to guide the path for customary law. It needs to be recognized and perhaps regulated just like the manner in which the Land Act, 1965 and the Registered Land Act, 1967 regulate the use and management of leasehold land created under those Acts. Of course, as already pointed out the use and management of customary land is essentially unregulated and, therefore, there will be need to develop customary lease covenants, or apply the covenants under the Land Act, 1965 as the case may be. We do not think that legalising customary land leases would make smallholder farmers want to lease all their land. The Lilongwe Land Development Project has shown that titles to land do not necessarily create a land market (Nankumba, 1988).

5. THE USE AND MANAGEMENT OF FREEHOLD LAND

The Land Act, 1965 and the Registered Land Act, 1967 are the principal pieces of legislation which regulate the use and management of freehold land. Such land is, of course, also subject to other legislation such as the Town and Country Planning Act, 1988, the Local Government (Urban Areas) Act, 1966 and the Public Health Act, 1948 .

5.1 THE MINISTER'S POWERS OVER FREEHOLDS

Section 31 of the Land Act, 1965 gives power to the Minister responsible for land matters to make regulations for regulating, managing and controlling the use of all land other than public land or private land in a municipality or township. It is clear therefore that the Minister has power to regulate the use and management of freehold land in areas outside local authorities. The minister has no power to control the use and management of freehold land within local authorities. This is because all land in municipalities and townships, including freehold land, is under the control of local authorities such as municipal and town councils. The provision was, of course, enacted at a time when Malawi did not have city councils and should, therefore, be amended accordingly to reflect the present situation.

In terms of freehold land outside local councils it is noteworthy that the Minister has not promulgated any regulation or orders relating to the use and management of freehold land. The orders which have been made under

Section 31 of the Land Act, 1965 deal with the control of user of land in designated and or settlement schemes set up by the Government. The orders do not cover private land under freehold title. Thus freehold and outside local authority jurisdiction is unregulated. This land, however, covers vast hectares under tea, coffee and tobacco plantations, especially in the Southern Region of Malawi. On the other hand the owners of this type of land are rich companies which can afford to invest in conservation measures and employ appropriate expertise to advise them on the best methods of good land husbandry. In fact, in the course of our interviews with some agricultural officers in areas where these freehold estates are loaded, it was indicated that the land in these estates is properly managed and the estate owners sometimes do ask agricultural officers to help them with modern techniques of conservation.

We are of the view, however, that there is still need for provision for minimum standards and regulations on the use and management of freehold land, to ensure that every land-owner complies with those minimum standards. It is not prudent to leave issues of environmental concern to individuals as they may slacken and hence disturb the equilibrium in the environment.

The absence of any regulations to cover freehold land means that, unlike leasehold land holders, freeholders can, if they want, cut mbawa trees, cut trees wantonly neglect their ditches or drains to the extent of causing soil erosion on their own land and on neighbouring land. Of course, the freeholder would be subject to the rule in *Rylands v. Fletcher* and other common law rules regarding nuisance. However, seems that under the present land use legislation, the freeholder is free to lay waste to his land. The freeholder can cut trees up to the river or stream, cause sedimentation and drying up of the river or the stream with no one to answer to. The freeholder is not subject to any reforestation provisions under the Land Act, 1965. It is our view the sustainable management of the environment cannot be achieved in such a *laissez faire* context.

5.2 THE TOWN AND COUNTRY PLANNING ACT 1988

It should be noted, however, that section 52 of the Town and Country Planning Act, 1988 does give powers to the Minister responsible for Physical Planning to declare certain areas to be subject to special powers of control and management. The Minister may, thus, make orders for purposes of protecting the natural environment or water from the harmful effects of any particular class of development, the proper cultivation of agricultural land, implementing projects involving major commercial, industrial or mining developments, or

prohibiting all or any specific type of development. Orders may also be made for improvement of residential areas and the preservation of buildings under sections 53-56 of the Act

Thus the Town and Country Planning Act, 1988 contains various land use and management provisions which may be used to promote good land husbandry practices. Most of these, however, relate to building, infrastructure and commercial sectors, rather than to agricultural land use and management.

5.3 EXTENSION SERVICES ON FREEHOLD

It is our view that although government agricultural officers do not extend their service to commercial estate ventures, there should be a mechanism for monitoring the activities of commercial estates under freehold or leasehold tenure. Where specific works have to be carried out with the supervision of government extension personnel the estate owner would have to pay government a fee, as government subsidies should not be provided for such services.

5.4 LOCAL AUTHORITIES AND CONTROL OF FREEHOLDS

Freehold land within local authority areas is under the jurisdiction of the local authorities concerned. These local authorities have planning committees which are responsible for designating and zoning the use of each piece of land, in accordance with the Town and Country Planning Act, 1988, the Local Government (Urban Areas) Act, 1966 and the Local Government (District Councils) Act, 1954. The designated land for forestry, water catchment areas, residential areas, industrial areas among other uses. They enforce legislation relating to the management of the land in their jurisdiction. As the planning committees comprise the various departments involved in land use and management, they would have the capacity to monitor and enforce the use and management of land in their areas of jurisdiction.

Local authorities, however, also have problems when it comes to enforcement. While there are clear provisions under the said Acts for the control of deforestation, sanitation and treatment of wastes, the urban areas have been deforested; garbage collection and treatment thereof is not up to the required standards; and illegal, unplanned housing development is rampant in all the towns and cities, signifying a breakdown in the planning system and its mechanism of enforcement. Another problem is that enforcement mechanisms are not properly co-ordinated with other agencies in the jurisdiction of local authorities.

5.5 OBSERVATIONS

In conclusion it can be observed that the main problems regarding the use and management of freehold land are:

- (a) failure to use the powers of the Minister under Section 31 of the Land Act, 1965 to regulate freehold land;
- (b) lack of enforcement co-ordination within local authorities;
- (c) absence of monitoring of commercial estates under freehold titles by the agricultural extension services department.

6. THE USE AND MANAGEMENT OF PUBLIC LAND

Public Land is essentially Government land, and it is that land on which Government office infrastructure, hospitals, schools and other public facilities are located. Some public land is under agricultural settlement schemes, forest areas, national parks and wildlife reserves. The land becomes public land upon the Minister responsible for land matters making a declaration that a particular piece of land (usually previously customary land) shall henceforth be public land.

However there is a lot of land where Government has built schools, hospitals and other office infrastructure which has not been converted into public land and is still customary land. This is as a result of the perception that customary land is a species of public land and therefore available for use by the Government. As a result Government has not seen any need to take the necessary legal procedures for the conversion of customary land into public land.

6.1 GOVERNMENT FACILITIES ON CUSTOMARY LAND

There is a likelihood that conflicts will arise between local communities seeking more land and viewing Government acquisition of their land as a deprivation. Such a conflict would be detrimental to Government interests since the court is likely to decide in favour of the local community who are the owners of the land as long as it remains customary land. Two alternative solutions may be offered. Government can turn the schools into community property, so that these continue to be customary land. On the other hand, Government can convert all such land into public land. The first alternative would be more appealing and in keeping with current trends to keep services under the care and charge of communities

which they are situated. The second solution would only increase public perception that Government property belongs to no one, and thus encroachments and vandalism will remain chronic problems. Land which is currently within national parks and wildlife reserves should remain public land because although community participation is being encouraged in this respect, the parks and wildlife reserves cover very wide areas involving very many different communities which need proper co-ordination to ensure that conflicting functions, responsibilities do not become a hindrance to monitoring and enforcement efforts around the protected areas.

6.2 REGULATING PUBLIC LAND

The next issue is whether public land should be subject to the same regulations and orders as those that apply in relation to leasehold land customary land and freehold land. It is our view that every piece of land should be subject to standard land use and management regulations, to ensure that the totality of the environment is conserved. It is not clear, for example, whether the Land Act, 1965 binds the Government.

7. THE USE AND MANAGEMENT OF FRAGILE LANDS

7.1 DEFINITION OF FRAGILE LANDS

By fragile lands we refer to those portions of land which by reason of human or natural processes are or have been made vulnerable to degradation or waste. These areas include catchment areas, hilly and mountainous areas, wetlands including dambos, rivers, streams and lakeshore areas as well as pans and swamps. Such areas need special and urgent attention since they are the most conspicuous areas of degradation.

The type of human activities that contribute to degradation of fragile lands include cultivation, livestock grazing, mining, wanton cutting of trees, and burning. Natural processes which contribute to degradation and/or waste include flooding, erosion and flash floods. This chapter will, however, concentrate on human activities. It should be remembered that some natural processes are a direct result of human degrading activities.

7.2 CATCHMENT AREAS

A working definition of a catchment area may be stated as an area of land which contains the source or sources of rivers, or streams or swamps. As a source it determines the water quantity and quality found in the river or stream whose source it is. It is an important natural resource that requires special attention and care.

The legislation which should have dealt with the use and management of catchment areas is the Water Resources Act, 1969. The aim of this Act is "to make provision for the control, conservation, apportionment and use of the water resources of Malawi....." It makes provision for the grant, recognition and revocation of water rights by the Water Resources Board. There are also provisions relating to pollution control. There is power given to the Minister to declare in the public interest "any area of Malawi to be a controlled area for the purpose of this Act" (section 22 of the Act).

It is clear from a reading of the Act that there are no specific provisions regarding use and management of catchment areas. While it is possible for the Minister to use section 22 of the Act to declare certain catchment area to be controlled areas, the Act does not contain a list of controlled areas from which one can determine whether the legislature had catchment areas in mind in enacting section 22 of the Act.

In a water grant the Minister can provide for covenants which the grantee must comply with. One of the covenants which may be implied in a water grant is provided for under regulation 4 of the Water Regulations under the Act. The regulation stipulates that a grantee must take all reasonable precautions "to prevent accumulation in any river, stream or water course of silt, sand, gravel, stones, sawdust, sewerage, waste or any other substance which may injuriously affect the use of such water". It would appear that this provision may be used to control catchment areas in that, for example, dumping of waste or any matter in a catchment area may injuriously affect the use of water in a river, stream or other water course. The application of this provision is, however, limited in that it only applies to grantees of water rights under the Act. These are very few. The majority that use catchment areas for cultivation or dumping of waste would not be caught.

The Water Resources (Water Pollution Control) Regulations do not offer any solution. While regulations 1 and 2 thereof seem to suggest that the Minister can prevent construction of septic tanks or pit latrines within a certain distance from a borehole or the discharge of effluent from sewerages, mining or other, industrial process, it is clear that these provisions do not apply to catchment areas.

There is, therefore, need for regulations or provisions to control the use and management of catchment areas in a more direct manner than is presently available.

Where, however, a catchment area falls within a village forest, forest reserve or protected forest, the provisions of the Forestry Act, 1997 may be applied. This Act prohibits deposit of litter or noxious waste in a forest reserve, village forest or protected forest. It further prohibits cultivation, grazing of

livestock or residing or setting fire in these areas (sections 44, 46, 64 and 65 of the Act). These provisions, however, would not apply outside village forest areas, forest reserves or protected forests.

7.3 MOUNTAINOUS AND HILLY AREAS

These high-rise areas are especially vulnerable to soil erosion which may use siltation in rivers, streams and other water courses. There is need for specific provisions to deal with:

- (i) the extent to which and the manner in which cultivation may be carried out in hilly and mountainous areas;
- (ii) control of bush fires in hilly and mountainous areas
- (iii) reforestation in hilly and mountainous areas; and
- (iv) the extent to which and the manner in which grazing of livestock may be carried out in these areas.

The Land Act, 1965 as already pointed out contains provisions which the Minister may use for regulating, managing and controlling the user of all land other than public land or private land within a local authority area (section 31 of the Land Act). This section could be used by the department of Lands to prohibit cultivation, grazing or cutting of trees on mountainous or hilly land. The provision, however, has not been utilised. Besides, it seems that this part of the Act is concerned with a wrong Government department. We are of the view that the department of Agriculture would have been the best-placed to implement section 31, as read with section 39 of the Act. In these circumstances, there is need for regulations or provisions to specifically deal with use and management of mountainous and hilly agriculture land.

7.4 WETLANDS

These include rivers, streams, dambos, swamps, lake shores, pans and some much water courses and sources. The comments made under catchment areas would equally apply under this discussion. The following points need to be noted:

- (i) there are no specific provisions dealing with use and management of wetlands in general;
- (ii) Section 33 of the Environment Management Act, 1996 gives power to the Minister responsible for the environment to declare any area other than a wild reserve, forest reserve, game reserve, national park or monument to be an environmental protection area. This provision may be used to protect specified wetlands, thereby incorporating proper land use and management methods.

7.5 OTHER LAND USE PRACTICES

There are land use and management practices which do not fall under the above topics. These include land used for moulding bricks or to quarry for building stone. These lead to soil degradation but while they would be regulated under section 31, as read with section 39 of the Land Act, 1965 is clear that the Minister has not used this power for this purpose. In this respect, regulations may be promulgated under section 35 of the Environment Management Act, 1996 to deal specifically with such issues. Such land use practices are cross-sectoral and would not necessarily fall under the department of agriculture.

8. INSTITUTIONAL FRAMEWORK

8.1 CENTRAL GOVERNMENT

A number of government departments are involved in land use and management. The departments of lands, town and county planning, agriculture, mining, forestry and water are some of them. A number of statutes deal with use and management of land. These include the Land Act, 1965, the Town and Country Planning Act, 1988, the Water works Act, 1995, the Forestry Act, 1997, the Mines and Minerals Act, 1981 and the Public Health Act, 1948. A review of these statutes was already carried out in an earlier study (Banda, 1997). Of the various departments it is only the department of agriculture which does not have a statute on the activities for which it is responsible, relating to land use and management.

8.2 LOCAL GOVERNMENT

Local Government (Urban Areas), Act, 1966, the Local Government (District Councils) Act, 1954 and the Public Health Act, 1948 provide powers to all authorities to regulate several sectoral environmental issues such as land pollution control and waste management. The Land Act, 1965 for example clearly excludes the regulation of public and private land in local authorities by the Minister for Lands, because these are regulated by local authorities. Land outside local authorities is the responsibility of the departments of Lands and town and country planning under the Land Act, 1965 and the Town and Ministry Planning Act, 1988.

8.3 COMMUNITY PARTICIPATION

In the past three or four years, Malawi has had proposals from studies conducted in various sectoral environmental concerns for the introduction of mechanisms for involving local communities in environmental management. The thinking is that involving local people in environmental

governance will localise the policing and monitoring of environmental compliance and thus make it more effective. Further, if such involvement is coupled with local resource ownership and benefit-sharing it will enthuse local communities to be vigilant in ensuring compliance. Thus institutions such as village natural resource committees, beach village committees and village development committees have appeared in project proposals. It is only recently that the involvement of local communities has moved beyond 'project' status.

The Environment Management Act, 1996 introduced some limited form of community participation in environmental management, through District Development Committees' formulation of district environmental plans every five years. The advisory board to the department of National Parks and Wildlife includes positions for up to 5 members of the general public who may be local people to be appointed by the Minister under the National Parks and Wildlife Act, 1992. A similar provision is found under the Forestry Act, 1997. The Fisheries Conservation and Management Act, 1998 also contains provisions for the involvement of local communities in fisheries management.

8.4 EFFICACY OF COMMUNITY INSTITUTIONS

It is rather too early to determine whether community participation in environmental management in general is viable, it has its problems since the community are the same local people who are involved in destruction of natural resources either due to ignorance or poverty. To change their attitudes is not going to be easy. It is said, for example, that when some local people are informed that natural resources belong to them they interpret that to mean that they use the resources as they deem fit.

There is, however, merit in combining traditional enforcement mechanisms such as penal sanctions meted out by the state, with community involvement. In our interviews we noted that the department of agriculture does involve chiefs and farmers clubs in inculcating extension messages relating to land use and management. Our view is that it is necessary to involve these communities in land use and management.

One other possible mechanism is to use the village development committees which are chaired by traditional leaders, to influence local vigilance in proper land use and management methods as well as monitoring and policing compliance with relevant legislation. The village development committee is a creature of the decentralisation plan which is a project not yet implemented but whose pilot phases are being tried in some districts.

9 GENERAL OBSERVATIONS

9.1 CUSTOMARY LAND

The study has shown that there are no regulations concerning the use and management of customary land. This type of land forms the bulk of all land in Malawi and is the main source of food supply. It is smallholder farmers who grow the bulk of the maize supply. They are, however, constrained in their efforts due to shrinking land sizes as well as declining soil fertility due to soil erosion and over-use. The pressure on land resources makes these farmers cultivate on steep slopes, and along riverbanks, thus causing soil erosion, drying-up of water sources, and deforestation.

The study has also revealed that most smallholder farmers lack the expertise and facilities to carry out conservation measures. They heavily rely on agricultural extension workers for advice and even for necessary facilities, for example, for construction of soil erosion control measures such as the A-frame. These farmers will continue to rely on such services for a long time. On the other hand extension services do not reach every farmer, for several reasons. Lack of adequate resources from the government, laziness on the part of extension personnel, and lack of interest on the part of some smallholder farmers contribute to the problem.

Since Malawi gained independence from colonialism the government has eschewed compulsory methods of land conservation, such as had been used in the colonial time. This is due largely to the fact that compulsory land conservation measures were a source of political disaffection against the colonial government, and freedom fighters took advantage of this disenchantment promising people they would put an end to the practice. Current practice of the department of agriculture, therefore, gives reference to extension methods aimed at persuading farmers to adopt conservation measures. The results have not been encouraging as it is now realised that massive soil erosion, deforestation and other forms of environmental degradation remain unchecked, and the absence of regulations is a major cause.

Interviews with traditional leaders, agricultural extension staff and smallholder farmers revealed that colonial methods of enforcement of conservation measures, whereby defaulters were jailed or fined, are unlikely to work if reintroduced. There was consensus, however, that extension messages alone may not be adequate and, in appropriate cases, some form of punishment for chronic defaulters should be applied.

At customary law, very few regulations relating to the use and management of land existed. Land is allocated by the chief or village headmen to family lineages who in turn,

allocate to individual members of the family. At that point the chiefs authority almost comes to an end. He could not order the farmer on how to use his land, which trees not to cut or which parts of the land not to cultivate or how to cultivate them. There are prohibitions against cultivation at grave sites or near shrines, but nature itself regulated the farmer. There was plentiful arable land and the people, therefore, did not cultivate on hilltops or in *dambos*.

Customary land, even when allocated, still belongs to the community with the traditional leaders almost as trustees. In case of violation of customary norms. The chief had power to expel the convict and thereby forfeit the land he occupied, in practice this power was only exercised in very few cases, such as where one was convicted of an offence of witchcraft or murder. Our respondents were, emphatic they cannot remember a case in which a farmer was expelled from his land for failure to use their land responsibly.

Traditional leaders were unanimous in demanding that they be given power and facilities to monitor compliance with any land use and management regulations. Some indicated that the colonial system, in which they held their own courts where offenders were prosecuted, fined and or jailed and proceeds of the fines used for running the court and monitoring compliance with natural resources legislation, worked better. People respected traditional leaders and, therefore, any advice they gave carried weight. Now that people can 'appeal' against the chief's decision to the 'chiefs own court,' no respect can be given to the chief. This is a serious dilemma which requires a solution, giving traditional leaders either executive powers of arrest, or judicial powers. Their proximity to the people gives them the advantage of effective monitoring. In fact, extension personnel told us that the involvement of chiefs in communicating extension messages is essential.

There are statutes that may be used to regulate use and management of customary land in general. These include the Land Act, 1965, the Town and Country Planning Act, 1988 and the Environment Management Act, 1996. At present, there are no specific regulations dealing with use and management of customary agricultural land.

9.2 FREEHOLD LAND

Freehold land in rural areas is under plantation estates mainly growing what may be called 'beverage crops' such as tea, coffee, sugar or tobacco. These crops earn foreign exchange for Malawi. The estates are commercially run and their conservation capacity is good.

There are, however, no regulations on the use and management of this type of landholding. It is our view that minimum standards should be set regarding the use and management of this land.

Freehold land in urban areas is under the jurisdiction of local authorities under the Local Government (Urban Areas) Act, 1966, the Town and Country Planning Act, 1988 and the Public Health Act, 1948. Here, lack of facilities and resources hamper enforcement efforts.

9.3 LEASEHOLD LAND

Although there are regulations relating to the use and management of leasehold land created under section 5 of the Land Act, 1965, they are not comprehensive and may need to be revisited in view of current conditions. The major problem is, that enforcement of the legal provisions is virtually non-existent. Much effort must be placed in the strengthening of enforcement mechanisms.

Customary land is in practice being leased. The lessees need protection and some regulatory machinery must be put in place with regard to the use and management of leased customary land.

9.4 PUBLIC LAND

This land is not regulated perhaps because it is government land. However, this land is within the same environment as all other land and should be subject to the minimum standards to ensure holistic environmental protection.

9.5 FRAGILE LANDS

There are no specific regulations dealing with fragile lands such as catchment, hilly, mountainous and wetland areas. These require attention.

9.6 INSTITUTIONAL FRAMEWORK

The role of traditional authorities in customary matters requires that they be utilised in the regulation of the use and management of customary land.

There are problems relating to the integrity of some traditional chiefs. However, such problems may be reduced if members of the community as a whole participate in the monitoring and policing of legislation through institutions such as village natural resource committees, or village development committees to provide checks and balances.

9.7 AN ACT OR REGULATIONS?

Regulation of land use and management may be done under section 31 or 39 of the Land Act, 1965 or sections 77 and 35(2) of the Environment Management Act, 1996. These are general and/or co-ordinating pieces of legislation.

The workshop to review this report recommended that due to the urgency of the problem it is necessary to promulgate regulations which can quickly be implemented. Three sets of regulations have been prepared. These are made under the Environment Management Act, 1996 and they cover Mountainous and Hilly Areas, Wetland Resources and River Banks and Lakeshores.

The single biggest problem of non-regulation concerns use and management of customary agricultural land. This problem requires a sectoral statute, such as a new Agriculture Land Use and Management Act.

10. GENERAL RECOMMENDATIONS

We recommend that an Agriculture Land Use and Management Act be drafted for consideration by Parliament. The Act should deal with the following issues:

Customary land be declared communal land vested in the chiefs on trust for the people.

Traditional leaders, namely, chiefs and village headmen should be given power to monitor and enforce compliance with land use and management legislation in liaison and or consultation with either village natural resource committees or village development committees, and agricultural officers to provide professional advice.

Strategies for benefit-sharing from land resources and fines from non-compliers should be developed to enhance the capacity of the community to police soil and water conservation.

Extension staff should be under the supervision of traditional authorities and village development committees. Where these have serious complaints against extension staff they should recommend censure of the staff.

Where a farmer has had an opportunity to learn conservation measures and has been given opportunity to rectify any defects in the conservation of his garden and fails to do so, extension staff should be given power to arrest the offender and bring him before court. If convicted he should be liable to pay a fine of K500 and/or give community service for 2 months including an order that he construct conservation works as advised by extension personnel.

Incentives should be considered to induce compliance with regulations. Already the department of agriculture does provide some incentives such as fertilisers, seeds, radios, etc. for those farmers who do well in constructing conservation measures. In the case of leasehold land held by smallholder tobacco growers, the incentives can also be in the form of tax rebates. Legislation should specifically provide for a Land Conservation Fund, or the Environment Endowment Fund under the Environment Management Act, 1996 may be used.

Minimum land use and management regulations should be developed to cat for all types of land whether those under freehold, leasehold or public tenure.

The Minister must have power to promulgate specific regulations for particular pieces of land depending on the existing environmental conditions. As the regulation of the use and management of agricultural land will b contained in this new Act, there may be need for harmonisation with the Land Act, 1965, and the Town and Country Planning Act, 1988 should be amended accordingly. Where a farmer fails, neglects and or refuses to construct conservation work the department of Agriculture should be given power to enter upon the land an construct the necessary works and charge the costs thereof to the farmer. We have also recommended that regulations be drafted to cover the regulation and management of mountainous and hilly areas, wetland resources and riverbanks and lakeshores. The aim of these regulations is to deal with fragile pieces of land and ensure that provision is made for regeneration and reclamation of degraded lands. If a new Agricultural Land Use and Management statute will be enacted, it will have to be harmonised with these regulations.

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LAND USE AND MANAGEMENT STUDY

FIELD INTERVIEWS

A. Smallholder farmers

1. How many acres/hectares of land do you have? What is the number of people in your family?
2. Who gave/allocated the land to you?
3. Do you follow any farming methods for control of:
 - (a) soil erosion?
 - (b) pests and disease, etc?

4. Who instructs you on the methods for management of land?
5. What, if any, is the punishment if you do not follow the instructions?
6. Are there any benefits / advantages which you enjoy for following good land husbandry practices?

B. Chiefs/Village Headmen

1. How large is the land in your village or under your jurisdiction?
2. Explain your main responsibilities towards:
 - (a) land allocation
 - (b) uses to which land is put
 - (c) management of land
3. How do you deal with farmers who do not follow your instructions?
4. How much control do you have over:
 - (a) allocated land?
 - (b) unallocated land?
5. Is there a forest in your village? What is your role in presenting the forest?
6. Are there any benefits/advantages which farmers enjoy for following good land husbandry practices?

C. Agricultural Officers

1. What is the average size of farm holdings in your area.
2. What is the role of your department in ensuring proper use and management of land?
3. What techniques/methods do you use in order to ensure proper use and management of land resources.
4. How do you deal with cases of non-compliance with proper agricultural and land husbandry techniques.

5. What do you recommend should be done to ensure compliance with appropriate agricultural and land husbandry practices?
6. What incentives/disincentives are there to motivate farmers to comply with good land husbandry practices?

NOTE: These questions were used as guidelines for interviews. The aim was to solicit information from rural stakeholders on how land is allocated utilised and managed, and on the problems that are faced in enforcing any land use regulations.

**PART II:
REVIEW OF THE DRAFT FISHERIES
CONSERVATION AND MANAGEMENT BILL, 1997**

CONTENT

1. Terms of reference
2. Review of the draft bill
3. Recommended amendments to the draft bill
4. Comments from various experts
5. Final draft bill

A REPORT ON THE REVIEW OF THE DRAFT CONSERVATION AND MANAGEMENT BILL, 1997

1. TERMS OF REFERENCE

The terms of reference for the consultancy were-

- (a) review of the draft Fisheries Conservation and Management Bill, 1997 (the draft Bill);
- (b) recommend suitable amendments to the draft Bill;
- (c) incorporate into the draft Bill suitable comments from various experts; and
- (d) prepare a final draft Bill for submission to Ministry of Natural Resources, Ministry of Research and Environmental Affairs, Ministry of Justice and the United Nations Development Programme.

2. REVIEW OF THE DRAFT BILL

The draft Bill was critically examined and it was found wanting in the following respects-

- (a) provisions on community participation in the conservation and management of fisheries are low and not well articulated;
- (b) international co-operation in the management of cross-boarder fisheries is not well provided for;
- (c) fines imposed under the draft Bill are not in clear proportion to custodial sentences;
- (d) two important stakeholder ministries, that is, Ministry of Agriculture and Livestock Development and Ministry of Irrigation and Water Development are missing on the membership of the Fisheries Advisory Board;
- (e) the sources of payment into the Fisheries Fund are narrow-based;
- (f) the maximum administrative penalty provided for under the draft Bill of a fine of one third of the criminal penalty is on the lower side when compared to a similar system which is in the Forest Act, 1997.

3. RECOMMENDED AMENDMENTS TO THE DRAFT BILL

To address weaknesses set out in the preceding heading, the following amendments are recommended:

- (a) in order to strengthen the regime on local community participation, it is recommended that there should be incorporated into the draft Bill a new part whose purpose would be to provide for local community participation in the conservation and management of fisheries. The part should empower the Director of Fisheries to enter into fisheries management agreements with fisheries management authorities, for example, beach committees. The agreement may provide for management plans, and for assistance to be provided by the Department of fisheries to local communities.

It is important to bear in mind that the provisions of the part being recommended for incorporation into the draft Bill would only be supplementing sections 19 and 23 of the Environment Management Act, 1996.

- (b) to address the trans-boundary dimension of the fisheries problem, it is recommended that a new part, to provide for international co-operation in Fisheries, should be incorporated into the Bill. The part should empower:
 - (i) the responsible Minister to enter into fisheries access agreements with foreign states;
 - (ii) the Director of Fisheries to produce management plans which lead to the realization of common fisheries goals in shared bodies of water;
 - (iii) the responsible minister to specify, by order published in the *Gazette*, measures for the proper implementation of relevant provisions of any agreement on Fisheries to which Malawi is a party.
- (c) to achieve uniformity in the penal provisions, it is recommended that a sentencing scale under which a corresponding term of imprisonment to a fine of K10,000 would be one year, should be adopted. Needless to say, there will be exceptions to this approach. For example, the penalty for a pollution offence under the

Environment Management Act, 1996 is a fine of not less than K20, 000 and not more than K 1,000,000, and imprisonment for ten years. In the premises, it is recommended that the penalty under the draft Bill for polluting fishing waters should be the same as that under the Environment Management Act, 1996.

- (d) to ensure that all important stakeholders are represented on the Fisheries Advisory Board, it is recommended that the membership of the Board should include the Principal Secretary for Agriculture and Irrigation, and the Principal Secretary for Water Development.
- (e) to broaden the financial sources of the payments into the Fisheries Fund, it is recommended that payments in respect of the following matters should go into the Fisheries Fund:
 - (i) proceeds from the sale of forfeited fish, fishing vessels, equipment, articles, etc., and
 - (ii) administrative penalties;
- (f) to be in line with the recently enacted Forest Act, 1997, it is recommended that the maximum administrative penalty should be one half (and not one third) of the maximum penalty to which a person would be liable if he were convicted of the offence by a court.

4. COMMENTS FROM VARIOUS EXPERTS

Comments by experts on the draft Bill came from many quarters but the most comprehensive ones come from the United Nations Environment Programme (UNEP). Comments from UNEP are attached hereto, as Annexure "A".

Most of the concerns raised by the experts have been noted and appropriate amendments have since been made to the draft Bill. However, not all amendments suggested by the experts have been incorporated into the draft Bill.

Section 2 of the General Interpretation Act defines "Minister" as the Minister for the time being charged with the responsibility for the matter in question. In the premise, it is not necessary in the draft Bill to give further definition of "Minister".

To avoid tedious repetition the term "Director of Fisheries" is abbreviated into "Director".

In some enactments officers such as the Director of Fisheries are only subject to the Minister on matters of policy. Clause 3(4) of the draft Bill makes it clear that such is not the case under the draft Bill.

The question of who may qualify to be an honorary Fisheries Officer will be dealt with in subsidiary legislation

The establishment of more grass-root oriented "District Fishermen Committees" could be brought under the recommended new part "Local Community Participation", and under clause 61(2)(w) which empowers the Minister to make regulations establishing local fisheries committees.

Clause 41 of the draft Bill makes it an offence for a person to introduce into any water any fish not indigenous thereto.

Part IX of the draft Bill deals with the Fisheries Fund. The object of the Fund is the conservation and management of fisheries, with particular emphasis on research.

The establishment of a Fishermen's Loan Scheme could be dealt with under the regime of local community participation. For example, clause 9(2) of the draft Bill empowers the Minister to make rules authorizing payments of grants or bonus out of public funds.

The "wider criminal law" is governed by the Penal code [cap. 7.01 of the Laws of Malawi]. Section 2 of Penal Code provides that nothing therein shall affect the liability, trial or punishment of any person for an offence against the common law or *any other law in force in the Republic* other than the Penal Code.

The Malawian case law is to the effect that unless there are clear express words to the contrary, any offence created by a statute requires proof beyond reasonable doubt, of criminal intent.

FISHERIES CONSERVATION AND MANAGEMENT BILL

5. FINAL DRAFT BILL

Following the review of the draft Bill, a final draft Fisheries Conservation and Management Bill has been prepared and a copy thereof is attached hereto as Annexure

“B”.

The final draft Bill has since been approved by the cabinet.

In the premises, the appropriate time to introduce amendments would be during the passage of the Bill in the National Assembly at Committee Stage.

The following provisions are recommended for amendment at Committee Stage-

- (a) in the definition of “Fisheries protection officer”, the words “and includes any person authorized by, or acting under the orders of, a fisheries protection officer” should be deleted. This should be covered in a substantive provision;
- (b) clause 3(7) of the final draft Bill should be amended to include a new paragraph (b) “any person authorized to practice under the”.
- (c) clause 10(3) of the final draft Bill should be amended to read as follows “The Director may revoke a registration under this section if the owner of the registered vessel allows the vessel to fall 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”.

K. Nyirenda Parliamentary Draftsman
Deputy

S.A. Mapila
Director of fisheries

FISHERIES CONSERVATION AND MANAGEMENT BILL ARRANGEMENT OF SECTIONS

SECTION		
PART I - PRELIMINARY		
1. Short title and commencement	31. Powers of inspection	
2. Interpretation	32. Powers of search, seizure, demolition and arrest	
PART II- ADMINISTRATION		
3. Director of Fisheries and fisheries protection officers	33. Warrant to enter a dwelling place	
4. Honorary fisheries officers	34. Fisheries protection officer to give receipt	
5. Fisheries Advisory Board	35. Control of weirs	
6. Functions of the Board	36. Powers of fisheries protection officers and convention fisheries officers to enforce conventions	
PART III -LOCAL COMMUNITY PARTICIPATION		
7. Purposes of this Part	37. Indemnity	
8. Fisheries management agreement	38. Security for release of fishing vessel	
9. Minister may make rules	39. Disposal of seized fish and other perishables	
10. Registration of Local Registrable Fishing Vessels	40. Persons arrested etc., to be brought before Court	
11. Control of Fishing by Registrable Local Fishing Vessels	PART XI -PROHIBITIONS AND OFFENCES	
12. Fishing by Foreign Vessels	41. Prohibition of transfer, etc., of fish	
13. Notification of Fish on Board by Foreign Fishing Vessels entering Fishing Waters	42. Prohibited fishing methods.	
14. Prohibition of Commercial Fishing Without a Licence	43. Pollution, etc., of rivers, streams, lakes or other parts of the fishing waters	
15. Grant of Fishing Licence and Conditions relating Thereto	44. Obstruction, etc., of fisheries protection officers	
16. Illegal Holding of Fish	45. Offences, penalties and proceedings	
17. Stowage of Gear	PART XII -COURT PROCEEDINGS, ADMINISTRATIVE PROCEEDINGS AND PENALTIES	
18. Transshipment Export of Fish	46. Jurisdiction of magistrates courts	
PART VII - SPECIAL ARRANGEMENTS		
19. Fisheries research permits. etc.	47. Convention offences	
PART VIII - AQUACULTURE		
20. Establishment and operation of aquaculture establishment	48. Liability of members of companies, etc.	
21. Aquaculture permits	49. Forfeiture of licence, permit or registration	
PART IX - FISHERIES FUND		
22. Establishment of Fisheries Fund	50. Administrative penalties	
23. Fund to vest in Minister	51. Detention or forfeiture of fishing vessel on failure to pay fine	
24. Advances to the Fund	PART XIII - INTERNATIONAL CO-OPERATION IN FISHERIES	
25. Objects of the Fund	52. Fisheries access agreements	
26. Application of the Fund	53. Cross-border management	
27. Books and other records of account, audit and reports of the Fund	54. Regional fora	
28. Holdings of the Fund	55. Implementation of agreements	
29. Financial year	PART XIV- MISCELLANEOUS	
PART X -ENFORCEMENT		
30. General powers of fisheries protection officers relating to fishing vessels	56. Applications, fees and charges	
	57. Suspension or cancellation of registrations, licences or permits	
	58. Appeals against suspension, cancellation or variation of registrations, licences or permits	
	59. Fishing districts and district fees	
	60. Statistical information	
	61. Regulations	
	62. Repeal and Savings	
	63. Transitional	

A BILL

ENTITLED

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:

SHORT TITLE ACT, 1997, AND COMMENCEMENT

1. This Act may be cited as the Fisheries Conservation and Management 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 structure used for the cultivation of fish or shellfish;

“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 one that intends to make such an investment;*

“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 or 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 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) and includes any person authorized by, or acting under the orders of, a fisheries protection officer;

“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 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 operations or for the processing, storage or carriage of fish or any operations (including transshipment of fish) ancillary thereto, but does 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, "forest officer" has the same meaning as in the Forest Act (Cap 63:01);

"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;

"wildlife officer" has the same meaning as in the National Parks and Wildlife Act (No. 11, 1992).

PART II - ADMINISTRATION

DIRECTOR OF FISHERIES AND 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 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;

(3) Honorary fisheries officers shall exercise such of the powers of fisheries protection officers as shall be prescribed in the instrument of appointment.

HONORARY FISHERIES OFFICERS

4. (1) The Director may, by notice published in the *Gazette* appoint suitable persons to be honorary fisheries 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 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 service 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 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), 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, creditors;
 - (b) has been absent from three consecutive meetings of the Board without the approval of the Chairman or without other 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 function as a member of the Board;
 - (g) appointed under paragraph 9d), (e), (f), or (g) of subsection (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 or sub-committee shall be paid such allowances as the Minister may determine.

- (13) Subject to this Act, the Board may regulate its procedures 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 any 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, or proposals for the entry into or accession to conventions that 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) carry such other functions and duties as the Minister may, from time to time, prescribe.

PART III - LOCAL COMMUNITY PARTICIPATION

PURPOSES OF HIS 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 fisheries management agreements 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 benefit of the local communities;
 - (c) encourage District Councils, non-governmental organizations, the private sector and other relevant institutions to contribute to the provision of fisheries extension services, as well as the establishment or management of aquaculture, in accordance with guidelines provide by the Department of Fisheries;
 - (d) provide for declaration of endangered species and their management;
 - (e) authorise payments of grants or bonus out of public funds for the 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 NO.12 OF 1995

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 shall not be registered under this section unless-
- (a) it has been registered, if so required, under the Inland Waters Shipping Act, 1995 and otherwise complies with 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 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 any of the requirements of subsection (2) cease to apply in relation to registered a vessel but shall restore such registration on being satisfied that the failure 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 stipulated in the registration certificate.
- (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 section.
- (7) The Director shall maintain a register of local registrable fishing vessels in which he shall register such particulars of vessels as they may be prescribed.

CONTROL OF FISHING 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 authorised 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 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 VESSELS PROHIBITED WITHOUT A LICENCE

12. (1) No foreign fishing vessel shall be used for commercial fishing in the fishing water 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 the 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.

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 LICENCE AND CONDITIONS RELATING THERETO

15. (1) Subject to subsection (2), the grant of a 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
- (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 a licensee;
 - (iv) the navigation equipment and charts to be carried on board fishing vessels;
 - (v) the records of fishing operations that shall be kept on board fishing vessels;
 - (vi) 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 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, or to fish only with specified fishing gear, the vessel or so much of the gear as is not required for permitted fishing, shall be stowed in such manner that it will not be readily available for use for fishing, or in such manner as may 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 K 10,000 and to imprisonment for two years and to a further fine of K200 per day for each day that the offence continues after conviction.

TRANSHIPMENT AND EXPORT OF FISH

18. (1) The Minister may make regulations for the licensing of the transhipment or receiving 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.
- (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 a licensee;
- (iv) the navigation equipment and charts to be carried on board fishing vessels;
- (v) the records of fishing operations that shall be kept board fishing vessels;
- (vi) the place or places where the licensee may carry out transhipment 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 STOWAGE OF GEAR

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 und subsection (1) if the person charged satisfies the court that the fish was not taken or caught in the fishing waters.

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, or to fish only with specified fishing gear, the vessel or so much of the gear as is not required for permitted fishing, shall be stowed in such manner that it will not be readily available for use for fishing, or in such manner as may 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.

TRANSHIPMENT AND EXPORT OF FISH

18. (1) The Minister may make regulations for the licensing of the transhipment or receiving of transhipped from any 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 transhipment export of fish, or the economic benefit of Malawi, including conditions as to the treatment on board fishing vessels of fish received, and on board, different conditions may be imposed in respect of different fishing vessels or fishing vessels of different descriptions.

PART VII- SPECIAL ARRANGEMENTS

FISHERIES RESEARCH PERMITS, ETC.

19. (1) The Minister may, on the recommendation of the Director, grant 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
 - (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

ESTABLISHMENT AND OPERATION OF 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

CAP. 72:03

- (b) unless he has been granted rights to use water for that purpose under the Water Resources Act.
- (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 to 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 minimise 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 of 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. (1) 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 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 the 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 the 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

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 provisions of the Finance and Audit Act (Cap. 37.01).
- (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, in respect of receipts and expenditures of the Fund in accordance with the provision of that 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.

GENERAL POWERS OF FISHERIES OFFICERS RELATING TO FISHING LEVELS

30. (1) For the purpose of enforcing this Act, a fisheries protection officer may exercise the following powers with respect to any fishing vessels in the fishing waters protection
- (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 person 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 immobilise a 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) fish which he believes has been taken, or fish product produced in the commission of an 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 are 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 belief 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 committed against 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;
- (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 questions concerning such cargo or any other contents of the vehicle, aircraft, boat or other conveyance.
 - (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;
 - (f) arrest without warrant any person whom he has reasonable grounds to believe is committing or has committed an offence under this Act, and use such force as may be reasonably necessary to effect such arrest, unless he is satisfied that the person will appear and answer any charge that may be preferred against the person.
- (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 has been 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 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 WEIRS

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.
- (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 fishing vessel, and a fisheries protection officer may, in convention 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 FISHING

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 a 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 is due to be made for the release of the vessel, provide 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
 - (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 condition, 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 (32), 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 on the information or charge; or
 - (b) the defendant, on being convicted on 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 of. a court of competent jurisdiction as soon s it is reasonably possible, but not later than forty-eight hours after the arrest, detention or seizure, or if the person 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 an 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 provisions 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 such other thing, it, or any proceeds realised 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 realised from its disposal under subsections 3 and 5 may be applied in payment of the fine.

PART XI – PROHIBITIONS AND OFFENCES

PROHIBITION ETC., OF FISH OF TRANSFER,

- 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 91) 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 91) 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, poisonous 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 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 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 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 document 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

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.
- (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, if 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.

PART XII- COURT PROCEEDINGS, ADMINISTRATIVE PROCEEDINGS AND PENALTIES

JURISDICTION OF MAGISTRATES AND COURTS

46. 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's 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.
- (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

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 hold any such licence or permit or to be registered under this Act.

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 hold any such licence or permit or to be registered under this Act.
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 penalty 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 for 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—
- in respect of any offence under Section 11 or 12

DETENTION OF 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 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 direct:

Provided that if the disposal is by sale, the proceeds thereat shall be paid into the Fund.

PART XIII - INTERNATIONAL CO-OPERATION IN FISHERIES

FISHERIES ACCESS AGREEMENT

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 from 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.
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

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.

STATISTICAL

60. (1) The Director may, prior to the registration of a local fishing information 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 closed 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 local fishing communities;
- (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 establishment;
- (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 application 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 for licensing applicants, and the licensing of bonds or other forms of security for securing compliance with obligations under and the terms and conditions of licence;
- (u) reports to be made for the purposes of this Act;
- (v) compliance with and 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;
- (w) establishment of local fisheries committees to which the Director, in his discretion, may delegate some powers,

REPEAL AND SAVINGS

62. (1) The Fisheries Act is repealed.

CAP. 66:95

(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 or 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 after 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.

of fisheries protection officers, the establishment of a Fisheries Advisory Board and a Fisheries Fund, local community participation, registration of fishing vessels, and the issuing of fishing licences. The Bill also lays down certain prohibitions and restrictions, which are designed to ensure the proper conservation of the fisheries resources of Malawi.

OBJECTS AND REASONS

The object of this Bill is to provide for a flexible system of managing and conserving the fisheries resources of Malawi together with an institutional structure to achieve the same. The Bill provides for, among other things, the appointment

Dr. C. Chilumpha
Attorney General

**PART III:
SANITATION AND WASTE IN MALAWI:
INSTITUTIONAL REVIEW**

TABLE OF CONTENTS

Summary
Background
Sanitation in Malawi
Sewerage/Sanitation Service Levels
Low-cost Sanitation Technologies of Choice
Solid Waste Management in Malawi
Strategies, Goals and Legislation Relating to Sanitation
Existing Institutional Organisational Arrangements
Local Authorities
Urban Sewerage Systems and Refuse Collection Services
City Councils
City of Blantyre
Sanitation Services in the City of Blantyre
City of Lilongwe
Sanitation Services in the City of Lilongwe
City of Mzuzu
Cleansing Services
Town Councils
Government Ministries/ Departments
Donors and International Agencies
Non Governmental Organisations
Industrial Wastes
Institutional Arrangements, Overlaps and Gaps in the Sanitation Sector
Manpower and Training Implications
Observations
Proposed Strategies and Institutional Arrangements
Recommendations

ABBREVIATIONS AND ACRONYMS

AGR:	Annual growth Rate
BCC:	Blantyre City Council
CBM:	Community Based Management
CONGOMA:	Council for Non-Governmental Organisations of Malawi
GoM:	Government of Malawi
HESP:	Health Education and Sanitation Promotion
IDSSWD:	International Drinking Water Supply and Sanitation Decade
KEI:	Key Environmental Issues
MHC:	Malawi Housing Co-operation
MOHP:	Ministry of Health and Population
NWDP:	National Water Development Project
NWSDP:	National Water Service Development Plan
PHC:	Primary Health Care
THA:	Traditional Housing Area
UNCHS:	United Nations Centre for Human Settlements
UNDP:	United Nations Development Programme
WHO:	World Health Organisation

SUMMARY

The Government of Malawi (GoM) is seriously concerned about its environmental problems. The establishment of the Department of Research and Environmental Affairs (DREA) is an institutional effort of the GoM to tackle the environmental problems threatening the country's sustainable development.

The GoM has made significant gains in improving the water supply coverage for both urban and rural households. However, as is generally the case in other countries, sanitation coverage particularly in the rural areas has significantly lagged behind the water supply coverage figures.

According to the findings of the NEAP, it is estimated that 64 percent of the households have some form of toilet with a significant difference between rural and urban areas of 61 percent and 91 percent respectively. The most commonly used type of toilet is the pit latrine, being used by 74 percent and 59 percent of urban and rural households respectively. In rural areas 40 percent of the population discharge excreta directly through surface run-off into the surface water resources. In addition, there is lack of awareness on the need to have, and to use pit latrines as well as lack of appropriate technology and adequate numbers of pit latrines, especially in the rural areas. The high rate of urbanization has generated excessive urban population growth in the major urban areas of Blantyre, Lilongwe, Mzuzu Cities and Zomba Municipality.

There are a number of environmental problems associated with rapid urbanization. In most cases these revolve around the need for adequate social services and infrastructure, including drainage, refuse collection facilities, sanitation and good roads etc. Local authorities in Malawi are unable to provide adequate and appropriate facilities and services.

The provision of sanitation and sewerage services is the responsibility of the respective Town, Municipal and City Councils. This includes the overall development, maintenance and operations of the sewerage systems. In addition, they are also responsible for providing an emptying service for septic tanks and pit latrines.

Urban areas lack adequate solid waste disposal facilities, and very few households have rubbish pits. Most of the domestic waste is dumped in open quarries and spaces. This rudimentary solid waste collection and inadequate disposal methods gives rise to serious environmental health problems such as odour, dust, pests, scavengers, pollution of surface and groundwater sources, smoke and fire hazards. It also brings about deterioration of the aesthetic environment. Above all, there are no established solid waste disposal systems in rural areas.

Sanitation service in Malawi is characterized by a fragmented institutional arrangement.

Currently there is some duplication of efforts within the GoM, NGO and private industries, in their attempts to provide the populace with sanitation service. Government needs to reassess the roles various ministries and departments play in the provision of sanitation service to the people of Malawi, and decide on an appropriate division of labour to streamline the delivery process. The Ministry of Local Government and the Ministry of Health should be the primary agents in this process.

There is an urgent need to provide a forum for regular dialogue, linking the water, sanitation, and health education efforts throughout the country. Water, sanitation and health intersectoral committee is required to coordinate the development of these sectors in a rationalized fashion.

There is need, therefore, to formulate a National Sewerage Master Plan to address some of the above mentioned problems instead of the present *ad hoc* approach, where each local authority, NGO and Government department implements its projects in an uncoordinated manner, leading to a duplication of efforts and a waste of resources.

1.0 BACKGROUND

Malawi's population is at present estimated at 12 million, from about 8 million in 1987. The crude birth and death rates are 53.6 and 20.9 respectively. Fertility is very high and fairly constant. The total fertility rate is 6.7% with a natural population increase of 3.2% per annum. This, according to the World Bank, means that the population will double in the next twenty years.

The rapidly increasing population is exerting severe pressure on land and natural resources; on the nation's food self-sufficiency and food security; the labour markets; and the provision of essential services like water supply and sanitation. The consequences are very serious for Malawi's socio-economic development. The Situation Analysis of Poverty in Malawi for 1992 reveals that development programmes and services have had limited impact on the poor. One of the major reasons has been the inadequacy of the institutional structures to fully involve and harness the energies and participation of the poor in improving their own living conditions. As a result, fundamental economic and social transformations have been difficult to attain.

In many countries of the world, the state of the environment appears to be deteriorating and adversely affecting people's well being. Some of the contributing factors include high population growth rate, industrialization, poor management and over-exploitation of resources. These factors contribute to the deterioration of Malawi's environment. If the necessary counter-measures are not considered the situation may result in political, social and economic problems as well as increased morbidity and mortality rates. The government of Malawi, nongovernmental organizations and other relevant agencies have the obligation to make sure that the state of the environment does not deteriorate to such an extent as would jeopardize the well-being of both current and future generations.

In the two national documents "Statement of Development Policy (DEVPOL) 1987 - 1996" and "1991 Policy Framework Paper", the Government of Malawi has emphasized the importance of environmental sustainability of the country's socio-economic development. In addition, as a signatory to "Agenda 21" of the United Nations Conference on Environment and Development (UNCED), 1992, Malawi is showing its commitment to environmental protection for sustainable development by inaugurating its own National Environmental Action Plan (NEAP).

In this regard the GOM's concern with the environment reflects a desire to influence

- a) the interaction between the population and the nation's natural resources; and
- b) the distribution of investment in economic and social activity, and infrastructure.

The broad objective is to maximize the benefits to be realized from natural and man-made resources for present and future generations. Since development means change, concern with the natural environment is not just about conservation. It is also about the direction of change, so that it is not seriously detrimental to the nation's inherited wealth of natural resources: land, water, air, fauna and flora.

Therefore, the Government's aim in environmental protection policy is to prevent undue risks to human life and health, now and in the future; and to maintain the resources necessary to support man and his activities. Important related objectives are the protection of the natural environment and the improvement of the public amenity. In this regard, pollution control through improved sanitation becomes paramount. Pollution is one of the key Environmental Issues (KEI) pointed out in NEAP which Malawi needs to address as a matter of urgency.

One of the principles underlying the approach to pollution control is the need to provide improved sanitation to the majority of the populace and to recognize the interactions between different sectors and stakeholders in the environment and waste disposal.

Adequate supply of clean water for drinking and hygiene, and an adequate means of waste disposal, are fundamental rights and necessary for Public Health and personal well being. However, vast numbers of people in developing countries mostly in rural areas have neither. In 1990, only 52% of the population in Africa had access to safe water and 40% had proper sanitation facilities.

In Malawi, according to Malawi Social Indicators Survey of 1995, only one-third (37%) of the Malawian population has access to safe water for drinking that is located within a distance of less than half (1/2) a kilometre. This figure increases to 48% when the distance is increased to one kilometre. The same survey reveals that only 5.5% of the Malawian population has access to adequate sanitation facilities located within a convenient distance of dwellings, and that nearly 30% of the population in Malawi is without any sanitary facility.

1.1 SANITATION IN MALAWI

Improved sanitation is one of the essential elements in Primary Health Care (PHC) for achieving the global goal of Health for ALL by the year 2000. In many developing countries now, the emphasis is on meeting the needs of the low-income population. However, a number of development projects have been undertaken in these countries, in both rural and urban areas without any comparable work for improvement of human excreta disposal methods, which is important for breaking the faecal-oral route of disease transmission.

In Malawi, while the causes for high morbidity and mortality are complex, it is clear that water and excreta related diseases feature high among the deaths. It is estimated that about 10% of all children under five years of age suffer from severe diarrhoea. Although there has been a good progress to bring community use of oral rehydration therapy into widespread use, there is a need to address the causes of diarrhoeal diseases. In Malawi, like in many other developing countries, inadequate supply of safe water, poor sanitation and lack of health education are among the major community health problems to be addressed.

It was not until the outbreak of cholera in September 1973 that sanitation began to receive serious attention from the Authorities, and the emphasis since that time has been on the safe disposal methods of excreta, and environmental and domestic hygiene. Since the cholera epidemic several feasibility studies have been conducted for improvement of sanitation in Malawi. In 1978, WHO/IBRD Cooperation Programme studied the broad aspects of water and sanitation. Based on this study, the Rapid Assessment Report was prepared in 1978/1979, and it endorsed the country's willingness to accelerate improvement of water supply and sanitation programmes in light of Mar del Plata Action Plan on the first international Drinking Water Supply and Sanitation Decade. In addition, there have been further studies specifically for the sanitation of urban areas. In 1984, a World Bank feasibility study, which was conducted by Stanley International Limited Consultants, recommended an Urban Sanitation Demonstration Pilot Project in the City of Lilongwe, which aimed at demonstrating appropriate sanitation technologies for the planned and unplanned traditional housing areas (THAs). The pilot project examined whether the problem of sanitation in the peri-urban areas could be resolved by using low-cost on-site excreta disposal methods. The pilot project was later extended to other major urban areas of Malawi.

The several studies indicated that sanitation coverage throughout Malawi needed some improvement, and further demonstrated the government's willingness to intensify its

efforts to improve the sanitation coverage within the framework of the Primary Health Care Policy. The studies showed that sewerage systems, septic tanks and traditional pit latrines are the sanitation technologies used in Malawi.

1.2 SEWERAGE/SANITATION SERVICE LEVELS:

In order to present the existing situation in relation to sewerage/sanitation service levels throughout the country it would be helpful to first classify all existing and potential sewerage/sanitation service recipients/users within two broad categories as listed below

SETTLEMENT PATTERN		SANITATION SERVICE OPTION
URBAN	USER	WATERBORNE
		-Centralised Sewerage -On-Site Septic Tank
RURAL		NON-WATERBORNE
		-Latrines

The 1987 Population and Housing Census indicated that 9% of Malawi's population lived in urban centres while 91% of the population lived in rural areas. However, these percentages are now changing. According to Roe, it is currently estimated that Malawi is urbanising at the rate of 2000 persons per week, and that by the end of the decade some 30% of the country's population will be urbanised.

Settlement	Population	Household	Percentage
Urban	730,000	146,000	9%
Rural	7,252,000	1,450,000	91%
TOTAL	7,982,000	1,596,000	100%

TYPE	Urban	Rural
Sewerage schemes	15%	0%
Septic tanks	10%	3%
Pit latrines	65%	57%
No Facilities	10%	40%

Note that combining the figures in Table I and II above leads to the following tables based on the same census.

Type	Population	Households	Percentage
Sewerage system	109,500	21,900	15%
Septic tanks	73,000	14,600	10%
Pit latrines	474,500	94,900	65%
No facilities	73,000	14,600	10%
Total	730,000	146,000	100%

TYPE	POPULATION	HOUSEHOLDS	PERCENTAGE OF RURAL
Septic tanks	217,600	43,500	3%
Pit latrines	4,133,600	826,700	57%
No facilities	2,900,800	580,200	40%
TOTAL	7,252,000	1,450,400	100%

Source: Tables I-IV: World Bank/U7NDP

The information contained in tables I to IV above leads to following assumption and observations:

The rural/urban split of 91% and 9% respectively leads to the following table based on the 1987 census:

- 1) While the population and household figures above are directly taken from the 1987 census results, the relative proportions between the different levels of service and urban-rural split are assumed to remain the same today (1998).
- 2) Very few people, i.e. about 5% of Malawi's populations are currently serviced with a waterborne sewerage system, that is, either reticulated or septic tanks. Therefore, the promotion of low-cost on-site non-waterborne sanitation is justifiable.
- 3) Overall urban sewerage/sanitation service levels are good with only 10% of the urban population not serviced with any sanitation facilities. However, there are a large percentage of pit latrines within 65% cited coverage for urban areas, which are the traditional, unimproved type, where efforts need to be directed in order to upgrade their hygienic conditions.
- 4) Reviewing the coverage levels for sanitation in the rural areas indicates that, while some 40% of the rural population are not serviced with some form of sanitation infrastructure, the concept of "sanitation" in these areas is not an alien idea (57% of rural households having latrines). Again officials point out that with this 57%

rural coverage of latrines, much work is required in order to upgrade the condition of these latrines up to a more acceptable hygienic standard.

- 5) The 1987 population densities indicate the Central and Southern Regions have densities significantly high enough to have a bearing on public health conditions affected by sanitation coverage levels. More efforts are, therefore, required towards improving the sanitation infrastructure service levels.

1.3 LOW-COST SANITATION TECHNOLOGIES OF CHOICE

Malawi has been experimenting with low-cost sanitation alternatives since the early 1980's and has come up with some tested and acceptable, technical solutions. The following list indicates the forms of sewerage/sanitation currently in popular use in Malawi-

- a) Conventional waterborne sewerage reticulation and treatment;
- b) Waterborne to septic tanks;
- c) Ventilated improved pit latrine (VIP);
- d) Sanitation platform (San-plant) type non-ventilated latrine;
- e) Traditional type unimproved pit latrine.

Only the last three alternatives can be considered to be in the low-cost grouping, and of those three, the VIP cannot be low-cost to all groups of people in Malawi. The San-plant and the traditional pit latrines are the main low-cost forms of sanitation in the Malawian context.

However, the concept is that through promotion of hygiene, sanitation, and technical advice together with san-centres throughout the country, improvements could be made in terms of environmental health conditions at a fairly reasonable cost both to the government and the users and/or recipients.

SOLID WASTE MANAGEMENT IN MALAWI

The solid waste management services that are currently provided only collect some 15% of the solid waste produced in the major urban centres of the Republic of Malawi. In the areas under the control of the local authorities, waste management services are only provided to the formally planned and developed areas. Areas under the control of local authorities include the following:

- (a) high income low density residential areas;
- (b) middle income middle density residential areas;

- (c) low income high density residential areas;
- (d) industrial areas; and
- (e) commercial areas within each of the local authorities.

The informal urban areas, which include over 70% of the urban population, have no access to formal waste management services. These areas are characterised by traditional housing areas and squatter settlements.

Environmentally safe waste management is a critical element of the national primary health care programme. Thus the application of the best practical environmentally acceptable option criteria must remain central to the systems that are selected. In addition to the above, the upgrading and extension of waste management services must meet the following criteria

- The equipment that is recommended must be relevant to local conditions and must be efficient.
- It will be advantageous to the local authorities and the country overall if the recommended equipment can be locally sourced, or manufactured and assembled in Malawi.
- The waste management systems that are selected must optimize the use of labour and equipment, in order to facilitate high productivity.

2.0 STRATEGIES, GOALS AND LEGISLATION RELATING TO SANITATION

2.1 STRATEGIES

The "Statement of Development Policies (DEVPOL) 1987 - 1996" and "National Health Plan of Malawi 1986 - 1995" indicate that intensified efforts were developed within the Government of Malawi to focus on improvements in the general health conditions throughout the country.

The National Health Plan of Malawi 1985 - 1995 set out the following seven priority Health programmes which would be addressed during the plan period

- (i) Child spacing;
 - (ii) Combating childhood communicable diseases;
 - (iii) Expanded programme of immunization;
 - (iv) Bilharzia control;
 - (v) Leprosy control;
 - (vi) Tuberculosis control;
 - (vii) Environmental Health and sanitation.
- It is important to note that one of the priority areas of effort identified by GoM is programme approach towards environmental health and sanitation.

Primary Health Care (PHC) and Health Education are two "programme" activities that are identified in the National Health Plan as priority areas to be addressed. PHC, being multi-sectoral, is supported by improvements in environmental health and sanitation conditions. Sanitation improvements, as has been internationally recognized, on their own will not significantly improve the overall health standards of a community. Improvements in the water supply (quantity and quality) and overall changes in hygiene habits, through health education efforts, need to be integrated with improved sanitation in order to improve the health status of a community. This approach is clearly supported by the GoM.

Woven throughout the "Statement of Development Policies 1987-1996" are the cross-sectoral elements of self-help and community participation. Government objectives are to have these integrated into all development projects where feasible. Activities within the low-cost sanitation sector lend themselves to such inputs.

These two elements are very much a part of current implementation practices in Malawi, and they are recognized internationally as essential elements for successful water and/or sanitation programme.

2.2 GOAL

The Ministry of Local Government estimates that as a goal 80% of the total population should be served with improved-type latrines by the year 2000.

Assuming that the goal of 80% of the population with on-site improved sanitation facilities should be achieved by the year 2000 the physical targets year by year from 1990 to 2000 are listed in Appendix I. This goal in the rural areas, is irrespective of the modest increases which can be expected in waterborne sewerage, is assumed in the following projections giving 100% coverage in the urban areas and approximately 85% coverage in the rural areas when considering both waterborne and non-waterborne forms of sanitation service.

In order to achieve these goals implementation rate would be as high as 350,000 improved latrines constructed per year.

2.3 LEGISLATION

The "Laws of Malawi" contain several areas of legislation which are relevant to developing a sanitation strategy. These are listed below for information purposes. Legislation and the imposition of fines, are however, not envisaged as the means to achieve the targets/goals as outlined in the above section. As was pointed out by the Ministry of Health, in attempting to persuade individual householders to improve

their sanitation situation, promotion and health/hygiene education are the proper mechanisms for change. Legislation would be enforced in this respect in very rare cases against individual householders only when an extreme situation would arise which threatens the well-being of the community as a whole. Most of the legislation which is listed below would be applied more towards commercial and industrial enterprises.

The relevant legislation is as follows:

CAP 22:01 - Local Government Act (Urban Areas) - Part VIII of this section of the Act allows urban authorities to promulgate By-Laws some of which relate to public health (relating to CAP 34:01, below).

CAP 22:02 - Local Government Act (District Councils) - Part VI of this section of the Act describes the powers and duties of District Councils (paragraphs 27-39), again some of which do relate to public health and sanitation issues.

CAP 72:01 - Waterworks Act - Mostly applicable to water supply but affecting public health and, indirectly, sanitation.

CAP 33:01 - Estates Act - Setting out sanitation facilities standards for settlements within estates areas.

CAP 34:01 - Public Health Act - Part IX of this section of the Act relating to sanitation and housing nuisances; Part X relating to sewerage and drainage; and Section 75 of the Rules stipulating that every latrine within councils' authority must be constructed and maintained in accordance with council direction.

The fines stipulated within the Acts listed above are outdated and need review and revision.

3.0 EXISTING INSTITUTIONAL/ ORGANISATIONAL ARRANGEMENTS WITHIN THE SANITATION SECTOR

There are many stakeholders involved in the sanitation sector in Malawi, and the extent and capacity in which they are involved vary greatly. In some cases, there are similarities and in others there are disparities in which the various stakeholders are involved in the sanitation sector.

The planning and delivery of sanitation infrastructure services to household in both urban and rural areas of Malawi is dependent upon several ministries, departments, local

authorities, international donors and agents, Non-Governmental Organisation, and private industries and individual household owners.

4.0 LOCAL AUTHORITIES

In relation to sanitation, the eleven urban councils and twenty-four district councils are responsible for ensuring that the best technical advice is delivered to all householders, and that within existing Government policy and financial guidelines all possible material support is offered in order to improve the sanitation coverage throughout the country. To date, very little has been achieved in relation to sanitation programmes in the rural areas other than the simple promotion of the concepts of improved sanitation. The Environmental Health staff within the district councils have been the primary motivators but have had very little, if any, financial and technical support in order to launch such programmes.

4.1 URBAN SEWERAGE SYSTEMS AND REFUSE COLLECTION SERVICES

There are only four urban centres which have off-site sewerage systems in the whole country, namely: Lilongwe, Blantyre, Liwonde and Zomba. These combined serve an urban population of approximately 100,000 equivalent to 15 percent of the four town's population. Hence only 15 percent of the total urban population is connected to water-borne sewerage and 15 percent to septic tanks.

On-site domestic and institutional systems in use include unimproved pit latrines, improved Ventilated Pit Latrines (VIP) and septic tanks.

More than half of the plots in Traditional Housing Areas (THA) and Unplanned settlements in Lilongwe, Blantyre, Zomba and Mzuzu have no soakways to dispose off sludge water and most of the existing soakways are not properly designed. The existing conventional sewerage systems experience frequent breakdowns and blockages due to poor maintenance, as a result of lack of spare parts and in some cases, due to poor design and/or inadequately trained staff. There is also lack of awareness on the part of the general public on proper use of sewerage networks. Urban areas lack adequate solid waste disposal facilities, and very few households have rubbish pits. Most of the domestic waste is dumped in open quarries. Such rudiment solid waste collection and inadequate disposal methods give rise to serious environmental problems such as odour, dust, pests, scavengers, pollution of surface and groundwater sources, smoke and fire hazards. It also brings about deterioration of the aesthetic environment. Above all,

there are no established solid waste disposal systems in rural areas.

4.2 CITY COUNCILS

4.2.1 City of Blantyre

The city of Blantyre is the largest urban settlement in Malawi and covers an area of 228 square kilometres. The city is the industrial and commercial centre of the country.

The city of Blantyre is part of the Blantyre district and, in the 1987 census, this district had a total population of 589,525 people, of which 333,120 people lived within the boundaries of the city. The average annual population growth rate of the city of Blantyre was 6.7% for the period 1966-1977 and 4.2% for the period 1978 - 1987.

There are now a number of different estimates on the annual population growth rate in the city of Blantyre since 1987. In accordance with the Blantyre City Council (BCC) Development Strategy 1993-2003, an annual population growth rate of 6% is used. Based on the 1987 census, this gave an estimated population of approximately 531,000 in 1995 with a total of 145,000 dwelling units. However, these figures are annually changing and increasing for a variety of reasons.

The residential housing areas in the city of Blantyre, are divided into three major types. These are:

- a) permanent housing areas, i.e. low, medium and high density
- b) planned traditional housing areas.
- c) unplanned traditional housing areas

There are a number of studies and estimates of the population distribution, in relation to type of housing areas. Table V below summarises some of these studies. In 1991 approximately 82% of the population in city of Blantyre lived in the THAs and squatter areas.

The city of Blantyre is zoned into different land uses, following the recommendations of the City of Blantyre Structure Plan of 1973, as revised in 1980. Hence, development of the city into industrial, commercial, residential and institutional areas has taken place systematically.

Three departments of the city of Blantyre are directly involved in the sanitation sector within the city. They are-

- a) City Engineers Department;
- b) Cleaning Services Department;
- c) Health and Social Services Department.

4.2.1.1 Sanitation services in the city of blantyre

The sewerage section of the City Engineer's Department was responsible for all liquid and solid waste collection and disposal until 1977, when solid waste collection and disposal, and septic tank emptying and disposal were transferred to the Health Department. In 1990, a further re-organisation took place, when solid waste collection and disposal and septic tank emptying services were transferred to a newly formed Cleansing Services Department.

The sanitation services dealing with wastewater are now dealt with in two departments and four operating units. These are—

- 1) The City Engineer's Department, i.e.
 - a) The Pollution Control Section which is responsible for sewerage and sewage treatment and disposal; trade effluent discharge control and monitoring; and pollution control over catchment streams within the city.
 - b) The Low-Cost Sanitation Unit, which is responsible for the production and promotion of concrete sanitation units (San-plats for use in the low-cost housing and THAs.)
- 2) The Cleansing Services Department—

TABLE V: POPULATION BY HOUSING TYPES 1977-1991

Housing	1977	1980	1982	1991
Area	Blantyre Planning Team	MHC Report	University of Malawi	MHC (Estimate)
Permanent	39%	22%	21%	18%
Planned /THAs	17%	35%	24%	25%
Unplanned THAs/ Squatter	44%	43%	55%	57%
Source: Council Development Strategy 1993-2003				

TABLE VI POPULATION CONNECTED TO SEWERS								
No of Houses Connected to Sewers								
Ward Name	Ward Area ha	Low density housing	Medium density housing	High density perm	High density planned	High density unpla.	Total Units	Total Popul.
Bangwe	1020	0	0	0	0	0	0	-
Blantyre Central	413	135	0	0	0	0	135	378
Blantyre East	439	57	0	0	0	0	57	160
Blantyre west	908	389	0	0	0	0	389	1089
Chichiri	679	406	1033	0	0	0	1439	5889
Chigumula	1395	0	0	0	0	0	0	0
Chilomom	694	0	0	0	0	0	0	0
Likhubula	1338	0	0	0	0	0	0	0
Limbe Central	516	0	0	1336	0	0	1336	3073
Limbe East	239	0	129	543	0	0	672	1842
Limbe West	855	0	247	4092	0	0	4339	10548
Michiru	1616	0	0	0	0	0	0	0
Misesa	1996	0	0	0	0	0	0	0
Mpanga	1045	0	0	0	0	0	0	0
Mzedi	1435	0	0	0	0	0	0	0
Namiyango	427	0	0	0	0	0	0	0
Nancholi	643	0	0	0	0	0	0	0
Ndirande North	786	0	0	0	0	0	0	0
Ndirande South	469	0	0	01086	0	0	1086	2498
Ndirande West	1281	41	0	919	0	0	960	2229
Nkolokoti	935	0	0	0	0	0	0	0
Nyambadwe	539	373	0	0	0	0	373	1044
Soche East	1074	0	0	6430	0	0	6430	14789
Soche West	369	0	0	459	0	0	459	1056
South Lunzu	1661	0	0	0	0	0	0	0
Totals	22,771	1,401	1,409	14,865	0	0	17,675	44,594
Source:	Sanitation master plan report							

- a) The Septic Tank Emptying and Disposal Section which is responsible for emptying septic tanks and pit latrines.
- b) The Toilet Cleansing Section, which is responsible for cleaning toilets at schools, markets and other City Council premises.

In addition to the main operational units referred to above, the Health and Social Services Department has a strong supporting role in respect of sanitation services.

Furthermore, the Town Planning and Estates Management Department also has operational links with the Pollution Control Section. Applications for planning permission (and this includes existing premises which it is proposed should be connected to the sewerage system) are considered by a technical committee, which includes all other departments involved in the physical aspects of the development, e.g. City Engineer's, Cleansing Services, the Fire Brigade. The planning application is then considered by the Planning Committee of the City Council.

4.2.1.2 City Engineers Department

The City Engineer's Department is responsible for water-borne sewerage reticulation systems and the associated wastewater treatment works within the city. This includes provision of sewerage systems, their operation and maintenance.

There are wastewater treatment and disposal works at Blantyre, Soche, Limbe, Chirimba, and Maone.

The works receive wastewater effluent through the sewerage reticulation and from tankers depositing effluent collected from septic tanks and pit latrines. These tankers include those operated by the City of Blantyre Cleansing Services Department, Malawi Housing Corporation, and other public organisations.

The ability of the existing wastewater treatment works to accept and suitably treat the extra septage (load) from the growing number of septic tanks as well as the contents of the pumpable pit latrines needs to be assessed.

By 1995, a total of 17,675 dwelling units serving a total population of 44, 594 were connected to sewers. See Table VI below for details. This is 8.3% of the total population.

4.2.1.2.1 *organisational framework-city engineers department*

The Pollution Control Section of the City Engineer's Department is directly concerned and involved in wastewater treatment and sanitation services within the city of Blantyre. The Section is headed by a qualified civil engineer supported by an Engineering Assistant and an Administrative Assistant and some support staff. The section is organised into two separate sub-sections. These are operations and maintenance, and pollution control.

(a) OPERATION AND MAINTENANCE SUB-SECTION

This sub section is headed by an assistant engineer responsible for operations and maintenance. He has responsibility for the management of two units, the Sewerage Maintenance Sub-section, and the Sewage Treatment and Disposal Sub-section. The Assistant Engineer, is based at the Soche Wastewater Treatment Works.

This subsection is responsible for the repairs, and maintenance of sewers, provision of new sewer connections from private drains and sewers, and identification of illegal sewer connections from private premises.

(b) POLLUTION CONTROL SUB-SECTION

The section is responsible for the provision, monitoring and control of trade effluent discharges and for the monitoring and control of public waters.

The subsection should be headed by a chemist but, at the present time and the Senior Laboratory Technician time, the post is vacant is in charge. He is supported by two laboratory technicians, one laboratory assistant, three samplers, and a laboratory cleaner- all on junior grades. The Senior Laboratory Technician is a diploma holder and is the only qualified member of the staff

4.2.1.2.2 *Low Cost Sanitation Unit*

The Low-Cost Sanitation Unit is headed by a sanitary supervisor who reports to the Head of Engineering Services in the City Engineer's Department. The supervisor is supported by a construction foreman, construction tradesmen and labourers.

The unit is responsible for production and marketing of sanitation platforms (sanplants), and seeks to encourage the

provision of low-cost and effective toilet facilities to persons of low incomes. In addition, the unit constructs on request and at a fee, improved and ventilated pit latrines.

The production process is entirely manual, and at the present level of production, it would not be worthwhile mechanising the process. The main problem observed is that there is very poor social marketing of the san-plants.

4.2.1.2.3 *Plant and equipment*

There is no equipment available to effect proper sewer repairs, and any major repairs have to be done by private contractors.

The Pollution Control Section is equipped with one van, a range of rodding equipment for unblocking sewers and a generator, but no operational pumps. The lack of pumping equipment presents difficulties in unblocking sewers; and assistance in cleaning manholes is sometimes provided by the Cleansing Services Department.

In addition, not all the equipment necessary for the conduct of a full laboratory analysis of samples is available. The poor state of the equipment throws doubts on the validity of the tests. There is no indication that there is any difficulty in obtaining stocks of chemicals required for the conduct of analysis.

The lack of transport is a major drawback, as sampling can only be done in the mornings, and only for four days in a week.

4.2.1.3 *Cleansing Services Department*

The Cleansing Services Department is responsible for the management of street cleaning, public conveniences, solid waste collection and disposal; and septic tank emptying and disposal throughout the city. The last two services are of particular importance as far as sanitation is concerned in the city of Blantyre.

The Department is headed by a Cleansing Services Manager who is a qualified Environmental Health Officer. The Manager reports directly to the Town Clerk and Chief Executive. The Cleansing Manager is supported by a Cleansing Supervisor, a cleansing foreman and labourers.

4.2.1.3.1 Solid Waste Management

4.2.1.3.1.0 Collection

(a) GENERAL DESCRIPTION OF CURRENT SERVICE PROVISION:

The current solid waste collection and disposal service serves industry, commercial properties, institutions and rateable domestic dwellings. The frequency of collection varies, depending on the type of property, but is at least twice per week.

A wide variety of vehicles is currently employed in the collection of refuse, including tractors with side loading trailers, fiat lorries and refuse freighters with compaction equipment.

No distinction is made in the method of collection of waste, whether it be from shops, streets, industry or domestic quarters. All refuse is collected by the same vehicles and disposed of at the same disposal site at Mzedi some 5.5km north east of Limbe town.

This collection and disposal service, however, does not at present extend to the THAs where the majority of the population reside. The waste from these areas is disposed of in an uncontrollable manner that seriously affects both the environment and the health of the inhabitants.

(b) STREET CLEANING

Several studies carried out for the city of Blantyre have recommended that rubbish skips should be provided at strategic locations around the city. These skips should be sited at agreed locations and emptied on alternate days, unless, with experience, this is found to be inadequate. All collected rubbish from street cleaning operations would be placed in these units rather than the current practice of burning, or mobile collection by tractor. The skips used should be compatible with those used for other collection activities.

(c) MARKETS AND COMMERCIAL AREAS

The existing brick-built bunkers, provided at several of the official markets around the city are elevated structures with ramp access to the upper level where refuse is dumped and stored until collection. The refuse is then man-handled out of the bunker through sliding doors into the back of a waiting vehicle. This method is very labour-intensive and has fallen into disuse.

It is recommended that these units be demolished and skips be provided at all official and the large unofficial markets.

Regardless of the type of refuse container, if there is something of potential value in them, then human scavengers will find access. The result is that refuse is scattered all over; flies and other disease vectors are attracted and breed in the refuse. An education programme is necessary to emphasise the potential hazards from inappropriate or inadequate waste management.

(d) INDUSTRIAL WASTE:

The provision of skips, for the collection of waste at the larger industrial premises would greatly improve the efficiency of collection. Wastes are currently collected from numerous small bins which are tipped into the collection vehicle. The provision of a skip would release the city employees from the onerous task of emptying the dustbins and put the onus on industrialists to store waste in an appropriate manner for collection.

(e) PERMANENT HOUSING AREAS

The collection of refuse is currently only undertaken once the property owner or tenant has provided a suitable container usually a small galvanized dustbin; failure to do so may result in collection being refused. Collection is currently planned to take place twice per week, though in some areas this is rarely achieved.

(f) EXTENSION OF COLLECTION TO THE THA (PLANNED AND UNPLANNED):

Refuse collection is not currently provided in traditional areas. The majority of the population of the city, perhaps up to 435,000 people, have no form of solid waste collection and have to resort to disposal on their own property or on public land. The resulting indiscriminate disposal causes vast quantities of refuse to be washed into the streams and rivers of the city forming piles of rotting, unhealthy vermin-ridden waste in public open spaces and along the river banks. It had been proposed to extend the refuse collection service in the THA areas before the year 2000, though this was not achieved.

The system as proposed in the MSDC report of 1992, recommended the provision of covered bins, each of 2m³ capacity, at suitable points/locations around the THAs. The population in the THAs would then be expected to bring refuse to these units. However, a later report by Sir Alexander Gibb Partners called "Upgrading of Waste Management Services in the Major Urban Centres" recommended the use of standard 6m³ skips as communal refuse containers.

The 6m³ skips are now in place in some THAs but they are not adequate. Each skip is estimated to serve approximately 3000 people. The skip locations however do not have hardstanding concrete areas that can easily be kept clean and ramp access to assist in the deposition of refuse.

(g) WASTE CONTENTS AND QUANTITIES:

The 1991 City of Blantyre Local Government Development Project report indicates that the density and content of wastes from different sources in the city vary considerably. Trade wastes contain very little moisture and a high volume of packaging material: while domestic waste has a high moisture content, it is acidic and contains abrasive charcoal ash and sweepings.

Refuse arising from Street cleaning is mostly dust, leaves, and considerable quantities of peelings, paper and plastic. Scrap metal is also collected by the City Council upon request, and disposed of at the tip.

Specialised waste is sometimes collected though it is often delivered to the tip by the producer. Recent problems with disposal of oily wastes have resulted in the banning of various producers from using the site.

As yet there is no control over the disposal of hazardous wastes, other than a refusal by the City Council to accept them for disposal.

During 1994, a total of 5,268 truckloads of refuse were deposited at the site. Of these, 2,706 were operations by the City Council, the remainder being from private contractors or directly from factories. It is estimated by the Cleansing Services Department of the City that the total volume deposited equated to 30,000 tonnes. It is estimated that by 2015 the deposition of solid waste from industrial, commercial, civic and permanent domestic housing stock will increase to 48,000 tonnes per annum. It should be noted that there is no recycling of solid waste in the city of Blantyre.

4.2.1.3.3 Disposal Landfill Site

The current landfill site is a former timber plantation and was acquired by the City Council in 1992. It is situated at Mzedi, some 5.5km north of Limbe town centre, on the Zomba road.

Of the total site area of 17.3ha an area of approximately 3.0 ha is currently being used for waste disposal purposes.

There are currently no under-drains or leachate control at the site. In addition, the lack of adequate compaction

equipment means that the active face is not compacted or covered, and there is potential for water ingress during the wet season. Appropriate compaction plant in the form of a D6 or D8 bulldozer should be available at the tip each day, to ensure the face is covered and adequately compacted.

The original intention of the designers of the landfill site was to compost the waste arising from the THAs, which has a high organic content and is readily biodegradable. This regime has not yet commenced.

Since there is no policy currently in force, as to the safe disposal of hazardous industrial or medical wastes, these wastes are commonly found at the landfill. In addition, there is hardly any practice of sorting or separating, pulverizing, recycling or weighing the waste.

The landfill is not fenced and there is no ablution block for use by the landfill attendants; and scavenging and fire outbreaks are common.

PLANT AND EQUIPMENT:

The solid Waste Management Section of the Cleansing Department has no adequate plant and equipment. As a result, the refuse collection service covers only 30% of the areas intended to be covered. The section has only four refuse trucks and one open tractor. These are very old (over 10 years), and the problem of breakdown is very common.

LIQUID WASTE MANAGEMENT

4.2.1.3.2.0 Septic tank emptying sub-section:

The septic tank emptying subsection also includes the emptying of pitlatrines. This subsection conveys over 2,200 loads per month, giving a daily output of between 4 and 6 loads. This is largely from within the city limits, but on occasions, the section operates outside the city limits.

The septic tank and pit latrine emptying services is carried out by two Leyland vacuum tankers and two micravac vacuum tankers respectively. The demand for the Leyland tankers is low, whereas the demand for the micravac tankers for emptying latrines is very high.

LEYLAND TANKERS:

The Leyland tankers are used for emptying septic tanks both inside and outside Blantyre City. The tankers empty their contents at either one of the water waste treatment works at Limbe or Soche in the city. Outside the city, the number of septic tanks that can be emptied depends on distances and

on whether there is a local dumping place close to the septic tank being emptied.

The city of Blantyre subsidises emptying charges within the city, limiting the charge to K850.50 per 6 cubic meters load. Outside city limits, the charge includes the above emptying charge, as well as mileage claim, hire of vehicle and plant per hour and administration charge of 50% of the total costs.

One existing problem is that some septic tank sites and designs are approved without taking operations and maintenance into consideration. This has resulted in the Leyland vacuum tankers not being able to service some septic tanks.

The Malawi Housing Corporation has 2 vacuum tankers. The tankers are used for Malawi Housing Corporation houses. The Corporation also sells its services to the Government and the private sector. These tankers discharge at the Soche and Limbe wastewater treatment works.

The Ministry of Works, ESCOM and the Malawi Army have vacuum tankers working in the city part time, based on demands from their organisation.

(b) MICRAVAC TANKERS

Pit latrines require desludging and at present, there is a demand which cannot be met. Pit latrines are, however, mainly found in planned and unplanned traditional housing areas. The Leyland vacuum tankers are not sufficiently maneuverable to operate effectively in the unplanned areas handled by the Micravac vacuum tankers.

The Micravac vacuum tankers are each of 2 cubic metres sludge capacity, equipped with a 9,000 litre/minute high-velocity vacuum pump.

The tankers are used for emptying pit latrines inside and outside Blantyre City. The tanker empties the pit latrine and runs directly to the wastewater treatment works, or they discharge their loads into a large vacuum tanker which transports the pit latrine waste to the nearest wastewater treatment works. The vehicle is designed to work in inaccessible areas; it has a high ground clearance, a short wheel base, and good manoeuvrability. The total number of two macravac tankers is far much below the requirement.

4.2.1.4 Health and Social Services Department

This Department is headed by a qualified Medical Officer of Health who is assisted by a qualified Deputy Medical Officer of Health. These two are supported by ten Environmental Health Officers.

The Environmental Health Control Section carries out the inspection of premises to detect the commission of any nuisance, enforces the application of sanitation bylaws, carries out inspections of reported nuisances such as overflowing sewers, noxious streams and watercourses and maintains a laboratory for carrying out chemical and bacteriological analysis.

The Health Education Unit and the homecraft section provide sanitation education and hygiene both in low and high density housing areas, through home visits, to give information about the use of latrines, and disposal of waste water and refuse.

All health educational materials used by the City Council's Health Department is produced by and provided free of charge by the Ministry of Health and Population; and non-governmental organisations.

The Environmental Health Officers have a quite extensive job description, but lack transport. Their involvement in promotion of safe water supplier and improved sanitation is mainly through inspections.

But however, the role played by the Health Department is vital to the implementation of successful sanitation programmes.

4.2.1.5 City of Blantyre - Sanitation Problems

There are many problems which the city of Blantyre faces which affect the performance and delivery of sanitation services. These problems include—

1. inadequate budget both for capital and revenue expenses;
2. lack of or inadequate essential plant and equipment, e.g. refuse trucks, tankers, pumps, blowers, spare parts, etc;
3. frequent breakdowns of existing treatment plants, and blockages in the drains and sewers resulting in environmental pollution;
4. insufficient haulage from septic tanks by tankers;
5. irregular and inadequate garbage collection, especially in THAs;
6. very high generation of refuse by street vendors;
7. lack of systematic training and a capacity building (manpower) programme;
8. vandalism of the City Council's property, plant and equipment especially at the wastewater treatment plants;

9. extensive scavenging and fire outbreaks at the land fill.

4.2.1.6 City of Blantyre - Future Plans

- (a) The new water Act empowers the City Council to transfer some activities/responsibilities to the Blantyre Water Boarding in monitoring pollution from industries and quality of water.
- (b) The 15-year Master Plan of 1996 allows for extension of the sewerage system to cater for the rapidly increasing population of the city of Blantyre.
- (c) Due to long distances from Blantyre to Mzedi landfill in Limbe, the City Council will establish a new landfill site within the vicinity of Biantyre.

4.2.2 City of Lilongwe

Lilongwe is the capital city of the Republic of Malawi and is centrally situated. Since it became the official capital of the country in 1975, the population of the city has been growing rapidly. According to the National Census, the population of 99,000 in 1977 had increased to 234,000 by 1987 with an annual growth rate of 8.7%. This trend has continued and the population is expected to increase to about 668,000 by the year 2005.

Table VII presents the impact of population growth at 6%, 7% and 8% per annum. The first percentage represents the urban average population growth rate for Malawi. The third percentage is a conservative rounding down of the inter 1977-1987 census growth rate for Lilongwe. The middle percentage represents a compromise.

Year	6% AGR	7%AGR	8% AGR
1987	245756	245756	245756
1990	292699	301062	309582
1995	391698	422255	454877
2000	524180	592234	668364
2005	701471	830639	982046
2010	938726	1165014	1442947
2012	1054753	1333824	1683054

Source: Integrated Development Strategy

The graph in Appendix II gives a clear picture of the rapid population growth projected for the City. The difference is merely the varying percentage of rapidity. Table VIII shows the population profile as a percentage of the total population by basic residential classification.

Areas Type	
Squatter areas	26.8%
Undetermined Land (Traditional settlements)	7.2%
High Density planned Traditional Housing areas	44.2%
High density permanent Housing Areas	9.7%
Medium Density Housing Areas	5.1%
Low Density Housing Areas	4.9%
Institutional, Commercial and Government	2.1%
Total	100.0%

Source: Integrated Development Strategy

The squatters, the rural settlements and the THAs (the poorer sectors of the city) make up 78.2% of the population. In basic economic terms, this represents the informal sector. The formal economic sector, therefore, makes up 21.8%

Like in Blantyre, the sanitation services in Lilongwe are provided mainly by three departments of the City Council. These are:-

- (a) City Engineer's Department;
- (b) Cleansing Services Department; and
- (c) Health and Social Services Department.

4.2.3 Sanitation Services in the City of Lilongwe

The Lilongwe City Council is responsible for the overall development, operation and maintenance of the sewerage system and for providing an emptying service for septic tanks and pit latrines. It is also responsible, in broad terms, for ensuring that the city develops adequate sanitation services to meet anticipated growth requirements. Construction of pit latrines and septic tanks is the responsibility of the developers in the extensive Traditional Housing Areas.

In response to the rapid growth in population, Lilongwe City Council prepared a feasibility study on sanitation in 1994, with the aim of instituting an organised sanitation programme which would aid the development of parameters targeting sanitation demands up to the year 2005.

A water supply and Sanitation Master Plan for Lilongwe was prepared with financial assistance from UNDP and the

International Development Association. This led to a major extension and improvement to Lilongwe's water supply. At the same time Lilongwe proposed to undertake a long-term strategic framework and investment plan for sanitation; hence the formulation of the Strategic Plan of 1990- 2005.

4.2.3.1 Sanitation Strategic Plan 1990-2005

The purpose of the strategic plan up to the year 2005 is to ascertain that, depending on the projected growth of the city, all parts of the population can advance in terms of water supply and, consequently, of sanitation. The plan aims at the long-term development of all sanitation services and seeks to ensure that the projected measurements to respond to immediate needs, called emergency works, constitute the optimal project for the period, consistent with the long-term development framework for adequate sanitation services in Lilongwe.

4.2.3.1.1 Objectives of the strategic plan:

The general objective of the strategic plan is to provide continuous access to adequate levels of sanitation for all residents of Lilongwe.

The specific objectives of the plan are:

- (a) the reduction of river pollution to acceptable levels;
- (b) the utilization of low-cost technologies that are affordable by low income residents.
- (c) the centralization of sanitation responsibilities at Lilongwe City Council for more effective control.

The strategic plan also suggests Sanitation Service Standards which are outlined below, and these also appear in the Master Plan:

The proposed service standards were presented in the Master Plan under the following criteria

- (a) acceptability to the users from the standpoint the both from the social point of view and financial affordability;
- (b) technical feasibility as well as representativeness of a least-cost solution;
- (c) desirability to rehabilitate and protect the river courses.

LEVELS OF SANITATION SERVICING:

Three levels of sanitation service are proposed in the Strategic Plan. These are

SEWERAGE SYSTEM

(a) Conventional Water-Borne sewer systems are recommended for:

- (i) all new sewered areas.
- (ii) areas where on-site systems are impractical.

(b) Small bore (solid-free) systems are recommended for—

the existing areas 1,2, parts of 3,4, and 27 which are equipped with septic tanks.

SEPTIC TANKS SYSTEM

Septic tanks are recommended for:

- (i) all areas where they are technically feasible;
- (ii) where it would not be economical to extend a sewer because of the distance to institutional or light industrial areas.
- (iii) existing low density residential areas where problems are not acute.

PIT LATRINES

Pit latrines appear to be a low-cost technology feasible sanitation option that will meet the affordability of the residents in the following areas:

- (i) High Density Traditional Housing (H.D.T.) areas;
- (ii) Unplanned Traditional (Rural areas):
- (iii) Squatter Areas.

The allocation of the three levels of sanitation was estimated as follows:

	1989	2000	2005	
Sewered Areas	3375	9106	10204	Households (hh)
Septic tanks Areas	123	589	729	and hectare (ha)
Pit Latrines Areas	5957	9144	12509	Units (U)
	847	20362	29201	Units (U) of lot

4.2.3.1.3 Serviced population

Based on the sanitation service standards proposed for respective service areas and the planned growth in these areas, an estimate has been made on the serviced population

for the target years of 2000 and 2005. The total population figures contain rural and unplanned areas with 75,000, 101,000 (in 2000) and 128,000 (in 2005) inhabitants. These are as follows:

Sewerage users	-	25,000 persons (9.5%)
Septic tank users	-	52,000 persons (19.8%)
Pit latrines users	-	186,000 persons (70.7%)
Total		263,000 persons (100.0%)

4.2.4 City Engineers Department

The City Engineers Department is responsible for water-borne sewerage reticulation systems and associated wastewater treatment works within the city boundaries. This includes the provision of sewerage systems, their operation and maintenance. The wastewater treatment works receive effluent from the sewerage reticulation systems and from tankers depositing effluent collected from septic tanks and pit latrines.

In Lilongwe, sewerage service is mainly available in parts of the high density population residential areas (H.D.P.) and those occupied by administrative offices and commercial buildings, but the service coverage is low, and many of the residents use septic tanks or pit latrines. The percentage of the service population by various types of sanitation facilities in Lilongwe in 1989, was estimated at 9.5% by sewerage system, 19.8% by septic tanks, and the remaining 70.7% by pit latrines. These figures were considered to be substantially unchanged in 1993.

4.2.4.1 State of Sewerage Facilities

As for the sewerage facilities, until recently there were 11 sewerage treatment plants in Lilongwe (6 operated by the City Council, 3 by the Ministry of Works and 2 by private companies), and approximately 37km of sewers are gravity-flow types, and no pumps are installed in the system.

Table XI presents a summary of each treatment plant. Because of poor maintenance, difficulties with equipment, a shortage of spare parts, insufficient knowledge of operation and maintenance, etc., except for those plants using the stabilization pond process, the treatment was poorly performed, and the treated sewage from these treatment plants was discharged into the Lilongwe and Lingadzi Rivers flowing through the city and caused the water pollution of these rivers.

4.2.4.2 Kauma Sewage Treatment Plant (STP) in Area 44/4 (Stabilising Pond Process)

In line with the Strategic Plan 1990-2005, the Lilongwe Water supply and Sanitation Master Plan of 1983 to 1986, the Feasibility Study of 1992, the City Council of Lilongwe and the Government of Malawi, with financial and technical assistance from the Japanese Government, developed and constructed a modern sewage treatment plant in Area 44/4 near Kauma village. This plant was inaugurated in 1997.

The plant is in a form of stabilising pond process, with a design sewage flow of 8,400m³/day - by 2000 and about 12,900m³/day by the year 2005. This project is essential to provide improved sanitation to all the population in the city, and to meet the increasing demand for wastewater disposal generated by the extension and amelioration of the water supply.

The Kauma sewage Treatment Plant project is in two phases. These are:

PHASE I: 1992 - 1997

(a) Construction of Trunk Sewers

- No. 1 600mm x 4.2km
- No. 2 600m x 5.1km
- No. 3 800mm x 8.5km

TABLE X SERVICED POPULATION PROJECTIONS

	Existing Population Serviced 1989		Estimated Population Serviced 2000		Estimated Population Serviced 2005	
Sewered Areas	9.5%	25,000	14.0%	70,000	11.9%	80,000
Septic Tank Service Areas	19.8%	52,000	16.6%	83,000	18.0%	120,000
Pit Latrine Areas	70.7%	186,000	69.4%	347,000	70.1%	468,000
Total	100%	263,000	100%	500,000	100%	668,000

- (b) Construction of Sewer Network
- (c) Construction of Sewage Treatment Plant
 - Kauma Sewage Treatment Plant (Stabilization Pond)
 - Kauma Pumping Station

PHASE II: 1997 – 2007

- (a) Construction of Sewage Treatment Plants
 - Area 51 Sewage Treatment Plant (Stabilization Pond);
 - Expansion of the Kauma Sewage Treatment Plant;
 - Expansion of the Kauma Pumping Station;
- (b) Extension of Sewer Network.

4.2.4.2.1 Design service area

Areas served by Kauma Sewage Treatment Plant are in the densely inhabited areas where the sewage enters into the trunk sewer by gravity, within the areas along the Lilongwe and Lingadzi rivers. This arrangement took into account the topography range of the river basin, and the operation conditions of the old sewage plants within the city.

Table XII shows the overall planned area served by the Kauma Sewage Treatment Plant.

4.2.4.2.2 Design population

Table XIII shows the population served by the Kauma Sewage Treatment Plant, area by area. This is in accordance with Serviced Population Projections in the Strategic Plan 1990-2005 (See Table X). The population was calculated using the 1987 actual population statistics for the city, with an annual average population growth rate of 6%.

It should be noted that after the construction of the Kauma plant, some old sewage plants in the city which were not functioning properly to the expected standard were closed down, and effluent therefrom connected to the Kauma plant. These old closed-sewage plants are: Area 2 Extended Aeration Plant, Area 6 Stabilization Pond, Area 13 Oxidation Ditch, Area 18A Extended Aeration Plant, Area 18b Oxidation Ditch, and Area 33 Stabilization Pond. (See Table XI).

4.2.4.3 Low-cost Sanitation Unit

Unlike Blantyre, Lilongwe privatised the services of the low-cost sanitation to local small/medium scale entrepreneurs

who also manufacture other concrete products apart from the san-plants. Lilongwe has very little control over these entrepreneurs, hence the monitoring of the construction, quality and sale of the san-plants is very limited.

4.2.4.4 Plant And Equipment

Due to the Kauma project the City Engineer's Section which deals with the reticulated sewerage system has enough plant and equipment and a well equipped laboratory. The only problems observed are that

- (a) the section lacks adequate transport for routine inspections, collection of samples, and maintenance;
- (b) the laboratory lacks appropriately qualified technicians to conduct various quality monitoring tests;

4.2.5 Cleansing Services Department

The Cleansing Services Department is responsible for the management of street cleaning public conveniences, solid waste collection and disposal, and septic tank emptying and disposal throughout the city. The last two services are of particular importance as far as sanitation is concerned in Lilongwe. The department is headed by a Cleansing Services Manager who is a qualified Environmental Health Officer. The Manager reports directly to the Town Clerk and Chief Executive.

4.2.5.1 Solid Waste Management

a) GENERAL DESCRIPTION OF CURRENT SERVICE PROVISION

The City Council of Lilongwe has made it abundantly clear that its first priority is to keep the city clean, and to improve standards of health care.

A major review of the city's solid waste management was undertaken. At present the system only covers the formal sector of the city and markets, i.e. 22% of the city. The service does not include the THAs, or the squatter and rural areas (i.e. the remaining 78%).

A wide variety of vehicles is currently employed in the collection of refuse. These include tractors, fiat lorries and refuse freighters with compaction equipment. There are not enough refuse collection vehicles to carry out the required work.

It was estimated that about 102,693 tons of refuse was collected and disposed of in 1992. With a rapid population growth, this figure, has now more than doubled.

Plant	Treatment Method	Sewer Access Area	Capacity (m/day)	Actual Flow	Effluent Point	Management
Area 2	Extend Aeration	Area 1.2	290	230	Lilongwe River	LCC
Area 6	Stabilisation Pond	Area 6 Maula Prison	300	(80)	Dambo Stream	Min. of Works
Area 13	Oxidation Ditch	Area 13 Capital Hill (A-20) Commercial (A-26) Capital Hotel (A-11)	1770	521	Lilongwe River	LCC
Area 18 A	Extended Aeration	Area 18A	389	58	Lingadzi River	LCC
Area 18 B	Oxidation Ditch	Area 18B	1770	737	Lingadzi River	LCC
Area 33	Stabilisation Pond	Area 33 Kaamuzu Central Hospital	205	472	Lilongwe River	Min. of Works
Area 35	Stabilisation Pond	Area 35 Kamuzu Barracks	630	(250)	Dambo Stream	LCC
Area 46	Extended Aeration	Cold Storage Co. Ltd	-	(58)	Infiltration	Private
Area 46	Oxidation Ditch	New Capital Dairy Co.	-	(21)	Infiltration	Private
Area 52	Stabilisation Pond	Area 52 Kamuzu Inter. Airport	330	-	Infiltration	Min. of Works
Area 53	Stabilization Pond	Area 53 Lumbadzi	1200	133	Lingadzi River	LCC

Area Number	Overall Plan	Project Plan	Area number	Overall Plan	Project Plan
1	144	144	19	28	7
2	140	140	20	37	37
3	32	-	28	113	-
4	129	-	30	271	9
5	29	-	33	93	15
6	67	10	36	25	-
8	23	-	37	95	1
11	39	2	40	12	-
13	43	43	44	(-)	-
16	12	12	47	613	-
18	208	80	Total	2,153	500

(b) HAZARDOUS INDUSTRIAL WASTE

In the absence of a detailed hazardous-waste audit and record keeping by the City Council, it is not possible to report on detailed information. The City of Lilongwe has the second most highly developed industrial area in Malawi founded on maize and tobacco, long distance hauliers, fertilizer and agricultural remedy distributors, steel fabricators, petroleum

products storage, handling and distribution, bitumen products and many other industries. Several of the operations are also represented in Blantyre.

There is scope for the application of the precautionary principle for hazardous waste management in the Lilongwe industrial waste stream, but there does not appear to be as high an environmental risk as in the case of Blantyre/Limbe.

Area	2000	2005	Treat. Plant				Treat Plant
1	8,626	8,635	Kauma	26,7	5788	7,014	Kauma
2	253	3,309	Kauma	28	460	920	Area 51 STP
3	219	253	Kauma	29	989	1150	Kauma
4	748	805	Kauma	30	4389	5670	Area 51 STP
5	69	92	Kauma	33	1943	2011	Kauma
6	115	138	Kauma	35	7000	7000	Kauma
8	46	69	Kauma	36	115	138	Area 35 STP
11	939	1,015	Kauma	37	1633	2080	Kauma
13	345	460	Kauma	40	138	138	Kauma
16	58	69	Kauma	44	345	345	Kauma
18	15,050	15,190	Kauma	47	10419	11927	Kauma
19	150	184	Kauma	51	0	460	Area 51 STP
20	173	207	Kauma	52	1185	1230	Area 52 STP
25	930	1,045	Area 51 STP	53	7184	7819	Area 53 STP
Total	69,309	79,103	70,000	80,000			

It is recommended that the nature of these wastes in the waste stream be investigated. Once the hazardous wastes have been classified and quantified it will be possible to develop a management system to control the disposal of these wastes.

(c) CLINICAL WASTES

Provision must be made for the management of these potentially hazardous wastes. Clinical wastes should be incinerated in line with legislation in the developed countries. If this is not possible the City Council must ensure that the disposal of each load of this type of waste is supervised by a competent health official. The recommended method of disposal is burial, with the non-compostable fraction in backfill trenches at the landfill site.

4.2.5.1.1 Refuse Disposal

Sir Alexander Gibb & Partners (Malawi) were appointed in 1992 to carry out a solid waste management study for major urban areas in the Republic of Malawi.

The Gibb study report stated that an existing landfill site serving Lilongwe (Mchinji Road Site) could be rehabilitated for continued usage. However, this option was rejected because the site was within the Lilongwe Water Board watershed. An alternative site was identified on the outskirts of Lilongwe and was approved by the Planning Department, and the Civil Aviation, Lands and Water Departments. This site designated Area 38/2, covers some 25 hectares, and all solid waste from the City are disposed of there.

Gibb were engaged in March 1996 to carry out a detailed study of Area 38/2 to consider the phasing of development, and to prepare engineering documentation for construction of the first phase landfill site. The Phase 1 area of approximately 5.6 hectares was located precisely within Area 38/2 following a topographical survey and consultation between Gibb, Lilongwe City Council and the World Bank.

Given the close proximity of the site to local dambos and the likelihood that the water table below the site is in hydraulic continuity with these dambos, there is a potential high risk of contamination from the landfill site. The water supply wells located at Chikongo and Chioza may also be at risk from any contamination emanating from the landfill site.

It was established that the ground conditions on the site are not favourable to natural containment, and that the installation of a special low permeability linear wall, therefore, be necessary to prevent future contamination of ground water.

The study concludes that it is technically feasible to establish a composting plant at Area 38/2 landfill site. The financial analysis and subsequent sensitivity analysis shows the composting plant to be financially viable and capable of raising revenue for the Lilongwe City Council.

Technical analysis involved assessment of available data for waste generation and composition. Analysis showed that sixty-two percent of waste currently arriving at the landfill site is putrescible (i.e. compostable). The composting process recommended is based on appropriate technology and on

the nature and quantities of waste. It is estimated that the composting plant would potentially produce between 11,000 and 15,500m³/annum of compost in the year 2005.

Financial viability depends upon improvements in waste collection services, good management, efficient operation of the composting plant, and increases in compost adoption rates by smallholders. Key elements are:

- (a) new legislation and resources are in place to facilitate improved waste collection rates by the Lilongwe City Council, and these will need to be implemented to ensure the supply of putrescible waste to the composting plant;
- (b) the operating guideline in the report, and adequate training of the staff employed at the site should ensure that the plant is operated correctly. The Lilongwe City Council will need to take the appropriate steps to ensure that this is realized;
- (c) the City Council will need to promote the use of compost by small-holders and city residents in order to stimulate the demand for the product. An effective awareness and 'promotion of compost' campaign is, therefore, recommended to ensure that the demand for the product materialises.

There are significant economic benefits arising from composting which comprise:

- (a) extending the life of the existing landfill site through the composting operation;
- (b) providing foreign exchange savings through substitution of chemical fertilisers; and
- (b) improving agricultural yields.

HEALTH AND SOCIAL SERVICES DEPARTMENT

The Department is headed by an Environmental Health Officer who is assisted by fellow Environmental Health Officers.

The Environmental Health Control section carries out the inspection of premises to detect the commission of any nuisance, enforces the application of sanitation bylaws, carries out inspections of reported nuisance such as overflowing sewers, noxious streams and watercourses, and maintains a laboratory for carrying out chemical and bacteriological analysis. However, the work of Environmental Health Officers is hampered by lack of transport.

The Health Education Unit and the homecraft section provide sanitation education and hygiene both in low and high density

housing areas, through home visits, to give information about the use of latrines, and the disposal of waste water and refuse.

CITY OF LILONGWE-SANITATION PROBLEMS

The problems are the same as those faced by the City of Blantyre. In addition there is lack of understanding of city sewage by-laws and civic education, such as would enable the general public in the newly sewered areas to connect to the new sewage reticulation plant at Kauma.

CITY OF LILONGWE - FUTURE PLANS:

As part of its sewerage reticulation programme it intends to connect the following areas to the new sewerage system and to the Kauma Sewage treatment plant.

- (a) AREA 3 - A low-density housing, commercial and institutional area, almost fully developed on septic tanks, with an estimated flow of 1,200m³/day.
- (b) AREA 4 - An industrial and commercial area. There is need for a sewer network in this area to ensure that there is proper treatment of industrial effluent. The area covers 90 hectares of land with an estimated flow of 1,400 m³/day.
- (c) AREA 9 - A low-density housing area covering a total of 260 hectares of land and is currently on septic tanks.
- (d) AREAS 10 - 11, 12 and 43 - Low and medium density housing areas covering a total of 924 hectares of land and currently on septic tanks.
- (d) AREAS 14, 15 and 47 - Medium density housing areas on septic tanks and covering a total area of 794 hectares.

It should be noted that the problem of septic tank overflows in the city is rampant. This is partly attributed to poor construction techniques, such as soakaways being omitted during construction, and partly to saturated ground conditions. To improve the situation, sewerage networks are required in the areas above-listed.

In addition, the City Council of Lilongwe would like to develop the Area 38/2 landfill site so that it can have all necessary facilities e.g. caterpillars D6H 416 Backhoe loader, ablution block, etc. for proper waste management.

4.3 CITY OF MZUZU

Mzuzu has an estimated population of approximately 83,762 people. The annual growth rate is around 7% and the

population projection up to the year 2003 is shown in Table XIV below

Mzuzu's rapid population growth is already placing major demands on the provision of infrastructure and services like watersupply and sanitation services.

The situation becomes even more bleak if one looks at the population breakdown according to the various areas in the city. According to Table XV below, the squatter areas in particular show a phenomenal growth, which will certainly challenge the city's ability to provide basic services.

YEAR	7% AGR
1992-3	59,721
1993-4	63,901
1994-5	68,375
1995-6	73,161
1996-7	78,282
1997-8	83,762
1998-9	89,625
1999-0	95,899
2001-1	102,612
2001-2	109,795
2002-3	117,480

Source: Integrated Development Strategy: 1993-2003

Land Classification	Population	% of total
Squatter-rural	23,677	54%
Upgraded THA	9,290	21%
THA	5,574	13%
High density (permanent)	2,345	5%
Medium density (permanent)	1,327	3%
Low density (permanent)	2,035	4%
Total	55,791	100%

Source: Integrated Development Strategy: 1993-2003

The squatters, traditional settlements and the planned traditional housing areas, make up 88% of the population. This highlights the basic importance of the traditional sector in the growth of the city. It also illustrates the enormous infrastructure and services provision challenge facing the council.

Unlike in the Blantyre and Lilongwe, sanitation services in Mzuzu are under two departments. These are

- (a) City Engineer's Department
- (b) Health Department.

4.3.1 City Engineer's Department

This Department is headed by a qualified civil engineer and he has a deputy as assistant engineer.

Mzuzu has no reticulated sewerage systems. It has only septic tanks and pit latrines. The City Engineer's Department has very little to do with sanitation. The only thing is that it repairs the plant and equipment used by the Health Department in the refuse collection service and septic tank and pit latrine emptying.

4.3.2 Health Department

The Department is headed by the Chief Health and Cleansing Officer who is a qualified Environmental Health Officer who oversees the various functions.

The department has two sections. They are:

- a) Cleansing Services Section
- b) Environmental Health Section

4.3.2.1 Cleansing Services Section

The section deals with street cleaning, refuse collection and septic tank/pit latrine emptying. This section is headed by a cleansing supervisor who is a health assistant. The supervisor is supposed to be assisted by another two health assistants at the level of foremen, but these posts are vacant at the moment.

The population growth rate and movement into the urban areas has decreased the sector of urban population benefiting from any cleansing service provided within the major centres. In fact most of the urban solid wastes are not collected.

Mzuzu provides an adequate refuse collection service for its central business area using manual street sweeping to pre-arranged refuse accumulation points and refuse bins for individual commercial clients which are served by the mobile compaction vehicles.

The low and medium density residential areas, including formally planned townships, are provided with a kerb-side refuse removal service using bins served by the mobile compaction vehicles. There is a shortage of refuse bins.

The traditional housing areas and squatter settlements which have developed in outlying areas are not serviced regularly.

Industrialists are not provided with a containerised solid waste collection service to handle bulky industrial wastes.

It is estimated that the existing waste management system service only covers 10% of the total population of Mzuzu.

All the refuse collected from the city is disposed of in a crude and uncontrolled manner at the Mchengautuwa landfill site, hence posing serious problems of fire outbreaks, scavenging and environmental degradation.

However, a new disposal site at Nkhorongo has been proposed to replace the existing facility. This site appears to be geotechnically and environmentally acceptable.

In those areas where septic tanks and conservancy tanks are in use, the City Council vacuum tanker will continue to provide the desludging service. For pit latrines in traditional housing and squatter settlements, the service is provided by smaller and manoeuvrable pit latrines vacuum vehicles which are fitted with high-velocity and high volume vacuum pumps and 2m³ vacuum storage tanks.

The contents of the tankers are emptied at Luwinga Sludge drying beds.

4.3.2.2 Plant and Equipment

In order, for the City to carry out the rudimentary cleansing services, the Council has the following equipment:

- 2 Refuse vehicles;
- 1 Tractor trailer;
- 1 Microbin;
- 1 Vacuum tanker;
- 1 Macrovac.

4.3.3 Environmental Health Section

This section is headed by a Senior Environmental Health Officer who works with support staff. Like in Blantyre and Lilongwe, the Section is responsible for premises inspection, and enforces the application of sanitation by-laws. It faces transport problems for its operation, and it has no laboratory facilities for bacteriological examination and chemical analysis (for both water and sewage samples).

FUTURE PLANS FOR CITY OF MZUZU

1. To acquire and develop a new landfill site for refuse disposal at Nkhorongo.
2. Funds permitting, to construct a reticulated sewerage system in the city.
3. Again, depending on the availability of funds, to procure and maintain additional plant and equipment for both liquid and solid waste management.

5.0 TOWN COUNCILS

There are eight (8) town councils in Malawi. These are

- (a) Balaka
- (b) Dedza
- (c) Kasungu
- (d) Karonga
- (e) Liwonde
- (f) Luchenza
- (g) Mangochi
- (h) Salima

Apart from Liwonde, all the other town councils have more or less similar amenities, and face the same sanitation problems.

5.1 SEWERAGE SYSTEMS

Liwonde town council has a reticulated sewerage system in the form of sewage stabilization ponds, the effluent of which discharges into the Shire river. However, not all premises are connected to the centralized sewerage system.

The sewerage system for the other town councils is currently based on septic tanks and pit latrines. There is need, therefore, for a centralised sewerage system for each of the above stated town councils, and there is a provision for this in the Environmental Support Programme for Malawi.

5.1.1 Septic Tanks and Pit Latrines

Almost all the town councils apart from Salima and Luchenza have no vacuum tankers. When the septic tanks/ pit latrines are full and need emptying, the respective town councils and/ or landlords have to hire services from either the City Councils, or Ministry of Works and Supplies or the Malawi Housing Corporation. But however, the disposal of the septic tank sludge/effluent from these town councils poses serious environmental problems. These are usually indiscriminately

disposed of in forests, open ditches and spaces, hence causing environmental pollution.

5.2 SOLID WASTE MANAGEMENT:

This service is at rudimentary level. All the town councils cannot meet the high demand for waste collection and disposal. The little waste which is collected in open tractors or ox carts is indiscriminately disposed of or burnt in forests, open ditches and spaces, posing a serious danger of environmental pollution.

5.3 PERSONNEL

All the town councils do not have qualified personnel to handle sanitation issues.

They have in most cases retired the Health Assistants or Health Surveillance

Assistants. For advice on sanitation issues, the town councils rely heavily on the

District Environmental Health Officers from the Ministry of Health and Population.

There is need for capacity building in all town councils of Malawi.

6.0 GOVERNMENT MINISTRIES/ DEPARTMENTS

The following Government Ministries and Departments are involved in the provision of sanitation service to the urban and rural population in Malawi. They should all continue to be involved in the sanitation sector but with a clearer definition of their roles and targets -

Ministry of Health and Population;
Ministry of Water Development;
Ministry of Local Government;
Ministry of Women, Youth and Community Services;
Ministry of Agriculture and Irrigation;
Ministry of Education and Culture;
Rural Housing Project;
Department of District Administration.

6.1 MINISTRY OF HEALTH AND POPULATION (MOHP)

The Ministry is responsible for the planning and provision of improved health conditions for the population of Malawi through many different interventions. In relation to the

sanitation sector, the MOHP has played a significant role in the promotion of the concept of improved sanitation in both urban and rural areas. Through the cadre of Environmental Health Officers, Health Assistants and Health Surveillance Assistants, the construction and proper usage of improved pit latrines has been promoted.

Unfortunately, the Ministry is not geared towards the technical engineering aspects of latrine construction, nor experienced with logistical details which are essential in order to provide an organised and a real latrine construction programme approach for improving the coverage of sanitation facilities throughout Malawi.

The MOHP is very active in the sanitation sector through its Environmental Health Section under the so-called Hygiene Education and Sanitation Promotion Programme (HESP)

This HESP programme is mainly targeted at the rural population and has established very effective participatory bottom-up planning methodology through local structures like the Area and Village Health Committees for effecting community involvement. It uses participatory training as a popular method of imparting knowledge and skills to both health personnel and the local community.

HESP Programme has also developed and produced reference and training manuals on sanitation promotion messages for training health staff, such as the Health Inspectors (HI), and the community members.

Although almost all HESP activities are targeted at rural communities, local councils do have sanitation programmes aimed at urban and peri-urban areas like Traditional Housing Areas. However, there are a number of constraints facing the programme including shortage of staff; failure by the donor to disburse funds in time, which delays implementation of project activities; inadequate training materials; shortage of staff housing and inadequate transport, causing bottlenecks in supervision and distribution of materials.

In general, the implementation of large-scale construction activities throughout the country in relation to sanitation infrastructure delivery may not be best handled by MOHP.

6.2 MINISTRY OF WATER DEVELOPMENT

The Ministry, when it used to be known the Department of Water within the Ministry of Works and Supplies used to have a Sewerage and Sanitation Section. This section assisted urban Councils operating waterborne sewerage schemes with technical advice relating to planning and designing of such facilities. The Department had no connection with the

provision of low-cost, on-site, non-waterborne sanitation facilities.

The current National Water Development Project (NWDP), however, indicates the function of the Ministry within the rural and urban areas in terms of its responsibility towards the provisions of a safe and ample supply of potable water.

This has major implications for possible improvements in community health, through an integrated approach for improved water supply, sanitation facilities and health education.

Recently, a change in the approach by the Ministry towards the implementation of new water schemes has incorporated sanitation promotion, health education and community participation in an attempt to move towards the integrated programme approach to project implementation.

In addition Malawi enacted the Water Resources Act (Chapter 72.03 of the Laws of Malawi) in 1969, along with the Water Regulations, and Schedules and Forms. Additional subsidiary legislation was enacted in 1978. The Water Resources Board was created in 1969. The composition and functions of the Board are of particular importance for the smooth and proper water resources management in the country.

The administration of the provisions of the Act and Regulations has brought out some areas which require immediate attention; and some of the aspects needing further legal provision have been identified as -

- (a) clear authority allowing polluting discharges, and for assessment and collection of fees and charges;
- (b) an adequate statutory basis for the pollution control regulations;
- (c) power to inspect, take samples, and install monitoring equipment for water quality management purposes.

Within the scope or context of the National Water Resources Master Plan, it was necessary to review the country's existing water laws, and related aspects, and to propose appropriate additional legislation in the water sector, like the Water Works Act of 1995, and the establishment of the three Regional Water Boards.

In order to address and resolve some of the problems of water management mentioned above, and in pursuit of its policies and legislation, the Government of Malawi formed the National Water Development Project (NWDP) which was officially launched on 16th September, 1996.

6.3 MINISTRY OF LOCAL GOVERNMENT

The Ministry of Local Government acts in an advisory capacity to the local authorities in relation to sanitation infrastructure options. In 1987, the Ministry secured the services of a Sanitation Advisor to assist initially in the urban areas, and a Low-Cost Sanitation Unit was established in the Ministry to assist local authorities. Sanitation Centres (San-Centres) were set-up in four urban areas (Blantyre, Lilongwe, Mzuzu and Zomba) to promote and demonstrate several options of low-cost, non-waterborne sanitation; to advise householders on technical issues related to these options; and to supply at a cost, householders with essential components required in order to construct or improve their sanitation facility on their own.

As pointed out earlier on, this programme is continuing up to-date and it shows good potential in terms of providing a replicable model for delivery of such services to individuals, at a reasonable cost with mostly individual householder's efforts involved. This urban model is now applicable to the rural areas.

6.4 MINISTRY OF AGRICULTURE AND IRRIGATION

The Ministry of Agriculture and Irrigation, and the integrated rural development projects within the Agriculture Development Division (ADD) are assisting in the promotion and delivery of low-cost sanitation options.

They have as their biggest advantage, in terms of assisting in the improvement of sanitation coverage throughout the country the fact that their extension network is quite extensive throughout the country. These extension staff are currently helping to disseminate multi-sectoral development messages throughout the country, and have been successful in some of the ADDs, in promoting and implementing latrine construction projects.

6.5 MINISTRY OF EDUCATION AND CULTURE

The Ministry of Education and Culture constructs communal-type latrines for their primary and secondary schools, and for the Malawi College of Distance Education Centres. There are currently many problems associated with the schools' latrines, like vandalism, theft and lack of maintenance.

If these problems could be overcome, these institutional latrines offer a good form of practical hygiene education for the students.

6.6 MINISTRY OF WOMEN, YOUTH AND COMMUNITY SERVICES

This Ministry helps the sanitation sector in the promotion and mobilisation of activities at household level: that is, adult education in the area of functional literacy, income-generating activities for women, and organisation of community committees.

Community development staff are requested by implementing ministries/agencies to be seconded and to work within major projects which integrate the promotion of safe water supply, improved sanitation and health education.

6.7 DEPARTMENT OF DISTRICT ADMINISTRATION AND RURAL DEVELOPMENT

The Rural Growth Centres Project under this Department initiated the construction of communal ventilated and improved latrines at market places and district administration offices. But this project has since been discontinued. The Rural Growth Centres Project offered a good opportunity for the dissemination of sanitation technologies to people in the rural areas.

6.8 THE RURAL HOUSING PROJECT

The Government of Malawi, in co-operation with the United Nations Development Programme (UNDP) and the United Nations Centre for Human Settlements (UNCHS), launched the Rural Housing Programme in 1981, in order to address the problems of shortage and quality of housing in both the urban and rural areas of Malawi.

This project was formulated with the objective of training locally-based artisans who would contract their skills to improve national housing conditions. As part of the programme, the participants of this training were taught how to construct improved-type latrines for housing schemes they were contracted to build.

The project was dormant for quite some time, but it has now been revitalised under the Malawi Environmental Support Programme.

7.0 DONORS AND INTERNATIONAL AGENCIES

There are a few donors and/or international agencies involved in the sanitation sector in Malawi. Their involvement is mainly through funding of some specific projects, especially related to the water sector. Consequently, the sanitation sector benefits

from the water projects. The following are the areas in which funding has been made available-

(a) APPROPRIATE TECHNOLOGY

Which must be village operated and designed so that it can be maintained by beneficiaries.

(b) COMMUNITY-BASED MANAGEMENT (CBM)

It is vital in order to avoid the failures of donor or government-driven systems or projects

(c) HYGIENE EDUCATION AND SANITATION PROMOTION (HESP)

Which is a central element of water and sanitation projects.

Some of the donors and agencies involved in the sanitation sector are:

1. UNICEF

UNICEF has a Water and Sanitation Department and it is deeply involved in the HESP and CBM programmes in its effort to promote child survival, protection and development. UNICEF supports the efforts of all key players in the water and sanitation sectors, e.g. Ministry of Health and Population in order to achieve 80% coverage of safe water, and 60% access to adequate improved sanitation in targeted areas.

2. USAID

The major donor involved with the Hygiene Education and Sanitation Promotion (HESP) Programme through the Ministry of Health is USAID. It has in the past also been the largest single donor involved with the Rural Piped Water Supply Programme. USAID has been instrumental in integrating the HESP Programme with the water supply activities. The primary focus has been directed to the Ministry of Health, with secondary funding going towards the Ministry of Water Development. It has been involved in Promoting Health Interventions for Child Survival (PHICS) programme, and it funds some non-governmental organisations like SCF(USA) and (UK).

3. UNDP

Have provided technical assistance to the Ministry of Local Government to set up the Low-Cost Sanitation Unit in the Ministry. In addition, they made funds available for the implementation of the rural sanitation activities.

4 WORLD BANK

Has provided IDA financing for urban infrastructure projects which have had sanitation components to the projects. They have also provided technical assistance and supported some feasibility studies in the sanitation sector. In addition the Bank finances Malawi Social Action Fund (MASAF) activities in which the sanitation sector also benefits.

5. JICA

Has supported feasibility studies and sewerage infrastructure especially in City of Lilongwe (Kauma Sewage Treatment Plant).

6. OTHER

ADB, DANIDA, and GTZ have all provided some sanitation inputs through various integrated Rural Development Projects associated with Agricultural Development Division activities.

Donor support for water supply and sanitation has always been critical for the extension of services and any significant increase in national coverage requires concerted donor effort.

8.0 NON-GOVERNMENTAL ORGANISATIONS (NGOS)

All the NGOs in Malawi fall under the overall umbrella of the Council for Non-Governmental Organizations of Malawi (CONGOMA). CONGOMA oversees and co-ordinates the functions of all the NGOs in the country. The NGOs include:

- (a) Church organizations, e.g. the Christian Council of Malawi, and Evard.
- (b) Private organizations, e.g. Rotary Clubs, World Vision International, C PAR, Universal Concern, Action Aid, etc.

The NGOs are diverse in nature, and they vary in their functions and activities. The activities of some NGOs relate to enhancing sustainable environment. Such activities include promotion of safe water supplies, improved sanitation, and afforestation programmes at grass-root level.

Some of the NGOs which are involved in water and sanitation plus their impact areas are outlined below-

(1) ACTION AID

This deals in the sectors of agriculture, food security, public health, natural resource management, water and sanitation, education, advocacy and policy, and integrated development.

Action Aid covers: Dowa, Mwanza and Salima.

(2) AFRICARE

Africare is involved in public health, water and sanitation, and integrated development.

Its impact areas are the whole northern region, Ntchisi, Ntcheu and Thyolo.

(3) CANADIAN PHYSICIANS FOR AID AND RELIEF (CPAR)

CPAR is active in the following spheres: food security, health, natural resources management, water and sanitation, Aids and family planning, and small scale enterprise.

Its impact areas are Lilongwe and Nkhata-Bay.

(4) CHRISTIAN SERVICE COMMITTEE (CSC)

CSC is involved in the promotion of agriculture, food security, water and sanitation, and social development.

It operates in the Northern Region, Dedza Dowa, Ntcheu, Balaka, Machinga, Mangochi, Mulanje and Nsanje.

(5) CONCERN UNIVERSAL

This NOD is involved in the sectors of agriculture, food security, small-enterprise development, natural resource management, water and sanitation, and integrated development. It also supports other small Malawian NGOs.

(6) COORDINATION UNIT FOR THE REHABILITATION OF THE ENVIRONMENT (CURE)

CURE is a national NGO co-ordinating unit for natural resource management activities. Its core areas include capacity building, co-ordination and information exchange, advocacy and applied research in the field of integrated development, gender, natural resource management, water and sanitation.

(7) EVANGELICAL LUTHERAN DEVELOPMENT PROGRAMME (ELDP)

ELDP is involved in the areas of agriculture, food security, natural resource management, water and sanitation; and integrated development.

(8) MALAWI RED CROSS

This is a national NGO. It is involved in health, disasters, water and sanitation, and integrated development.

(9) PLAN INTERNATIONAL

The sectors in which this NGO is involved are: agriculture, food security, health, natural resource management, water and sanitation, AIDS and family planning, and integrated development.

It works in Lilongwe, Kasungu and Mzimba.

(10) PROJECT HOPE

It is active in health, education, AIDS and family planning, and water and sanitation in Mulanje, Thyolo, Machinga, Lilongwe, Mchinji, Kasungu, Nkhota-kota and Nkhata-Bay.

(11) SAVE THE CHILDREN FEDERATION (USA)

It is involved in food security, health, education, micro-enterprise, AIDS and family planning, and water and sanitation in Namwera and Mangochi.

(12) SAVE THE CHILDREN FEDERATION (UK)

It is involved in the sectors of food security, health, water and sanitation, and AIDS and family planning.

It operates in Salima, Mchinji, Dowa, Ntchisi and Nsanje.

(13) WORLD VISION INTERNATIONAL (WVI)

WVI is active in the sectors of agriculture, food security, health, education, natural resource management, water and sanitation, AIDS and family planning, integrated development and advocacy. Its impact areas are nationwide.

It can be observed from above that all the NGOs are multi-sectoral in nature, and that there are some overlaps and duplication both in the sectors of operation and their impact areas.

9.0 INDUSTRIAL WASTES

Only those industries in the vicinity of Blantyre were visited in this consultancy, and they are documented below. However, most of the industries have branches, or are represented in either Lilongwe or Mzuzu or Zomba or elsewhere.

The industries in Blantyre are either public or private, and can conveniently be grouped into the following:

(a) FOOD PROCESSING INDUSTRIES

- (i) Dairibord (Ex Malawi Dairy Industries)
- (ii) National Seed Oil Company of Malawi
- (iii) Malawi Distilleries
- (iv) Malawi Breweries (Chibukhu Products)
- (v) Southern Bottlers (SOBO and Carlsberg)
- (vi) Universal Food Products
- (vii) Tambala Food Products
- (viii) Naporo Ukana Brewery,
- (ix) Press Bakeries

(b) TEXTILES AND LEATHER PRODUCTS

- (i) David Whitehead and Sons
- (ii) Bata Shoe Company
- (iii) Knitwear Industries Ltd.

(c) PAINTS

- (i) Dulux Paints
- (ii) Rainbow Paints
- (iii) Valmore Paints

(d) PHARMACEUTICAL AND OTHER CHEMICAL INDUSTRIES

- (i) Optichem Fertilizers
- (ii) Chloride Exide Batteries
- (iii) Nzeru Radio company
- (iv) Match Company
- (v) Kiwi Nicholas
- (vi) Pharmonova
- (vii) Caps
- (viii) Blantyre Print and Packaging
- (ix) Industrial Gases
- (x) Lever Brothers
- (xi) Royal Chemical

(e) METAL, CEMENT AND WOOD PROCESSING

- (xii) Engineering Foundry and Metal Fabrication
- (xiii) Portland Cement
- (xiv) Lusitania
- (xv) S.R. Nicholas
- (xvi) Unitimber Industries
- (xvii) Wood Industries Company
- (xviii) Malawi Railways

(f) **PETROLEUM AND PLASTICS**

- (i) Mobil Oil
- (ii) Oilcom
- (iii) Caltex
- (iv) Plastic Products
- (v) Enterprising Containers.

(g) **POWER GENERATING**

- (i) Electricity Supply Commission of Malawi - Power House.

(h) **TOBACCO PROCESSING.**

- Stancam Tobacco
- Tobacco Processors (Malawi) Limited
- Tobacco Handlers Limited
- Tobacco Rehandling Centre Limited.
- Limbe Leaf Tobacco

The Mudi and Limbe Catchments receive the bulk, if not all, of the and commercial wastewater from within Blantyre. industries listed above discharge raw or partially treated effluent into the rivers. The most detailed study on the impact of industrial wastes Limbe rivers was conducted by G. Mvuma between 1992 and 1994. That study showed that Mudi and Limbe rivers were heavily polluted by both inorganic and organic matter. The waters had very high levels of some minerals and gases, e.g. BOD, COD, Nitrates, lead, mercury, chromium etc. which is above the minimum W.H.O and Malawi Water Quality Guidelines. These high levels have detrimental effects on the Fauna and Flora and were attributed to the discharges from the industries listed above (for example, Optichem fertilizers, Cold Storage and David Whitehead and Sons).

There are several pieces of legislation that impact on the functioning of industry. The most notable one with respect to discharges of effluent into sewers is the Local Government (Urban Areas) Act, Cap 22.01. Also relevant are the City of Blantyre (Trade Effluent) By-Laws, 1982.

This legislation imposes conditions restricting the discharge of trade effluent that contains any of the following:

- Calcium
- cyanide
- grease
- insoluble sulphate

- non-biodegradable detergents
- organic solvents
- petrochemical compounds
- phenolic compounds
- radio-active minerals
- settleable solids
- sulphide
- toxic metal
- tar
- toxic organic compounds
- viscera, blood, and other waste from animals
- yeast

In addition to the above, the pH of the discharge shall be within the limits of 5 to 10.

The Act imposes on the owner or occupier the duty to provide a sampling chamber, and to install a measuring flume or notch gauge with a continuous recorder capable of recording the volume of effluent discharged into the sewer. But this is rarely done, monitored or reinforced.

4.1 INDUSTRIAL WASTE TREATMENT

Some of the industries have certain of the pre-treatment facilities. The facilities vary from a simple grease interceptor to a complex, extended aeration plant (Table XVI summaries this).

TABLE XVI: NUMBER AND TYPE OF PRE-TREATMENT PLANTS	
Type	Number of Plants
Settlement	5
Oil Interceptor	7
Biological Filter	1
Activated Sludge	2
Dissolved Air Floatation	1
Total	16

None of the above plants is maintained to a satisfactory standard. The settlement tanks and oil/grease interceptors are not frequently inspected and the contents are often deposited on the adjacent ground.

Of the more sophisticated plants, the biological filtration works at the Cold Storage Company is by-passed; the activated sludge plant at Dairibord is derelict.

At David Whitehead and Lever Brothers factories, the pre-treatment scheme functions, but both have operational problems that result in out-of-consent discharges occurring.

10.0 INSTITUTIONAL ARRANGEMENTS. OVERLAPS AND GAPS IN THE SANITATION SECTOR

10.1 INSTITUTIONAL ARRANGEMENTS

Water supply and sanitation in Malawi is characterised by a fragmented institutional arrangement. Institutional constraints or deficiencies are well recognized. These relate principally to the lack of separation between the regulator and the provider of services. For example, the Water Resources Board is chaired by the Ministry of Water Development and Irrigation which is the operational agency for government-provided water services. In addition, the relationship between the three Regional Water Boards (i.e. Northern, Central and Southern) and Ministries of Health and Population for Health Education, Local Government in terms of sanitation and Women, Youth and Community Services requires clarification and improved co-ordination, to avoid duplication of tasks and competition for the limited resources from central government, district councils and donors.

As for sanitation and health in urban settings, City and Town Councils are responsible for water-borne sewerage systems and septic tank emptying. In rural areas the district councils are responsible for low-cost sanitation, i.e. pit latrines and san-plat distribution, while the Ministry of Health and Population is responsible for health and hygiene education. The Ministry of Women, Youth and Community Services is also involved in mobilization and sensitisation of village/area action groups and the entire communities.

The Government's strategies for attaining the goals of sanitation coverage, as outlined in this paper, should be rationalized into institutional arrangements or approaches that would foster more co-ordination and collaboration amongst the various ministries, departments, local authorities, donors and NGOs involved within the sanitation sector. Presently, as can be observed from the preceding sections, there are many change agents or players involved in the effort to improve sanitation within Malawi. It is necessary, therefore, to clearly define each agent's primary function in achieving the overall goal, so that duplication of efforts is minimised.

However, more detailed analysis shows that sanitation and indeed water delivery in Malawi is essentially a top-down approach, since only the government has the capacity and the funding, however limited it may be, to deliver services to both urban and rural areas. The strategies for sustainability, however, need to be bottom-up with the communities being the decision makers. At the same time, it is recognised that the communities cannot meet the capital cost of investment needed, and, therefore, any sense of ownership and control

over the resources can only come about through their involvement at every stage of the process of service delivery. This can only be achieved through the Community Based Management Approach.

10.2 OVERLAPS/DUPLICATIONS

The first and second International Drinking Water Supply and Sanitation Decades (LDWS SD) emphasised the need for government and other agencies to provide improved water supply and sanitation especially in rural and urban fringe areas, where water and excreta-related diseases commonly occur and where cash, technological skills, institutional and government support are in short supply. In addition, the IDWSSD also stressed the development of socially appropriate and relevant water supply and sanitation programmes, and technologies which the intended communities can accept, afford and participate in.

In Malawi, as has been observed, there are many agencies involved in efforts to achieve the proposed strategies. It is very clear, that to-date, there has been very little co-ordination amongst the agencies involved.

In the PHC approach, intersectoral collaboration is important in water and sanitation programmes. The programmes should be planned and coordinated together with other development programmes such as agriculture, education, housing, nutrition and other child survival programmes, as these tend to support each other. Co-operation among government organisations, international donor community and non-governmental organisations is essential in influencing the success of water and sanitation programmes. Co-operation results in avoidance of conflicting programme.

Community participation is one of the strategies adopted for improvement of water supply and sanitation and is a key element in the PHC approach. For the success of water and sanitation programmes, local communities should participate fully in problem identification, using the existing social structures because the targeted communities have some specific felt needs for water and sanitation. Local-level participation should also involve technology identification, operation and maintenance of such programme. Community participation should also be present at the planning, implementation and evaluation stages of these programmes, otherwise such projects will not gain the support of the community concerned.

In this respect, therefore, a committee needs to be set-up to co-ordinate the efforts of all agencies in the sanitation sector. The committee should comprise at least a representative from each ministry, department, local authority, donor or NGO

involved in the sector. Unless better coordination is realised in the sanitation sector, then the setting of goals, and strategies should be reviewed.

10.3 GAPS IN THE SANITATION SECTOR

From the preceding section above, it is apparent that there are gaps and/or disparities which exist in the planning, provision, operation and maintenance of the sanitation service delivery in Malawi, especially between major city councils and town/district councils.

The existence of the gaps is due to the differences in their rate of socioeconomic development, size and years of existence etc. which is beyond the scope of this paper.

The gaps or disparities which appear maybe categorised into the following areas

(a) ORGANISATION AND MANAGEMENT

(i) BUDGET

Allocation of funds differs from one organisation to another, for the sanitation sector. For example, Blantyre allocates more money than Lilongwe or Mzuzu. This negatively affects the levels at which the sanitation service is delivered. There is need, therefore to harmonise the budgetary system, in order to enhance the service.

(ii) PERSONNEL

The numbers as well as the quality of personnel differ significantly from one organisation to another. For instance, some town councils have only one Health Assistant who mans the whole section dealing with sanitation, while in city councils there are qualified civil engineers. Hence the level of service delivery is also different.

(iii) CAPACITY BUILDING AND DEVELOPMENT

In most organizations, especially the town councils and NGOs, there is no provision for capacity building. There is need to create opportunities to appoint better-quality staff, and develop training and personnel policies.

(b) OPERATION AND MAINTENANCE

(i) PLANT AND EOULPMENT

All city councils have some form of plant and equipment, e.g. refuse trucks, tankers, caterpillars, etc and they do have maintenance workshops. But the quantity, quality and state

of repair of such plant and equipment differ considerably from each one city to another.

Town and district councils have little equipment for service provision.

(ii) RETICULATED SEWERAGE SYSTEMS

Blantyre, Lilongwe and Zomba have reticulated sewerage systems, but they differ in quantity, type, efficiency and state of repair, in addition to the length of sewer network; Mzuzu and all town/district councils depend on septic tanks and pit latrines.

(iii) LANDFILL

All town and district councils do not have specific and organised landfill sites for disposal of solid wastes, and this leads to indiscriminate disposal of such wastes.

The major urban centres of Blantyre, Lilongwe, Mzuzu and Zomba have designated landfill sites, though these are not properly managed.

11.00 MANPOWER AND TRAINING IMPLICATIONS

Improvement, reorganisation and refocusing of training will almost certainly be necessary if staff are to meet the increasing demands of sanitation service-delivery throughout the country.

In this regard, as pointed by the World Bank report on Water Services Sector Study, present and future interventions are considerably dependent on the adopted policy and strategies for sanitary provisions and the availability of resources.

So far as the provision of improved sanitation services is concerned, there are steadily rising expectations of improved and more extensive services. More householders will demand connection to the piped system; the increasing number of new industrial units will want to discharge their wet effluent into already overloaded disposal and treatment systems; and the very large population in unplanned and non-formal settlements will need to be provided with adequate alternative disposal services, to guard against a deterioration of public health and the outbreak of epidemic diseases. Similarly, the efficiency of solid waste disposal needs to be improved to remove the unhealthy and hazardous collections presently accumulating on unplanned sites throughout the country.

The improvements in sanitation services will not require merely the technical, hardware innovations; the provision of better maintained, more effective, technically robust systems,

supported by transport, spare parts and essentials and better software services will be required.

The very large number of households that will never be connected to the piped sewerage systems, and the difficulties of enforcing new environmental legislation, imply a necessity for a high level of additional public educational and informational activity by the Government of Malawi, NGOs and by other concerned agencies and organisations.

Satisfying these increasing demands, in an effective, accountable way, and introducing more substantial elements of cost recovery, will be a major challenge to city councils' technical staff and to the management capability of the senior officials.

Much, of course, will depend upon the pace of implementation of the national strategy for development of water supply and sanitation, and the consequent reorganisation and re-institutionalisation of several services, as part of this strategy.

But, whether or not a decision is taken to integrate the water and sanitation authorities along the lines of the recommendations contained in the World Bank Water services Sector Study (WSSS) Report (November 1994), the type and volume of the training required, in any case, will not be very different:

"Comprehensive training interventions... will have to be planned in conjunction with: policy considerations on service levels; and the availability of technical and financial resources. The shortage of professional manpower is likely to place increased emphasis on in-service and targeted training. Linkages with regional or international institutions for attachment programmes as well as in-house training will provide a good opportunity."

OBSERVATIONS

- (1) Although Malawi has abundant natural resources in the form of land, water, air, fauna and flora, these resources are not well managed because of lack of coherent policies, inadequate legislation, and poor reinforcement of legislation.
- (2) The National Water Services Development Plan (NWSDP) and the National Water Development Project (NWDP) have no adequate provision for Sanitation services. This presents a shortfall, as it is widely accepted that water and sanitation projects must be planned concurrently and in an integrated manner.

- (3) There is very little meaningful community participation in the sanitation sector, both in the urban and rural areas especially with the introduction of multi-party politics in Malawi.
- (4) The existing solid waste collection services are not effective and do not operate efficiently. This is partly due to inadequate refuse collection vehicles to carry out the work, and lack of spare parts. In addition, the fleet age contributes to this and is, in turn, related to the shortage of capital for fleet replacement which is associated with foreign exchange constraints.
- (5) No provision has been made for the specialised handling of hazardous industrial and agricultural wastes.
- (6) Medical wastes are entering the general waste stream and placing the cleansing staff at a higher risk of contracting diseases, in particular the blood-borne disease of Hepatitis B.
- (7) The majority of the people living in the urban centres are served by pit latrines.

Only the cities of Lilongwe and Blantyre have initiated a pit-latrines emptying service that employs effective equipment. The other urban centres lack an effective pit-latrines service.

RECOMMENDATIONS

- (1) There is a need to establish an independent Board in the Sanitation Sector, on similar lines as the Water Resources Board. The Board would formulate policy and would co-ordinate and oversee waste management in Malawi.
- (2) The Ministry of Local Government should be the key Ministry involved with technical and logistical matters in the sanitation sector, in Malawi, through its local authorities.
- (3) The Ministry of Health and Population should be involved in a broad spectrum of activities to provide the end result of good health. This means that the Ministry's strengths and expertise should be directed towards policy-making in terms of service levels, goals, and strategies; promotion and extension; health education; monitoring and evaluation.
- (4) The recognition that sanitation services must be substantially improved, as water consumption increases, places a premium on good management and planning.

The various wastewater sanitation elements - sewerage, wastewater treatment and disposal, and septic tank and pit latrine emptying - interact with one another and should be managed together to provide the most effective service.

- (5) As various reports (World Bank Water Services Sector Study, Main Report, November 1994; Water Resources Management Policy and Strategies, Ministry of Works, Malawi Government, Draft Report, April 1994) have made clear, there is a strong drive towards the establishment of Unitary Sewage Authorities in Blantyre and other major towns and cities in Malawi. This is a positive development which should be encouraged, because the new Unitary Board will have the following advantages:
 - a) Long-term forecasting and planning of water supply and sanitation will be integrated and will not rely on inter-authority co-operation and communication.
 - b) Management decisions involving both water supply and sanitation will be made more expeditiously and with more certainty. Integrated management will foster an awareness of the needs of both services.
 - c) Operational links will be more positive and administrative arrangement in respect of joint operations significantly easier, e.g. the provision of new water supplies and sanitation facilities can be acted upon in concert; action taken on pollution incidents which may affect water supply will be much more rapid because of ease of communications.
 - d) Water supply and piped sewerage tariffs can be combined to provide for charging on a common base, i.e. the metered water consumption, as there is a direct link between water consumption and wastewater discharges.
- (6) The Malawi Housing Corporation septic tank emptying services should be taken over by the respective City Councils in order to provide an integrated service for the cities.
- (7) Standards for sanitation facilities, including on-site systems should be covered by the National Building Regulations.
- (8) In dealing with industrial wastes, a measure of flexibility is required depending on the nature of industrial waste

and the industry's requirements. A tailor-made service is required, and industrial waste management should be charged accordingly. The fact that the polluter must pay for his waste is a fundamental principle of any waste management.

- (9) Hazardous waste should not be accepted without a complete evaluation of environmental consequences associated with each case, in relation to the occupational health of cleansing staff, and the risk of water, soil as well as air pollution.
- (10) Clinical wastes are a special case which require policy, legislation, and regulations to enforce their disposal. The local authorities must ensure installation of proper, modern incinerators, preferably at each of the main hospitals.
- (11) Solid wastes produced by THAs and squatter settlements should be composted. Field evaluations have shown that the refuse from these areas contains 95% biodegradable material. The compost must be screened to remove glass, tin cans, wire and other non-biodegradable residues which should be landfilled.
- (12) According to the International Solid Wastes and Public Cleansing Association, sanitary landfill will continue to be the most commonly used method of ultimate disposal for urban solid waste on a global basis.

Therefore, indiscriminate disposal of wastes in some town/district councils should be stopped; and where there are waste disposal sites, they must be upgraded to sanitary landfill status, in order to achieve the best practicable environmentally acceptable levels of operation.
- (13) The development of privatisation in the public sector is growing significantly, as it is recognised that some service elements can be provided more efficiently and at a cheaper price by the private sector. Clearly, it would not be wise to lose control of essential public services, but this does not prevent elements of the services being undertaken by private sector contractors who are free from the legal and political constraints of local authorities.

It is, therefore, recommended that the solid waste management and the vehicle maintenance units (workshops) of cities of Blantyre, Lilongwe and Mzuzu should be considered for privatisation.

- (14) Accurate and reliable information on the status of sanitation services on a community, district, regional and national basis is essential for effective planning and management.

Therefore, a monitoring system needs to be developed which should be multi-faceted and based on collaboration and co-operation among all government, parastatal and other bodies with responsibility in the sector. This will play an important role in harmonising and co-ordinating sector plans and activities.

- (15) There is need for improved routine collection and testing of samples, and interpretation of the results therefrom. Hence sampling services for sanitation in all the cities need to be significantly improved and upgraded. The requirement will be specific training in laboratory techniques and skills.

- (16) There is need for a close co-ordination of community involvement, as well as health education activities.

In this regard, it is recommended that an Information Education and Communication Unit be established in each local authority, especially in the major ones. This unit would be responsible for the overall co-ordination of community involvement, and health education activities.

- (17) Public services such as waste collection and public toilets must be given considerably more attention, as this would have exemplary effects in health consciousness and motivation. A major catalytic role also belongs to schools.

- (18) The Ministry of Education should strengthen its programme for public motivation, health and hygiene education for children and adults.

**PART IV:
DRAFT REGULATIONS ON SANITATION
AND WASTE**

TABLE OF CONTENTS

Introduction
Public Health Act [Cap. 34:01]
Local Government Act [No. 42 of 1998]
Waterworks Act [No. 17 of 1995]
Environment Management Act [No. 23 of 1996]
Hazardous Wastes and Transboundary Movement of Wastes
Comments on the Consultative Workshops
Recommendations
Conclusion
References
List of Legislation Referred to

ANNEX I

Draft Environment Management (Waste and Hazardous Waste Management)
Regulations
First Schedule
Second Schedule
Third Schedule
Fourth Schedule
Fifth Schedule
Sixth Schedule
Seventh Schedule
Eighth Schedule
Ninth Schedule
Tenth Schedule
Eleventh Schedule
Twelfth Schedule
Thirteenth Schedule
Fourteenth Schedule

ANNEX II

Draft Public Health (Rural Areas) (Health and Sanitation) Rules

A. INTRODUCTION

As a country experiences economic development and population growth, the production and generation of wastes also increases. There is increased pressure on the existing sanitation structures and on the management of waste. Well-developed sanitary measures and sound waste management do contribute significantly to the success of industrialization, as can be seen from the experience of the Western countries. However, industrialization is accompanied by large-scale generation of wastes, which brings in the problem of disposal of the wastes. Some of the wastes generated invariably are hazardous and require careful handling.

The world as a whole recognizes the problems posed by wastes and, in particular, hazardous waste both to people and the environment. This has led to the adoption of international conventions such as, the Basel and Bamako Conventions.

Malawi has no policy directed specifically at sanitation and waste management, but policies such as the National Environmental Policy (NEP), and the National Health Plan touch on this. There are also other policies which address the issues of sanitation and waste management but which are still in draft; these are the draft Environmental Health Policy, and the Draft Programme Plan of Operation for Water and Environmental Sanitation, formulated by UNICEF.

Currently legislation dealing with sanitation and waste is very fragmented. Basically the issues of sanitation and waste management are dealt with under the Public Health Act [Cap. 34:01], Waterworks Act [No. 17 of 1995], Local Government Act [No. 42 of 1998 (under which the city, town and district councils make by-laws) and the Environment Management Act [No. 23 of 1996].

The following are the Terms of Reference (TOR) for the legal component of the study on Sanitation and Waste:

1. In the context of the finalized policy documents for sanitation and the findings and recommendations of the institutional review, assess the adequacy of existing statutes to provide an adequate legal framework for implementations;
2. Prepare draft amendments to existing legislation or draft new legislation (possibly but not necessarily new regulation under the Environment Management Act, 1996) as necessary. All proposals should be made in

conformity with policy and legislation in public health, the environment and local authorities, and should take into account Malawi's obligations under the Basel and Bamako Conventions; the proposal should be discussed with the relevant Government agencies, including the Ministry of Justice;

3. Present the proposed amendments of new legislation to the National legal Task Force for discussion at the national forum
4. Prepare the final report on the basis of the discussions at the national forum,
5. Incorporate comments emanating from workshops and sectoral agencies

The Report, therefore, will discuss the existing legislation which addresses the issues of sanitation and waste. The Report will then go on to discuss waste management, hazardous wastes and trans boundary movement of wastes. The Report will finally discuss the comments made by participants at consultative workshops regarding sanitation and waste management.

Several consultants have carried out reviews on legislation governing the environment generally that touches on sanitation and waste. For instance G.Z. Banda in his paper '**Reform of Environmental Legislation in Malawi: Determining The Scope and Need for Sectoral Review**', touches on a number of issues relating to sanitation and waste.

From the relevant policies, draft policies and the current legislation which touches on sanitation and waste, it is clear that Government is aware of the importance of sound sanitation and waste management.

Given below is an analysis of existing legislation, which deals with sanitation and waste.

B. PUBLIC HEALTH ACT [CAP 34:01]

This Act came into force on 29th July 1945 with the aim to amend and consolidate the law regarding the preservation of public health. Its specific aim is to promote and preserve the health of the peoples of Malawi and related to the issue of health is sanitation and waste. The Act deals with this under two separate parts, namely, Part IX - Sanitation and Housing) and Part X - Conveyance, Sewerage and Draining. Under Part IX, section 62 defines what constitutes a nuisance:

"The following shall be deemed to be nuisances liable to be dealt with in the manner provided in this Part -

- (1)
- (2)
- (3) any street, road or any part thereof stream, pool, ditch, gutter, water course sink water tank cistern, latrine, cesspool, soak-away pit, septic tank cesspit, soil-pipe, drain, sewer, garbage receptable, dust bin, dung pit, refuse pit, slop tank or manure heap so foul or in such a state or so situated or constructed as to be offensive or to be likely to be injurious or dangerous to health;

This part also defines who the author of nuisance is, and provides for notice to abate nuisance, consequences for failure to comply with the notice, and penalties in relation to nuisance.

It further deals with the power to make rules relating to buildings to regulate some matters, including, works and fittings -

- (i) sanitary conveniences in connection with buildings, the drainage of buildings, including the means for conveying soil, waste, storm and subsoil water from buildings and their cartilages and cesspools and other means for the reception or disposal of foul matter in connection with buildings;
- (ii) refuse pits in connection with buildings;
- (iii) private and public sewers and communications between drains and sewers and between sewers.

Part X starts off by giving definitions to the words used in this Part. The Part deals with the issue of public sewers and places the duty on local authorities to provide public sewers and make provision for sewage disposal. The Part also imposes a duty upon the local authorities to keep a map showing public sewers and gives the local authority power to alter or close public sewers and prohibit certain matter not to be thrown into sewer or drains. Further, this Part gives a right to owners and occupiers within districts or local authorities areas to drain into public sewers. This right comes with restrictions such as prohibiting draining any liquid from a manufacturing process or any liquid from a factory into public sewers. This Part makes it a requirement to provide necessary drains and adequate latrines for a new building or extensions. The Part urges the local authority to give to the owners of buildings notice to repair defective latrines or cleanse the latrines or do whatever necessary works in order to put the latrines in a satisfactory condition. Failure to comply with the notice attracts a fine of £5.00.

The first thing to note is that this Act came into force in 1948, over fifty years ago and although some of its provisions have been amended over the years, the last amendment was done in 1967. It is, therefore, an archaic piece of legislation, which needs to be reviewed *in line* with the changes or developments that have taken place over the years.

Although the issues of sanitation and waste are covered under this Act, they are not the main focus.

The Act does not make it mandatory for every local authority to have a sewage system that is environmentally sound, for treating sewage before it is discharged. It is not surprising, in these circumstances that a district such as salima deposits untreated sewage into a forest reserve, and this later finds its way into water bodies.

C. LOCAL GOVERNMENT ACT [NO. 42 OF 1998]

This Act was passed in 1998 and it repealed the Local Government (Urban Areas) Act [Cap. 22:01] and the Local Government (District Councils) Act [Cap. 22:02]. The repealed Acts came into force in 1966 and 1964 respectively, with a number of amendments effected consequently.

Among other things the new Act aims at regulating the affairs of the local authorities.

Section 24 of the Act gives an Assembly powers and functions contained in the Second Schedule of the Act. Further section 103 of the Act gives an Assembly powers to make by-laws for the good of the whole or any part of the local government area or, as the case may be/or the prevention and suppression of nuisances therein and for any other purpose.

The powers of an Assembly contained in the Second Schedule—in relation to environmental protection, which touch specifically on sanitation and waste management are

- (1) (a) establish, maintain and manage services for the collection and removal and treatment of solid and liquid waste, and the disposal thereof whether within or without its area and may compel the use of its services by any body of persons to whom the services are available;
- (b) compel and regulate the provision use, maintenance and repair of drains, latrines and receptacles for solid and liquid waste and the connection of any premises with any public sewer or drain

- (c) require the use of any sanitary service under its control and regulate the methods of dealing with night soil or solid or liquid waste of any description whatsoever:

Provided that nothing in this paragraph shall require an Assembly to accept for disposal any solid or liquid wastes which in the opinion of the Assembly are likely to be deleterious to plant or land fill site or which may contaminate any ground water

5. Subject to the provisions of the Public Health Act an Assembly -
- (a)
- (b)
- (c) may establish, maintain and manage public latrines, toilets, bathhouses, washing facilities and wash houses.
6. Subject to the provisions of any other written law, an Assembly shall be responsible for the drainage, cleansing and sanitation of its area

The second Schedule also has, a provision relating to hazardous materials which states

“subject to the provisions of the Petroleum Act and the Explosives Act, an Assembly may control and licence manufacture, storage, carriage and use of petroleum products, explosives, fire works and other combustible or hazardous materials.”

It should be noted that under section 38 (2) of the Environment Management Act [No. 23 of 1996] the Minister is given the power to grant a licence to a person to handle, store, transport waste, which includes hazardous wastes. However, in the Local Government Act there is no reference to the Environment Management Act.

Section 105 of the Act provides for penalties for breach of by-laws: a fine not exceeding K2,000 on conviction and in the case of a continuing offence a further fine not exceeding K200 for each day during which the offence continues, or to a term of imprisonment not exceeding six months or both such fine and imprisonment.

It is important to note that under the repealed Acts, the breach of a by-law after conviction in the case of a first offence, made a person liable to pay a fine of £50, and to imprisonment for a term not exceeding three months. For a second and subsequent offence a person was liable to pay a fine of £100 and to an imprisonment term not exceeding six months. For

a continuing offence it was £1 for each day the offence continued. The general feeling was that although the fines were in British Pounds, even when translated into Malawian Kwacha at the going rates the amounts were too small to have any deterrent effect. Interestingly, however, when these fines that are in British Pounds are translated into Malawian Kwacha at the going rate of approximately £1-K 76.00, the £50 fine for first offence comes to K3,800 and the £100 fine for a second or subsequent offence comes to K7,600, which amounts are much higher than what is in the new Local Government Act. The observation that the fines are too low to have any deterrent effect still stands.

One of the advantages of giving an Assembly power to make by-laws in respect of sanitation and waste management is that the Assembly can easily make, amend or revoke the by-laws for that local authority to incorporate any changes that may take place without going through the long and tedious process of going through Parliament.

D. WATERWORKS ACT [NO. 17 OF 1995]

This Act came into force on 27th November 1995 and it repeals the Waterworks Act [Cap 72:01], Blantyre Waterworks Act [Cap. 72:02] and Lilongwe Waterworks Act [Cap 72:04]. The Act aims to provide for the establishment of Water Boards and water area and for the administration of such water areas and for the development, operation and maintenance of waterworks and waterborne sewerage system in Malawi and other related issues.

Part V of the Act is about the operation of waterborne sewerage sanitation. This Part is covered under sections 26 to 33. Most of the provisions contained in this Part are a repetition of those contained in the Public Health Act. Under the Public Health Act provisions of public sewers and sewerage disposal work is by the Local Authorities. Under this Act this is to be done by the Board. Although there is an overlap in the provision of public sewers by the Board and Local Authorities there is no mention of consultation or cooperation. This may lead to ineffectiveness.

Part VIII deals with offences and penalties. In this Act penalties are not very different from those of the new Local Government. Under section 50, for causing damage or pollution to any waterworks, public sewer services, etc. a guilty person is liable to a fine of K2, 000 and to a further fine of K500 for each day during which the offence continues. Under section 54 any person who puts or accumulates or allows to be put any foul, noisome or injurious matter or any earth into the works or public sewers fine of K500 for each day during which the offence continues.

Under Part IX, the Board has power, among other things, subject to the approval of the Minister, to make by-laws for the regulation of the use and the prevention of pollution, or any interference with any waterborne sewerage sanitation scheme operated by the Board.

This Act is new and it is hoped that it took cognizance of the current situation on the ground.

E. ENVIRONMENT MANAGEMENT ACT [NO. 23 OF 1996]

This Act came into force on 8th August 1996 and it is the newest piece of legislation relevant to sanitation and waste management. It was passed with the aim to make provision for the protection and management of the environment and the conservation and sustainable utilization of natural resources and for matters connected therewith and incidental thereto. The Part that is relevant to this subject of sanitation and waste management is Part VII (Environmental Management) specifically sections 37, 38 and 39. These respectively are on waste management, licencing of waste and importation and exportation of hazardous waste. Section 37 (1) gives the Minister power to make regulations, on the recommendations of the Council, to control the management, transportation, treatment and recycling and safe disposal of wastes and for prohibiting littering of public places. It is under this provision that the proposed draft Regulations, it is suggested, should be made. The Draft Regulations are contained in Annex I of this Report.

This Act is new and has taken into consideration the current situation of the country and compares very well with similar legislation from other jurisdiction within the Region.

Other pertinent provisions in this Act are sections 66 and 67. Section 67 deals with offences relating to hazardous materials, processes and wastes. A person found guilty under this section is liable to a fine of not less than K20, 000 and not more than K1, 000,000 and to imprisonment for ten years.

Section 67 deals with offences relating to pollution and the penalty is the same as that in section 66. So far these are most severe penalties provided for in the legislation discussed which touch on sanitation and waste management.

F. HAZARDOUS WASTES AND TRANSBOUNDARY MOVEMENT OF WASTES

Wastes include hazardous wastes, and though hazardous wastes and the transboundary movement of wastes were not specifically mentioned in the TOR, the reference to Basel and

Bamako Conventions and the Environment Management Act implied that these issues should also be addressed. The draft regulations have provisions, which deal specifically with these two issues. It is inevitable that in any country where there are industries and medical operations hazardous wastes would be generated, and these need special attention to safeguard the health of the public. Similarly it is inevitable that any country would be faced with the issue of transboundary movement of wastes. It is for this reason that the Draft Regulations contain these provisions.

G. COMMENTS ON THE CONSULTATIVE WORKSHOPS

The consultative workshops that were held were important and useful towards the development of the proposed legislation regarding sanitation and waste management. Participants included stakeholders who actually deal with the issues relating to sanitation and waste. The contributions of the Consultant commissioned by UNEP were invaluable due to his expertise and experience on issues relating to sanitation and waste.

At the first workshop it was observed that there was need to come up with separate rules relating to sanitation, especially for rural areas. Following such recommendations a draft of the sanitation rules was formulated. These draft rules have been made under the Public Health Act [Cap. 34:0] and the full title of the rules is "Public Health (Rural Areas) (Health and Sanitation) Rules, 1999". The Rules are contained in Annex II to this Report.

The heading of the draft Regulations, therefore, now becomes Environment Management (Waste and Hazardous Waste Management) Regulations, 1999.

Concerns were expressed regarding issues of sanitation in the traditional housing areas. It is proposed that the Public Health (Minimum Buildings Standards for Traditional Housing Areas) Rules, 1960 which only apply to areas specified in the Application of Public Health (Minimum Building Standards for Traditional Housing Areas) (Amendment) Rules, 1971 be amended to apply to all traditional housing areas in the country's urban areas.

Participants at the two workshops made some other observations and proposals, most of which have been incorporated in the revised Report. However, one of the proposals made has not been incorporated, namely, to include the words "of wastes" to the words "exporter" and "importer", because these words were defined to set the limit of the normal meaning of the words. To add the words "of wastes" would result in unnecessary repetition.

The reason why the words “of the Act” are used every time there is reference to a section of the Principal Act, the Environment Management Act, is to make it clear that the section is from the Principal Act. Failure to do so would mean citing a section, for instance section 45, which will beg the question of which Act, since there are a lot of Acts. The idea is simply to avoid ambiguity or confusing the users of the Regulations.

The observations and recommendations made by the participants at the second Workshop regarding Public Health (Rural Areas) (Sanitation and Health) Rules, 1999 were incorporated after further consultations with concerned experts in different fields.

The Consultant proposed that the hazardous materials be further identified by their chemical

formulae. This suggestion was not incorporated because most participants were of the view that the Regulations would be too technical while most of the people using the Regulations be essentially lay persons.

The recommendation of the Consultant that the title of the Regulations should be “Environment Management (Solid and Hazardous Waste Management) Regulations, 1999” has not been incorporated because the regulations include the management of all types of waste, including liquids or gases.

The Consultant, in his recommendations relating to the Public Health (Rural Areas) (Sanitation and Health) Rules, made very specific recommendations relating to the building standards of dwelling houses, etc. These have not been incorporated because currently, Malawi has no building standards on which these specific details can be based.

After further consultations with the Consultant it was concluded that there was an urgent need to come up with Building Regulations for Malawi. However, it was also noted that this was outside the scope of the current consultancy. Building Regulations would improve the living conditions of both the urban and rural people.

H. RECOMMENDATIONS

It is important to pass legislation into which different stakeholders have had an input, because the people would then have a sense of ownership; they understand the issues clearly and appreciated the mischief the legislation is trying to address. Effective implementation of legislation requires that the general public should be aware of existing legislation, which affects their lives.

H.1 It is, therefore, recommended that the Government, local authorities and concerned non-governmental organizations should conduct concerted public awareness campaigns and civic education among the people of Malawi so that there would be major change and improvement in sanitation and waste management.

H.2 It is further recommended that the implementers should use the already existing structures for effective implementation and enforcement of the legislation dealing with sanitation and waste

Management: for instance, using the committees that shall be established by Assembly under section 14 (1) of the Local Government Act, 1998 to assist in the discharge of its functions. The relevant committee for sanitation and waste management is the Health and Environment Committee. Further, in a village setting implementers would need to explain to the village headman what the legislation says and why complying with the legislation would be beneficial to the community as a whole. The village headman, in turn, would through the already established channels of communication, disseminate such information to all the people. It would, therefore, be easy for the village headman with the assistance of officers like the environmental officers or health assistants, to ensure compliance. The village headman can even come up with enforcement mechanisms, may be in form of incentives or disincentives.

In an urban setting people in different localities also need to understand why they should comply with legislation relating to sanitation and waste management. For instance, people should realize why wastes should not be carelessly disposed of; why they should have garbage cans e.t.c; and service providers should provide the necessary services for collecting garbage, or pumping sewage from septic tanks.

1. CONCLUSION

From the discussion it is clear that Malawi needs new legislation specifically dealing with sanitation and waste management. The Environment Management Act has useful provisions relating to sanitation and waste, but the Act is not specifically on this subject, even though it addresses the issues relating to the whole environment in general. This observation applies to all the other Acts discussed: Public Health Act, Local Government Act, and the Water Works Act.

It is for this reason that the proposed legislation has been drafted and an amendment is suggested, namely—

- (a) Draft Environment Management (Waste and Hazardous Waste Management) Regulations);

- (b) Draft Public Health (Rural Areas) (Sanitation) Rules, and
- (c) an amendment to the Public Health (Minimum Building Standards for Traditional Housing Areas) Rules, 1960.

However, for the new legislation to be effective it is necessary for the public and private sectors to be really committed to see improvement in the management of sanitation and waste. Having local authorities with good intentions, zeal and knowledge of the law without the capacity, technical expertise,

equipment and resources with which to translate the legislation into practice would achieve nothing. Local authorities especially need to have an effective waste management system, good and sound sanitation rules.

In addition to new legislation specifically dealing with sanitation and waste management, as well as an effective waste management system for the local authorities, involving communities in sanitation and waste management, coupled with effective civic education and public awareness, would achieve a lot.

REFERENCE

1. Banda, G.Z., *Reform of Environmental Legislation in Malawi: Determining The Scope and Need for Sectoral Reviews*.
2. UNEP - *Hazardous Waste – Why African Must Act Now*.
3. UNEP - *Environmental Guidelines for Domestic Wastewater Management*.
4. UNEP - *Basel Convention on The Control of Transboundary Movement of Hazardous Wastes and their Disposal - Final Act*.
5. UNEP - *Revised Model National Legislation on the Management of Hazardous Wastes as well as in The Control of Transboundary Movement of Hazardous Wastes and their Disposal*
6. Malawi Government - *State of Environment Report for Malawi 1998*
7. Malawi Government - *National Environmental Action Plan*
8. Government of Malawi - *Biodiversity Country Study – Components*
9. Crabbe, VCRAC, *Legislative Drafting* (Cavendish Publishing Limited, 1993)
10. Government of Malawi - *National Profile of Hospital Wastes in Malawi, A Brief Overview, 1998*
11. Republic of Uganda - *Draft Waste and Hazardous Waste Management Regulations, 1997*

LIST OF LEGISLATION REFERRED TO

1. Environment Management Act [No. 23 of 1996]
2. Public Health Act [Cap. 34:01]
3. Local Government (Urban Areas) Act [Cap.22:01] (Repealed)
4. Local Government (District Councils) Act [Cap. 22:03] (Repealed)
5. Waterworks Act [No. 17 of 1995]
6. Malawi Revenue Authority Act [No. 14 of 1998]
7. Customs and Excise Act [Cap 42:0 1]
8. Local Government Act [No. 42 of 1998]
9. Water Resources Act [Cap 72:03]

ANNEX I

DRAFT

ENVIRONMENT MANAGEMENT ACT [NO. 23 OF 1996]

ENVIRONMENT MANAGEMENT (WASTE AND HAZARDOUS WASTE MANAGEMENT) REGULATIONS, 2001

IN EXERCISE of the powers conferred by section 37 of the Environment Management Act, I, HARRY IAN THOMSON, Minister of Natural Resources and Environmental Affairs, make the following Regulations -

PART I - PRELIMINARY

CITATION

1. These Regulations may be cited as the Waste and Hazardous Waste Management Regulations, 2001

INTERPRETATION

2. In these Regulations, unless the context otherwise requires-

“carrier” means any person who carries out the transportation of hazardous wastes and other wastes and includes his agents and assignees;

“disposal site” means the land or water area on which waste disposal facilities are physically located;

“disposer” means the person licensed to dispose of wastes under these Regulations;

“domestic wastes” mean wastes generated from residence;

“environmentally sound management of wastes” means taking all practical steps to ensure that wastes are managed in a manner which shall protect human health and the environment against the adverse effect which may result from such wastes;

“exporter” means any person under the jurisdiction of the state of export who arranges for the export of hazardous wastes or other wastes;

“generator of wastes” means any person whose activity produces wastes or if that person is not known, the person who is in possession or control of these wastes;

“hazardous waste” means any waste which has been identified in the First Schedule or any waste having the characteristics defined in the Second Schedule;

“importer” means any person under the jurisdiction of the state of import who arranges for hazardous wastes or other wastes to be imported;

“industrial wastes” mean wastes generated by industries;

“internal movement of wastes” means the movement of wastes within the country;

Cap 1:01

“Local Authority” means the local authority as defined in the General Interpretation Act,

No. 14 of 1998

“Malawi Revenue Authority” means the Authority established under the Malawi Revenue Act, 1998; “medical wastes” means wastes generated by hospitals, clinics, health centres and any other body or institution which carries out similar activities as those of a hospital, clinic or health centre;

“Minister” means the Minister responsible for environmental issues;

“transboundary movement” means any movement of wastes into, from or through Malawi from, to or through any area under the jurisdiction of another state;

“transit” means the passage from one border to another border through the national territory of Malawi including storage in transit bonds;

“wastes” includes ashes, garbage, refuse, domestic wastes, industrial wastes, medical wastes, hazardous wastes and such other materials as are designated in these Regulations;

“waste management system” means any facilities or equipment used in any operations carried out for the management of wastes including the collection, handling, transportation, storage, processing or disposal of wastes

APPLICATION

3. These Regulations shall apply to any person in Malawi whose undertaking involves or includes the generation, handling, use, storage, transport and disposal of hazardous wastes and other wastes and in respect of any activity which involves a risk or harm to human health and the environment.

PART II - MANAGEMENT OF WASTES

SORTING AND DISPOSAL OF WASTE

- 4.-(1) The Minister shall from time to time publish a list in the *Gazette* and in the local newspapers of daily circulation of wastes which fit in categories identified under the First Schedule or which have characteristics identified in the Second Schedule which need to be controlled.
2. Any person who generates wastes shall sort out the wastes by separating hazardous wastes from the other wastes and the other wastes shall be further sorted out into categories of wastes that can be recycled or reclaimed and wastes that cannot be recycled or reclaimed.
- (3) The categories of wastes shall be disposed of in accordance with the most suitable method of disposal, selected from the Ninth Schedule.
- (4) Any generator of wastes may, without licence under these Regulations, dispose of non-hazardous wastes in an environmentally sound manner in accordance with by-laws made by a competent local authority:

Provided that this shall not apply to the disposal of large amounts of domestic wastes.

LOCAL AUTHORITIES TO MAKE BY-LAWS FOR MANAGEMENT OF WASTES

5. (1) Every local authority shall make by-laws prescribing the management of wastes in their respective authorities:

Provided that -

- (a) such by-laws shall not be in conflict with the Act and these Regulations; and
 - (b) such by-laws shall ensure that the disposal method of the wastes is environmentally sound .
- (2) Every local authority shall be responsible for the waste management system and such system shall be in accordance with the provisions of the Act and these Regulations.

LOCATION OF DISPOSAL

6. (1) Any generator of wastes shall dispose of wastes within the area of jurisdiction of the local authority where he generates the wastes.
- (2) Where a person wishes to move wastes from one local authority to another, he shall notify in writing the environmental officers of the local authority from the area of which he is moving the wastes, and of the local authority of the area to which he is moving the wastes, before he applies for any licence under these Regulations.
- (3) The environmental officers in charge of the local authority shall consult and after they are satisfied that the intended site of the waste disposal and the proposed methods of disposal or storage are in accordance with sound environmental management and that the provisions of the Act and the regulations have been complied with, they shall make a recommendation to the Minister for consideration to grant a licence under these Regulations.

COLLECTION OF WASTES

7. Any person responsible for collection of wastes in a local authority area shall collect the wastes at such a frequency as to prevent the piling up of wastes.

LICENCE FOR TRANSPORTING STORING, ETC OF WASTES

8. (1) No person shall engage in the business of transporting, transporting handling or storage of wastes without first

applying for a licence from the Minister in accordance with the provisions of section 38 of the Act.

- (2) (a) Any person who intends to transport wastes from one local authority area to another, or to store wastes shall apply to the Minister for a licence.
 - (b) An application for a licence to transport wastes shall be in the form set out in the Third Schedule and an application for a licence to store wastes shall be in the form set out in the Fourth Schedule.
 - (c) A licence to transport wastes shall be in the form set out in the Fifth Schedule and a licence to store wastes shall be in the form set out in the Sixth Schedule.
- (3) The applications referred to in sub-regulation 1 shall be accompanied by the fee prescribed in the Fourteenth Schedule.
- (4) A person who contravenes the provisions of this regulation shall be guilty of an offence and upon conviction shall be liable to a fine of K500 and to three months imprisonment.

CONDITIONS FOR TRANSPORTING STORING, ETC OF WASTES

9. (1) In addition to the provisions contained in section 38(2) of the Act, the Minister before granting a licence to any person for transporting, storage or handling wastes shall be satisfied —

- (a) that the applicant has adequate and appropriate facilities and equipment to transport, store or handle wastes in an environmentally sound manner;
 - (b) with the collection schedule of wastes of the applicant and, in the case of storage, that the premises are suitable for storing such a category of wastes applied for.
- (2) The Minister shall publish his intention to issue the licence by notice in the *Gazette* and in the local newspapers of daily circulation sixty days before the licence is granted.
- (3) The Minister shall also subject the licence to transport wastes to the following conditions —
- (a) the collection and transportation of wastes shall be conducted a manner that would not cause scattering of the wastes; and

- (b) the vehicle, pipelines and equipment for the transportation of wastes shall be in such a state as not to cause the scattering of, or the flowing of the wastes, or the emission of bad smell from the wastes.

(4) The Minister shall attach the following conditions to the licences for transportation and storage of wastes—

- (a) that the personnel involved in the collection, transportation or storage of wastes shall be provided with
 - (i) adequate protective and safety clothing;
 - (ii) adequate and appropriate equipment or facilities for handling wastes;
 - (iii) safe and secure sitting facilities in the vehicles for transporting wastes; and
 - (iv) proper training and information

- (b) the licensee shall ensure the personnel involved in the collection, transportation or storage of wastes undergo such medical check ups as may be necessary, in the view of the risks faced by the employees, and medical reports of fitness shall be kept by the town clerk of every local authority;

- (c) an inspector may at any reasonable time subject the personnel involved in collection, transportation or storage of wastes to a medical check-up and the costs of such examination shall be borne by the licensee;

- (d) the vehicles for transporting or other means of conveyance and the premises for storage of wastes shall be labelled in such a manner as may be determined by the Minister and

- (e) any other condition which the Minister shall consider relevant for the transport and storage of wastes.

(5) Subject to the provisions of the Act and these Regulations, a licence for transportation or storage of wastes shall be valid for such a period, as the Minister shall determine:

Provided that the Minister may limit the validity of the licence to a specific number of transactions when necessary.

(6) In addition to the powers contained in section 45 of the Act, an inspector may at any reasonable time stop and inspect any vehicle used for the transportation of wastes and enter upon any premises where waste is stored.

MATERIALS FOR STORING WASTES

10. (1) Any person applying for a licence for storage of wastes under regulation 8 shall provide a sample of the container or packaging material in which the wastes shall be stored.

(2) The container or packaging material provided in sub-regulation (1) shall be suitable for the storage of wastes for which the application for storage has been made and shall —

- (a) not be reactive to the wastes in question;
- (b) be free from the possibility of leakage; and
- (c) be capable of protecting the health of persons involved in handling the wastes, the neighbouring community and the environment in general.

(3) Every container which is used in the storage of hazardous wastes shall be labelled in accordance with regulation 11 and shall be disposed of in a manner prescribed by regulation 17.

(4) A person who sells or offers for sale a container which has been used for the storage of hazardous wastes to be used for any purpose other than storage of wastes shall be guilty of an offence.

LABELLING OF WASTES

11. (1) Each container or package of wastes shall have a label written in English and such other relevant local languages affixed onto the container which shall at the minimum contain the following—

- (a) identity of the hazardous wastes;
- (b) name and address of the generator of wastes;
- (c) net contents;
- (d) normal storage stability and methods for safe storage;
- (e) name and percentage by weight of other ingredients or half-life of radio-active material;
- (f) warning or caution statements which may include all, some or any of the following as appropriate—
 - (i) the words “warning” or “caution”;
 - (ii) the words “danger! keep away from unauthorized persons”;
 - (iii) the word “poison” (marked indelibly in red on contrasting background);
 - (iv) a pictogram of a skull and crossbones;
- (g) a statement of first aid measures including the antidote when inhaled or ingested and a direction that a physician must be contacted immediately;

(h) adequate directions for handling should be included in accompanying leaflet including safety precautions in transporting storage and disposal of hazardous wastes and measures for cleaning any equipment used; and

(i) directions for the disposal of the container and the hazardous wastes in accordance with the Act and these Regulations.

(2) The label shall be written in characters that are easily legible.

(3) Vehicles or other conveyances carrying hazardous wastes shall be labelled in accordance with sub-regulation 1 (f).

(4) (a) The label shall contain no warranties, guarantees or liability exclusion clauses inconsistent with the provisions of the Act or these Regulations;

(b) any such warranties, guarantees and liability exclusion clauses shall be void to the extent of their inconsistency with the Act or these Regulations.

DUTY TO TREAT INDUSTRIES AND MEDICAL FACILITIES

12. (1) No industry or medical facility shall discharge any wastes from wastes in any state into the environment unless such wastes have been treated in accordance with acceptable international methods that are approved by the local authority in consultation with the Director.

(2) Any person whose operations discharge wastes into the environment at the date of entry into force of these Regulations, shall within ninety (90) days submit a written proposal specifying the time schedule within which compliance with these Regulations shall be achieved.

(3) It shall be an offence for any person to discharge any hazardous wastes whether treated or not into a disposal site or plant unless such disposal site or plant has been approved and licensed in accordance with and upon the conditions set out in these Regulations and for such purpose.

COMPLIANCE CODE

13. Every industry shall develop a compliance code which shall outline the industry goals for.—

- (a) waste reduction and minimization;
- (b) waste treatment on site; and

- (c) disposal plans.

APPLICATION FOR A LICENCE TO OPERATE A WASTE DISPOSAL SITE OR PLANT

14. (1) (a) Any person who intends to operate a waste disposal site or plant shall apply to the Minister for a licence ,

- (b) an application for a licence to operate a waste disposal site or plant shall be in the form set out in the Seventh Schedule and shall be accompanied by the appropriate fee set out in the Fourteenth Schedule.

(2) Any person carrying out a business of operating a waste disposal site or plant before the commencement of these Regulations shall apply for a licence within ninety (90) days from the date these Regulations come into force.

(3) A person who operates a waste disposal site or plant without a licence shall be guilty of an offence.

LICENCE TO OWN OR OPERATE A WASTE DISPOSAL

15. (1) The Minister may grant a licence in the form set out in the Eighth Schedule to own or operate a waste disposal site or plant, if-

- (a) a written approval has been obtained by the applicant from the local authority within the area of which the waste disposal site is located.
- (b) the local authority is satisfied that the owner or operator of the waste disposal site or plant has the ability and the appropriate facilities to manage the waste disposal site or plant without causing any damage to public health and the environment, taking into account the findings of the environmental impact assessment submitted by the owner or operator, and
- (c) notice has been given by the applicant in the Gazette and such local newspapers of daily circulation as the Minister shall deem fit on the proposed waste disposal site or plant, sixty days before the issue of the licence.

(2) The Minister shall subject a licence to own or operate a waste disposal site or plant to the following conditions.

- (a) the waste disposal site or plant shall be at least outside a radius of one thousand metres away from

a residential or commercial area and water sources;

- (b) the waste disposal site or plant have hazard and safety signs displayed at appropriate places indicating the disposal site or plant and the nature of operations it carries out in accordance with the Ninth Schedule to these Regulations;
- (c) the waste disposal site or plant shall be enclosed and secure from scavenging; and
- (d) the waste disposal site or plant shall be operated in a way which would,—
- (i) avoid polluting surface and underground water;
- (ii) avoid the emission of bad smells from the site or plant to levels beyond any standard prescribed by the Minister under section 30 of the Act; and
- (iii) prevent the breeding of rats, mosquitoes and other vermin at the site or plant;
- (e) the wastes deemed to be hazardous under these Regulations at the disposal site or the plant shall be compacted to a thickness of approximately three metres or less and each layer of wastes shall be covered with at least (30) centimeters;
- (f) hazardous wastes shall be disposed of or treated in accordance with conditions specified in the licence or in accordance with any general guidelines issued by the Minister in consultation with the Minister of Local Government;
- (g) means of ventilation shall be provided at the disposal site or plant to remove bio-gas generated from the disposal site or plant and the smell from the disposal site or plant shall be controlled;
- (h) the personnel working at the waste disposal site or plant shall be provided with .—
- (i) adequate protective and safety clothing;
- (ii) adequate water and appropriate equipment or facilities for the operations of the disposal site or plant;
- (iii) shelter;
- (iv) first aid training and facilities;
- (v) potable water; and
- (vi) communication facilities
- (i) the personnel working at the waste disposal site or plant shall undergo a medical check-up at least once every six months;
- (j) human waste or sewage may be disposed of at a waste disposal site or plant after sewage treatment;
- (k) measures to control or prevent scattering of papers or other light waste materials shall be installed at the waste disposal site or plant.

(3) A licence to own or operate a waste disposal site or plant shall be valid for one year and may be renewed for a like period at a fee set out in the Fourteenth Schedule:

Provided that the Minister may, where he deems it necessary, issue a licence to any applicant under Regulation 8 for the temporary storage of any waste pending final disposal provided that such temporary storage meets the standards required for the storage of such a category of waste under these Regulations.

- (4) Any person who -
- a) operates or owns a waste management disposal site without a licence; or
 - b) discharges wastes onto site or plant which is unlicensed, shall be guilty of an offence.

ENVIRONMENTAL IMPACT ASSESSMENT

- (1) No disposal site or treatment plant for wastes shall be licensed under these Regulations unless an environmental impact assessment has been carried out in accordance with the provisions of sections 24,25,26,27,28, and 29 of the Act.
- (2) Any person operating a disposal site or a treatment plant shall carry out annual audits of the environmental performance of his site or plant and shall submit his report to the Minister.

DISPOSAL OF HAZARDOUS WASTE

17. (1) Where a person intends to dispose of or treat hazardous wastes he shall, in addition to the provisions of regulations 15 and 16, indicate in his application for a licence, the disposal operations he intends to carry out in accordance with the categories identified in the First and Second Schedules and shall enclose.—

- (a) a detailed description of the process he intends to employ and its possible effects;
- (b) a detailed description of the soil structure and geology of the area;
- (c) a plan for managing leachate and other by-products from waste;
- (d) a detailed drawing indicating the structure, construction and surroundings of the waste disposal site or plant; and
- (e) any other matter that may be required by the Minister.

(2) In granting a licence for the disposal of hazardous wastes the Minister shall clearly indicate the disposal operation permitted and identified in accordance with the categories in the Ninth Schedule.

(3) Any person who disposes of hazardous wastes contrary to this regulation shall be guilty of an offence.

PREVENTION OF POLLUTION FROM DISPOSAL SITES AND TREATMENT

18. (1) Every person who operates a wastes disposal site or treatment plant shall take all necessary measures to prevent pollution from waste disposal sites and treatment plants including the erection of necessary works and taking of mitigation measures sites and
- (2) In taking measures to prevent pollution, the operation of such a waste disposal site or treatment plant shall comply with any directions given by an inspector under section 45 and 46 of the Act.

PART III - TRANSBOUNDARY MOVEMENT OF WASTES

TRANSBOUNDARY MOVEMENT OF WASTES

19. (1) Any person who wishes to export or import wastes from or into Malawi shall complete a movement document in the form set in the Tenth Schedule which shall be submitted to the Minister and a copy of which shall be submitted to the local authority to the area of which the imported wastes are destined, or in the area of which the wastes to be exported are situated.
- (2) The Minister shall issue an export licence which, shall be in the form set out in the Eleventh Schedule after considering the movement document submitted under sub- regulation (1) and taking into account the provisions of regulation.
- (3) The Minister shall issue an import licence, which shall be in the form set out in the Thirteenth Schedule taking into account the provisions of sections 39 and 40 of the Act.
- (4) The movement document, and the export and import licences mentioned in sub-regulations (1), (2) and (3) shall be accompanied by the appropriate fees set out in the Fourteenth Schedule.

- (5) Where a licence is issued under the provisions of this regulation, a copy of such licence shall be sent to the Malawi Revenue Authority for the necessary customs verifications and control.

RESTRICTIONS ON EXPORTING HAZARDOUS WASTES

20. The Minister shall grant a licence to export hazardous wastes or other wastes if-
- (a) the applicant does not have the technical capacity or suitable disposal sites to dispose of the wastes in question in an environmentally sound and efficient manner;
 - (b) the wastes in question are required as raw material for recycling or recovery in the state of import; and
 - (c) the import is in accordance with an agreement or arrangement that conforms with the requirements contained in Article 11 of the Basel Convention.

DUTIES OF THE AUTHORITY

21. (1) The Director shall be the national authority for the operation of the prior informed consent procedure for the import, export or any other transboundary movement of hazardous wastes.
- (2) The Director shall closely liaise with the designated national authorities of other states under any international conventions or arrangements to which Malawi is a party and international organizations with competence in the field of the management of hazardous wastes under any convention or arrangement to which Malawi is a party for the purpose of monitoring and controlling the movement of hazardous wastes in Malawian territory.
- (3) The Director shall disseminate information on hazardous wastes management to the public.

NOTIFICATION PROCEDURES AND PRIOR INFORMED CONSENT

22. (1) A licence for export of wastes shall not be issued by the Minister unless by the appropriate fee set out in Fourteenth Schedule, and-
- (a) the Director has notified the designated national authority of the state of import of wastes by sending a copy of the movement document in the form set out in the Tenth Schedule and the notification

document for transboundary movement of wastes in the form set out in the Twelfth Schedule and the comments that the Director made on the documents and has the necessary consents received from such authorities;

- (b) the Director has transmitted the documents provided for in paragraph (a) to the international body designated under any agreement or arrangement to which Malawi is a party or participant and has received favourable comments from such a body.
- (2) The Minister shall not grant a licence to any person who wishes to import any wastes into Malawi which are not hazardous in accordance with the categories identified in the First Schedule unless—
- (a) the Minister has received from the designated national authority of the state in which the wastes is generated a movement document conforming with the provisions of the Tenth Schedule and the notification document conforming with the provisions of the Twelfth Schedule;
 - (b) the applicant has submitted a valid licence or letter of authority from the designated authority of the state where the wastes generated permitting the export of the wastes; and
 - (c) the Minister has received comments from the international body designated under any agreement or arrangement to which Malawi is a party or participant.

PORTS OF ENTRY AND ROUTES

23. (1) A licence issued under these Regulations shall only entitle the licensee to transport wastes through the customs points of entry designated as such under the Customs and Excise Act.

CAP. 42.01

- (2) No hazardous wastes shall be transported by water except for hazardous wastes generated from islands within the territorial jurisdiction of Malawi.

PART IV - MISCELLANEOUS PROVISIONS

REPORTING PROCEDURES

24. (1) Any person who is licensed to carry out any activities under these Regulations shall submit to the Director biannual reports on the conduct of the licensed activities

FIRST SCHEDULE (REG.4, 17)

CATEGORIES OF WASTES TO BE CONTROLLED WHICH ARE HAZARDOUS

WASTES STREAMS

- Y1 Clinical wastes from medical care in hospitals, medical centres and clinics
- Y2 Wastes from the production and preparation of pharmaceutical products
- Y3 Waste from pharmaceutical drugs and medicines
- Y4 Waster from the production, formulation and use of biocides and phytopharmaceuticals
- Y5 Wastes from the manufacture, formulation and use of wood preserving chemicals
- Y6 Wastes from the production, formulation and use of organic solvents
- Y7 Wastes from heat treatment and tempering operations containing cyanides
- Y8 Waste from oils unfit for their originally intended use
- Y9 Wastes from oils/water, hydrocarbons/water mixtures, emulsions
- Y10 Wastes from substances and articles containing or contaminated with Polychlorinated biphenyls (PCBs) and/or polychlorinated (PCTs) and/or polybrominated biphenyls (PBBs)
- Y11 Waste from 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, glue/adhesives
- Y14 Wastes from chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or 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 Residue arising from individual wastes disposal operations

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, seienimum compounds

Y26 Cadmium cadmium compounds

Y27 Antiniony antimony compounds

Y28 Tellurium; tellurium compounds

Y29 Mecury; mercury compounds

Y30 Thallium thallium compounds

Y31 Lead; lead compounds

Y32 Inorganic fluorine compounds excluding calcium fluoride

Y33 Inorganic cyanides

Y34 Acid solutions or in solid form

Y35 Basic solutions or bases in solid form

- Y36 Asbestos (dust and fibres)
- Y37 Organic phosphorus 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 or Polychlorinated dibenzo-furan
- Y44 Any congener or Polychlorinated dibenzo-P-dioxin
- Y45 Organohalogen compounds other than substances referred to in this Schedule (e.g. 39, Y41, Y43, Y44)
- Y46 Organotin compounds (TBT)

CATEGORIES OF OTHER WASTES TO BE CONTROLLED WHICH ARE HAZARDOUS

- Y47 Wastes collected from households, including sewage and sewage sludges
- Y48 Residues arising from the incineration of household wastes
- Y49 Wastes resulting from mining, habitat modification, agricultural activities and industrial operations not specified in this Schedule and/or characterized in the Second Schedule

SECOND SCHEDULE (REG. 4)

LIST OF HAZARDOUS CHARACTERISTICS

UN	CODE	CHARACTERISTICS CLASS*	
1.	H1	<i>Explosive</i> An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.	5.1 H5.1 <i>Oxidizing</i> Substances or wastes which, while in themselves not necessarily combustible may, generally by yielding oxygen, cause or contribute to the combustion of other materials.
3.	H3	<i>Flammable Liquids</i> The word "flammable" has the same meaning as "inflammable". Flammable liquids are liquids, or mixtures of liquids containing solids in solution or suspension (for example paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.50, closed-up test, or not more than 65.5°C, open-up test. (Since the results of open-up tests and of closed-up tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such difference would be within the spirit of this definition).	5.2 H5.2 <i>Organic peroxides</i> Organic substances or wastes, which contain the bivalent -O-O- structure, are thermally unstable substances which may undergo exothermic self-accelerating decomposition.
4.1	H4.1	<i>Flammable solids</i> Solids or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.	6.1 H6.1 <i>Toxic or Poisonous (Acute)</i> Substances or wastes liable either to cause death or serious injury or harm to human health if swallowed, inhaled or by skin contact.
4.2	H4.2	<i>Substances or wastes liable to spontaneous combustion</i> Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.	6.2 H6.2 <i>Infectious substances extremely hazardous to health</i> Substances or wastes containing viable micro-organisms or their toxins which are shown or suspected to cause disease in animals or humans.
4.3	H4.3	Substances or wastes, which in contact with water emit flammable gases substances or wastes which, by interaction with water, are liable to	8. H8 <i>Corrosives</i> Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case leakage will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.
			9. H10 <i>Liberation of toxic gases in contact with air or water</i> Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.
			H11 <i>Toxic (delayed or chronic)</i> substances or wastes which, by intersection with air or water, are liable to give off toxic gases in dangerous quantities. Substances or wastes which if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects including carcinogenicity.

- | | |
|--|---|
| <p>H12 <i>Ecotoxic</i>
Substances or wastes which if released, present or may present immediate or delayed adverse impacts in the environment by means of bio-accumulation and/or toxic effects upon biotic systems.</p> | <p>10. H14 Radioactive wastes</p> |
| <p>H13 Capable, by any means, after disposal, of yielding another material, eg. leachate, which possesses any of the characteristics listed above.</p> | <p>11. H15 Persistent wastes; wastes which contaminate the environment for long periods of time.</p> <p>12. H16 Carcinogenic wastes which may lead to development of cancer in human beings or animals.</p> |

* corresponds to the hazardous classification system included in the United Nations Recommendations on the Transport of Dangerous goods (ST/SG/AC/10/Rev.5. United States, New York, 1988)

THIRD SCHEDULE
(To be completed in triplicate)

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996
ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT) REGULATIONS, 2001

APPLICATION FOR A LICENCE FOR TRANSPORTATION OF WASTES

(reg. 8)

I hereby apply for a Licence to transport wastes, of which particulars are given below

Name and address of applicant: _____

Location and District applied for: _____

Number and type of vehicles to transport wastes: _____

Quantity of wastes per vehicle to be transported _____

Quantity of wastes to be disposed off (tonnes/kg per annum) and source _____

Licensed sites/plant to which wastes are to be transported _____

Collection schedule _____

Any other information _____

Date _____ Signature _____

Designation/title _____

FOR OFFICIAL USE ONLY

Application received by _____

on _____ 20 _____

Fee paid MK (in words) _____

Date _____ Signature _____

Director, Department of Environmental Affairs

FOURTH SCHEDULE
(To be completed in triplicate)

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT)
REGULATIONS, 2001

APPLICATION FOR A LICENCE FOR STORAGE OF WASTES

(reg. 8)

I hereby apply for Licence to store wastes, of which particulars are given below

Name and address of Applicant: _____

Address of Premises where storage will be done: _____

(Plot No., village, town, district, city) _____

Type of wastes to be stored (*indicate number in accordance with Sixth Schedule and describe*) whether liquid, solid or gaseous and their possible impacts: _____

Quantity of wastes to be stored in kg or tons for solids or in cm³ if liquid or gases: _____

Type of containers in which the wastes are packaged: _____

Type of labels on the container (*Describe and attach sample*): _____

Are there any other materials stored in the premises? (*Describe*) _____

Surroundings of the premises (*Describe whether industrial, residential, commercial and whether it is near schools or recreational areas*) _____

Duration of storage applied for _____

Final destination of the wastes _____

Specifications of the construction of the premises including ventilation or other measures and suitability for storage for the specific wastes (*Describe and attach building plans*) _____

Describe the safety measures at the premises _____

Measures for containment and treatment of leachate if applicable _____

Date _____ Signature of Applicant _____

FOR OFFICIAL USE ONLY

Date received _____

Fee paid MK (*in words*) _____

Comments of the lead agency _____

Comments of the Authority _____

Date _____

Name and signature of Responsible Officer _____

Decision of the Technical Committee on the Environment _____

Date _____

Signature _____

Director, Department of Environmental Affairs _____

Date when decision was communicated to Applicant (*attach communication to this form*) _____

Date Signature _____ Name of Responsible officer _____

FIFTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT
NO. 23 OF 1996**

**ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT)
REGULATIONS, 2001**

LICENCE TO TRANSPORT WASTES

(reg.8)

Licence No. TR/HW _____

Name _____

Address _____

You are hereby licensed to transport wastes to (*location/district*) _____

from (*location/district*) _____

Number, type and registration number of vehicles licensed _____

This licence is valid from _____ 20 _____ to 20 _____

This licence is granted subject to the following conditions: _____

Date _____

Signature _____

Director, Department of Environmental Affairs _____

SIXTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT
NO. 23 OF 1996**

**ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT)
REGULATIONS, 2001**

LICENCE FOR STORAGE OF WASTES

(reg. 8)

Licence No. ST/HW _____

Name and Address _____

(Plot No., village, town, city, district) _____

You are hereby licensed to operate a storage facility for the following wastes (*indicated by number in Schedule*)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

at the following address _____

(Plot No., village, town, city, district) _____

This licence shall be valid from (date) _____ 20 _____ to (date) _____ 20 _____

This licence is subject to the following conditions

Date _____ Signature _____

Director, Department of Environmental Affairs

SEVENTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996
ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS MANAGEMENT) REGULATIONS, 2001**

**APPLICATION FOR A LICENCE TO OWN/OPERATE
A WASTES DISPOSAL SITE/PLANT**

(reg. 14)

I hereby apply for a Licence to own/operate a wastes disposal site/plant, of which particulars are given below

Name and address of applicant _____

Location and District of site/plant _____

Approval of Town and Country Planning Authority _____

Type of wastes to be disposed off at site/plant _____

Quantity being disposed off/per annum tonnes/kg _____

(a) Land fill _____

(b) Compost _____

(c) Incinerator _____

(d) Other (specify) _____

Estimated life span of plant site _____

Proposed hectarage/area of site/plant (*include site plan and design*) _____

Executive summary of environmental impact assessment (*please attach*) _____

Any other information _____

Date _____ Signature _____ Designation/title _____

FOR OFFICIAL USE ONLY

Application received by _____ on 20 _____

Fee paid MK (*in words*) (*make it fit*)

Date _____ Signature _____

Director, Department of Environmental Affairs

EIGHTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

**ENVIRONMENT MANAGEMENT (WASTES AND HAZARDOUS WASTES
MANAGEMENT) REGULATIONS, 2001**

LICENCE TO OWN/OPERATE A WASTES DISPOSAL SITE/PLANT

(reg. 15)

Licence No. WD/DW

Name _____

Address _____

You are hereby licensed to own/operate a wastes disposal site/plant at Plot No. _____

(village, town, city, district) _____

This licence is granted valid from _____ 20 _____ to 20 _____

This licence is subject to the following conditions ~

Date _____ Signature _____

Director, Department of Environmental Affairs

NINTH SCHEDULE**DISPOSAL OPERATIONS (REG. 4, 17)**

D1	Deposit into or onto land, (e.g. landfill, etc.)	D17	Reclamation /recycling of metals and metal compounds
D2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.	D18	Reclamation/recycling of other inorganic materials
D3	Deep injection,(e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc	D19	Regeneration of acids and bases
D4	Surface impoundment, (e.g. placement of liquid or sludge)	D20	Recovery components used for pollution abatement
D5	Discards into pits, ponds or lagoons, etc.	D21	Recovery of components from catalysts
D6	Biological treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations in this Schedule	D22	Used oil resulting in benefit to agriculture or ecological improvement
D7	Physic~chemical treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operation, (e.g. evaporation, drying, calcination, neutralization, precipitation, etc.)	D23	Land treatment resulting in benefit to agriculture or ecological improvement
D8	Incineration on land	D24	Use of residual materials obtained from any of the operations numbered D1-D25
D9	Incineration at sea	D25	Exchange of wastes for submission to any of the operations numbered D1-D26
D10	Permanent storage (eg. emplacement of containers in a mine, etc.)	D26	Accumulation of material intended for any operation in this Schedule
D11	Blending or mixing prior to submission for any of the operations in this Schedule		
D12	Repackaging prior to submission to any of the operations in this Schedule		
D13	Storage pending any of the methods of disposal		
D14	Use of a fuel (other than in direct incineration) or other means to generate energy		
D15	Solvent reclamation/regeneration of organic substances, which are not used as solvents		
D16	Reclamation/recycling of organic substances, which are not used as solvents		

TENTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

**ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT) REGULATIONS, 2001**

MOVEMENT DOCUMENT FOR TRANSBOUNDARY MOVEMENT OF WASTES

reg. 19,

Notification for wastes shipment was issued at: _____

Date of issuance _____ / _____ / _____

- Notification for a single shipment
- Notification for multiple shipments for the period _____

This shipment is number _____ general notification number _____

of total shipments included in the _____

¹ To be used in triplicate, one copy to Malawi Revenue Authority

1. EXPORTER NOTIFIER (1)

Name:	Telephone:
Address:	Telefax: E-mail:
Contact person (name, address, telefax)	

2. GENERATOR(S) OF WASTES

Name:	Telephone:
Address:	Telefax:
	E-mail:
Contact person (name, address, telefax)	
Process by which the wastes was generated	
Site of generation	

3. DISPOSER OF THE WASTES

Name:	TO BE COMPLETED BY DISPOSER
Address:	
Telephone:	
Telefax:	
E-mail:	
Contact person in case of emergency (name, address, telephone, telefax, E-mail)	Certificate of receipt of wastes at designated disposal facility
Approximate date of disposal	Method of disposal (3) D code _____ R code _____
Actual date of disposal	Date _____ / _____ / _____ Signature: Actual date of disposal ____ / ____ / ____

4. WASTES

Description of the wastes:						
Y number	H number		UN class		UN number	
UN Shipping name			IC code			
Physical state at 20°C						
Powder	solid	paste/viscous	sludge	liquid	gaseous	other.....
Estimated quantity (kg or L) per shipment 1 st			2 nd	3 rd	4 th	5 th
Type of Packaging						
State the special handling requirements, including emergency provisions in case of accidents:						

7. CONSENT OF THE COMPETENT LOCAL AUTHORITY*(to be completed by the generator/exporter/importer)*

I/we being the generator/importer/exporter hereby declare/guarantee that the information contained in this document is correct and true	signed (generator/importer/exporter) Date:
I/we being the generator/importer/exporter hereby declare/guarantee that there are no objections from all the contracting parties to the Basel Convention and local authorities through which the waste will be transported	signed (generator/importer/exporter) Date
<i>(attach copies of no objections/consent)</i>	Date of consent of Exporting State: _____/_____/_____ Date of consent of Transit State: _____/_____/_____ Date of consent of transit State _____/_____/_____

ANNEX TO THE NOTIFICATION AND MOVEMENT DOCUMENT

- The Notifier is:
 - the person who wants to transit hazardous wastes through Malawi
- "Designation to the wastes" means a designation of the nature and the concentration of the most hazardous components, in term of toxicity and other dangers presented by the wastes both in handling and in relation to the proposed disposal method.
- As per Annex IV of the Basel Convention: D or R Code.
- This must include the point of entry and the point of exit of the wastes, inside or outside the country.
- In the case of a general notification covering several shipments, the expected dates of each shipment have to be specified. If this is not known, the expected frequency of the shipments.

ELEVENTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

**ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT)
REGULATIONS, 2001**

LICENCE TO EXPORT WASTES

(reg. 19)

Licence No. EX/HW _____

Name and address _____

(Plot No., village, town, city, district) _____

You are hereby licensed to export the following wastes (indicated by number in Sixth Schedule)

To (*name and address*) _____

This export shall be made through _____ border/customer control post

This licence shall be valid from (date) _____ 20 _____ to (date) _____ 20 _____

This licence is subject to the following conditions: _____

(attach a copy of authorization by the state to which the export is to be made)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Date _____ Signature _____

Director, Department of Environmental Affairs

TWELFTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI**ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996****ENVIRONMENT MANAGEMENT
(WASTES AND HAZARDOUS WASTES MANAGEMENT) REGULATIONS, 2001****NOTIFICATION DOCUMENT FOR TRANSBOUNDARY
MOVEMENT OF WASTES
(FOR TRANSIT PURPOSES ONLY)**

(reg. 22)

1. NOTIFIER*

Name: Telephone:	
Address:	Telefax:
	E-mail
Contact person (name, address, telefax, E-mail)	

2. GENERATOR (S) OF WASTES

Name:	Telephone
Address:	Telefax:
	E-mail
Contact person (name, address, telefax, E-mail)	
Process by which the wastes was generated:	
Site of generation:	

3. REASON FOR WASTES EXPORT/IMPORT

Why the wastes cannot be disposed in, the country of origin
Why the wastes would have to be exported/imported through Malawi

4. WASTES

Wastes Description						
Y number	H number		UN class	UN number		
Shipping name		IWIC code				
Physical state at 20°C						
powder	solid	paste/viscous	sludge	liquid	gaseous	other _____
Estimated quantity (kg or L) per shipment:						
Type of packaging Number of packages						
Special handling requirements including emergency provision in case of accidents:						
Method of disposal:						

5. EXPORTER/IMPORTER OF THE WASTES

Component authority and details of approval		
Exporter/Importer of the Wastes in the country of origin/destination		
Name	Telephone	Telefax
	E-mail	

6. DISPOSER OF THE WASTES

Contact person in case of emergency		
Name:	telephone	telefax
	Email	
Approximate date of disposal		
Actual site of disposal		
Signature and official stamp of disposer		

7. TRANSIT

Projected length of time the wastes shipment shall be on transit on Malawi territory
Expected date of entry
Expected date of exit
Means of transport envisaged
Information relating to insurance (Guarantee that the person responsible shall fully compensate any damage caused to human health, property or the environment, by the wastes in question during transit)

8. DECLARATION

I/we*	being the exporter/importer* hereby declare that on
<p>I/we entered into a contract with the disposer and that I/we shall be bound by the terms of the said contract (attach a copy of contract)</p> <p>Signed (Exporter/Importer)</p>	
I/we*	being the exporter/importer* hereby guarantee/declare
<p>that the above information is correct and true.</p> <p>Signed (Exporter/Importer)</p>	

* delete whichever is inapplicable

THIRTEENTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

**ENVIRONMENT MANAGEMENT (WASTES AND HAZARDOUS WASTES
MANAGEMENT) REGULATIONS, 2001**

LICENCE TO IMPORT WASTES

(reg. 19)

Licence No. IM/HW _____

Name and address of Importer: _____

(Plot No., village, town, city, district) _____

Purpose for which the imported wastes are licensed _____

You are hereby licensed to import the following wastes: _____

from (name and address) _____

to (name and address) _____

This import shall be made through border/customs control post _____

This licence shall be valid from (date) _____ 20 _____ to (date) _____ 20 _____

This licence is subject to the following conditions _____

(attach a copy of authorization by the State from which the importation is to be made) _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Date _____ Signature _____

Director, Department of Environmental Affairs

FEES reg. 8, 14

Column 1	Column 2		Column 3	
Matter	Upon first application		Upon renewal of licence	
	K	t	K	t
1. Application for a licence to transport wastes.				
2. Application for a licence to store wastes.				
3. Application for a licence to operate! own a disposal site or plant.				
4. Application for a licence to export wastes (movement document)..				
5. Application for a licence to import wastes (movement document)..				

ANNEX II

DRAFT

PUBLIC HEALTH ACT [CAP. 34:01]

PUBLIC HEALTH (RURAL AREAS) (HEALTH AND SANITATION) RULES, 2001

IN EXERCISE of the powers conferred by section 75 of the Public Health Act, I, 9

LILIAN PATEL, Minister of Health and Population, make the following Rules –

CITATION

1. These Rules may be cited as the Public Health (Rural Areas) (Health and Sanitation) Rules—

INTERPRETATION

2. In these Rules, unless the context otherwise requires -

“authorised officer” includes a medical officer of Health, an environmental health assistant and an environmental health officer;

“dwelling house” means a building used exclusively or partly for the purpose of human habitation.

DWELLING

3. Every dwelling house shall have adequate space and house shall be provided with adequate lighting and ventilation.

PIT LATRINE

4. - (1) Every household shall be provided with a pit latrine, the doorway of which shall be screened from view.
- (2) A pit latrine shall be at least 2.5 metres in depth from ground level to the bottom of the pit and shall be provided with a roof the height of which shall be at least 2 metres from the floor to the underside of the roof:

Provided that when the surface of the water table is more than 2.5 metres below ground level, a depth of 2 metres

from ground level to the bottom of the pit shall be permitted.

- (3) A pit latrine shall be provided with a concrete slab, where affordable, and shall be covered with a fly proof cover.
- (4) A pit latrine shall be located at least 6 metres from the kitchen or a dwelling house and at least 1.5 metres from the boundary of the plot.
- (5) A pit latrine shall be located at least 30 metres away from any well, spring, stream, underground water supply, water reservoir, pool or borehole.

KITCHEN

5. - (1) Every household shall be provided with a kitchen.
- (2) Every kitchen shall be provided with satisfactory means of smoke escape.
- (3) No person shall sleep in any kitchen or part thereof

BATHROOM

6. - (1) Every household shall be provided with a bathroom which shall —
 - (a) if not roofed, be provided with a fenced enclosure screened in such manner as to provide complete privacy; or
 - (b) if roofed, be provided with adequate lighting and ventilation.
- (2) The average height of every roofed bathroom from the floor to underside of the roof or ceiling shall not be less than 2 metres.
- (3) Adequate provision shall be made for the disposal of all waste water by means of a soak pit or other method approved by the authorized officer.

SURROUNDINGS OF DWELLING HOUSE

7. - (1) Every dwelling house shall have surroundings which are kept clean and free from long grass for a radius of 5 metres from the dwelling house.
- (2) No person shall
- (a) deposit empty vessels, refuse or cow dung heaps;
 - (b) grow annual or permanent crops, within the surroundings referred to in sub-rule (1) above.

DISPOSAL

8. - (1) Every household shall have a refuse pit for disposing of house refuse
- (2) After the refuse pit is full, the refuse shall be burned, buried or composted.

FOOD STORE OR GRANARY

9. Every household shall have a rat-proof store or granary

DOMESTIC ANIMALS

- 10.- (1) No animal shall be kept in a dwelling house or kitchen except for a cat.
- (2) **No person shall sleep in a house built for keeping animals.**

POLLUTION OF WATER SUPPLY

11. No person shall pollute, damage, bathe or wash in any water source where the public draw water for domestic purposes.

ANIMALS NOT TO GET INTO DRINKING, E.T.C

12. No person shall cause any animal to get into water which is used by the public for domestic purposes

ENTRY AND INSPECTION

13. An authorised officer may at all reasonable times inspect all water sources or enter upon the site of any building or into any building for the purpose of ensuring compliance with any of these Rules.

PENALTIES

14. Any person who contravenes any provisions of these Rules shall be guilty of an offence and shall be liable to a fine of K500 or three months imprisonment.

Made this _____ day of _____ 20 _____

L. PATEL
Minister of Health and Population

**PART V:
DRAFT TOXIC SUBSTANCES AND
CHEMICALS POLICY**

TABLE OF CONTENTS

1.0 PREAMBLE

2.0 POLICY GOALS AND GUIDING PRINCIPLES

2.1 Overall Policy Goal

2.2 Specific Policy Goal

2.3 Guiding Principles

3.0 SECTORAL OBLIGATIONS AND INSTITUTIONAL FRAMEWORK

3.1 Sectoral Obligations

3.2 Institutional Framework

4.0 MANAGEMENT OF TOXIC SUBSTANCES

4.1 Regulations for Management of Toxic Substances

4.2 Import and Manufacture

4.3 Usage of Toxic Substances and Chemicals

4.4 Hygiene in Metal Processing Industries

4.5 Hygiene in Laboratories and Other Work Places

4.6 Hygiene in Health Care Institutions

4.7 Agriculture Run-Off

5.0 WASTE MANAGEMENT

5.1 General Waste Management

5.2 Characterisation of Wastes

5.3 Disposal of Liquid Toxic Wastes

5.4 Disposal of Solid Toxic Wastes

5.5 Open Air Dumping

1.0 PREAMBLE

1.1 Malawi's economy is dominated by agriculture, which employs about 85% of the total working population, and contributes about 37% of the Gross Domestic Product. This being the case, agricultural chemicals in form of fertilizers and pesticides constitute a large percentage of the chemicals used in Malawi. In addition, there are substantial amounts of chemicals handled in various industries. These include the textile, sugar processing, paint formulation, pharmaceuticals and detergent making industries, to mention but a few. These constitute a high proportion of the toxic substances used in Malawi.

1.2 Malawi produced a National Environmental Action Plan (NEAP) which was formerly launched in 1994. This was followed by the National Environmental Policy (NEP) and the Environmental management Act that came into force in 1996. All these were after long and exhaustive consultations between government Ministries, non-Governmental Organisations (NGOs) and other stakeholders in Malawi. The National Environmental Policy focuses on the following principles:

- Prevention of degradation of the environment;
- Protection of the environment;
- Conservation and enhancement of biological diversity of Malawi; and
- Provision of a healthy living and working environment for the people of Malawi.

1.3 Management of toxic substances in Malawi is characterised by a fragmented institutional arrangement. Besides, the NEP, other sectoral policies that incorporate management of toxic substances also exist. Examples of these are the Occupational Safety, Health and Welfare Act, 1997, the Pharmacy and Poisons Act (amended in 1982), the Dangerous Drugs Act, the Customs Act, the Pesticides Bill and the Malawi Bureau of Standards Act. These are, however, rather broad and do not address toxic substance issues to the desired depth and detail.

1.4 There are voluntary management initiatives by individual institutions and organisations to manage toxic substances. These include regulation of import, use and general management of pesticides. Others follow international standards for management of hazardous and toxic substances. These are however frustrated by the lack of any regulatory facilities in the country.

1.5 Lack of adequate environmentally sound management including disposal facilities for liquid and solid toxic and other hazardous waste puts at risk national public health and the safety of surface and groundwater bodies which are direct recipients of these toxic substances.

1.6 The Ministry of Agriculture is responsible for approval and registration of pesticides and other agrochemicals. Likewise the Malawi Pharmacy and Poisons Board is responsible for registration of medicines and poisons. The Department of Environmental Affairs will play a facilitating, coordinating and advisory role in ensuring implementation of this policy. This will be in full consultation with the above institutions.

1.7 City, Municipal and Town councils under the Local Government Department are service providers for sanitation services including waste disposal services. These however do not have any policy on management of toxic substances and wastes except for bye- laws, which are outdated and therefore due for review.

1.8 The objectives of the Policy on Toxic Substances and Chemicals should be seen as addressing the range of problems with the management of chemicals and chemical formulations that are potentially toxic to human health and the environment.

2.0 POLICY GOALS AND GUIDING PRINCIPLES

2.1 OVERALL POLICY GOAL

The overall policy goal is the sustainable promotion of human health and protection of the environment through proper management of toxic substances and chemicals in such a manner as will not render them a hazard to human health and the environment.

2.2 SPECIFIC POLICY GOALS

The policy seeks to accomplish the following goals:

2.2.1 Promote the proper use of toxic substances and chemicals in order to accrue maximum benefits with minimal effects on human health and the environment.

2.2.2 Ensure that only approved chemicals and pesticides are used in Malawi so as to control illegal introduction and use of chemicals some of whose use has been banned or severely restricted.

2.2.3 Ensure that the necessary disposal options are available for the range of toxic substances and chemicals registered and being used in Malawi.

2.2.4 Increase awareness for the need to ensure proper and adequate pre-treatment of waste prior to discharge through public sewers and landfills.

2.2.5 Enhance public awareness on the importance of maintaining hygienic conditions in all public and private institutions including their laboratories and other premises handling toxic chemicals.

2.2.6 Ensure that people handling waste disposal facilities are aware of dangers of toxic substances and are able to dispose of these wastes with minimal exposure to themselves, the general public and the environment.

2.2.7 Ensure participation of the private sector, NGOs, and community - Based Organisations (CBOs), in the management of toxic substances to increase benefits and the protection of human health and the environment.

2.2.8 Periodically review sectoral legislation on toxic substances to reflect changes in the state of the environment. Such reviews shall include, among other things, adequate incentive and punitive measures, and statutory powers of the Department of Environmental Affairs to manage toxic substances.

2.3 GUIDING PRINCIPLES

The general guiding principles in the National Environmental policy related to toxic substances include:

- (a) Every person has a right to a clean and healthy environment and a duty to maintain and enhance the environmental quality.
- (b) The masses are the most vulnerable and should therefore be sensitised in issues of toxic substances and chemicals with a view to involving them in management of these toxic substances. This should involve translation of regulations into local languages.
- (c) Management of toxic substances can only be achieved with the full cooperation of the public. Regulation should be complemented by social and economic incentives to influence behaviour for individuals or organisations to invest in sound technologies for reduction, recycling and treatment of hazardous and toxic wastes.
- (d) Regular and accurate assessment, monitoring and dissemination of information on toxic waste generation should be undertaken.
- (e) Minimised environmental degradation should be ensured through the use of environmental and health impact assessments and environmental auditing.

- (f) Every person or institution that handles toxic substances has a responsibility to train staff on safe handling and management of toxic substances and chemicals
- (g) Every person or institution that handles toxic substances has a responsibility to provide suitable and adequate protective clothing to employees.
- (h) Every person who generates waste has under all circumstances, a role to play in the fate of the generated waste. The generator has a duty to take responsibility for the waste generated.
- (i) The generator of waste should characterise waste by type and hazardousness for ease of collection, transportation, storage, handling and disposal as stipulated in the regulations.
- (j) Waste prevention should be ensured by minimising waste during production, by using appropriate technologies, recycling, recovery and waste treatment to reduce toxicity and quantities of waste.
- (k) Use of appropriate technology for disposal of waste should be adopted; this includes the reduction of hazardousness by land filling, incineration and/or containment.
- (l) Integration of environmental considerations in waste generating and waste disposal activities should be done, to ensure that less toxic wastes are generated and disposed of in disposal facilities.

3.0 SECTORAL OBLIGATIONS AND INSTITUTIONAL FRAMEWORK

3.1 SECTORAL OBLIGATIONS

The government is committed to its responsibility in taking pro-active steps to foster good hygiene to prevent the degradation of the quality of public health and the environment by improving management and disposal of toxic substances and chemicals. The Environmental Affairs Department is responsible for execution of this policy and the regulations made for its implementation. The government also appreciates that there are currently several stakeholders involved in handling toxic substances. EAD will, therefore, need to co-operate and collaborate with other government institutions, local communities, NGOs and the private sector in ensuring proper management of toxic substances and chemicals.

Though basically involving only chemicals, pesticides and plants, toxic substances cover a very wide field. The toxicity these can have on human health and the environment can be very profound. These, therefore, require strict regulations for the control of manufacture, import, sale, handling, transportation, storage and disposal. Government is aware of the high cost of investment in the management of hazardous and toxic wastes. Popular participation will be paramount, to ensure sustainable management of toxic substances.

3.2 INSTITUTIONAL FRAMEWORK

The Department of Environmental Affairs holds responsibility for ensuring the sound management of toxic substances, with the aim of protecting human health and the environment. The Department shall collaborate with other partners in the management of toxic substances. Specifically, the Department shall:

- (a) Operate as a co-ordination institution to ensure harmonisation of all initiatives towards management of toxic substances and chemicals in Malawi;
- (b) Provide technical advice to other stakeholders on toxic substances and chemical management issues;
- (c) Assess environmental impacts of toxic substances currently available in the country;
- (d) Set guidelines for the control of toxic substances and their derivatives in the manufacture/import, transportation, storage, handling and disposal;
- (e) Set standards for regulation of toxic substances being discharged into the environment;
- (f) Promote public awareness of toxic substances and their impacts on human health and the environment, and on their proper handling;
- (g) Liaise with other stakeholders to control illegal import, export, handling and disposal of toxic substances;
- (h) Institutionalise emergency call centres to take care of accidents related to toxic substances and chemicals;
- (i) Enhance the capacity of enforcing institutions.

4.0 MANAGEMENT OF TOXIC SUBSTANCES

4.1 REGULATIONS FOR MANAGEMENT OF TOXIC SUBSTANCES

Purpose

- (a) To facilitate regulatory measures for the control and management of toxic substances and chemicals;

- (b) To enhance enforcement of laws and legislation on the management of toxic substances, in liaison with other regulatory institutions.

Guiding Principle

Necessary regulations on management of toxic chemicals and other substances need to be instituted in addition to existing legislation in order to effectively manage toxic substances and chemicals in Malawi.

Strategies

- 4.1.1 Identify areas in which existing laws and regulations apply as regards the management of toxic substances and chemicals;
- 4.1.2 Identify other stakeholders and enforcing agencies, in order to harmonise efforts;
- 4.1.3 Establish a committee to oversee the enforcement of national regulations for the management of toxic substances and chemicals;
- 4.1.4 Develop guidelines for management of the toxic substances and chemicals regulations during their application;
- 4.1.5 Conduct public awareness on the existence of the guidelines and regulations, and their interpretation for the public to use;
- 4.1.6 Provide for inspectors duly authorised to inspect every premises where contravention of the regulations is suspected.

4.2 IMPORT AND MANUFACTURE, TRANSPORT AND DISTRIBUTION OF TOXIC SUBSTANCES AND CHEMICALS

Purpose

- (a) To provide regulations for the import, manufacture, storage, transfer, distribution and disposal of toxic substances;
- (b) To establish mechanisms for enforcement or ensuring adherence to the regulations;
- (c) To ensure adherence to other international provisions for the control and management of toxic substances and chemicals.

Guiding principles

- (a) Improper handling of chemicals during manufacture or import can result in uncontrolled occupational exposure and exposure to the general public;
- (b) Uncontrolled manufacture may allow for manufacture and/or import of chemicals and chemical formulations, which are banned or restricted locally and internationally due to their toxicity or persistence in the environment;
- (c) Uncontrolled transportation of toxic substances and chemicals can result in accidents that would be detrimental to human health and the environment.

Strategies

- 4.2.1 Establish codes of practice and standards for import/manufacture, storage and distribution of chemicals and chemical formulations;
- 4.2.2 Establish minimum qualifications for people responsible for handling and formulation of chemicals and chemical formulations to ensure maximum safety for both staff and the general public in manufacture/import, storage and distribution of toxic substances and chemicals;
- 4.2.3 Train and empower customs officials to deal with cross-boarder movement of toxic substances and chemicals;
- 4.2.3 Encourage personal hygiene among members of staff in the manufacturing /importing and distribution industries;
- 4.2.4 Allow only registered premises and personnel to handle toxic substances and chemicals;
- 4.2.5 Allow only registered products for marketing and public and or private use;
- 4.2.5 Initiate the participation of all enforcing institutions in inspection and ensuring adherence to import and manufacturing guidelines;
- 4.2.6 Develop guidelines for inspections of plant and safety facilities in the manufacturing sector;
- 4.2.7 Establish minimum qualifications for personnel involved in inspection of chemical manufacturing and chemical formulation facilities;
- 4.2.8 Conduct regular inspections of storage and transportation facilities to ensure adherence to storage and transporting guidelines;

4.2.9 Encourage newer technologies that use alternative remedies as opposed to chemical treatment or use;

4.2.10 Avoid acceptance of donations of unsolicited chemicals and pesticides;

4.2.11 Subject all donations to the rigorous and exhaustive testing and registration process to ensure the safety of human health and the environment.

4.3 USAGE OF TOXIC SUBSTANCES AND CHEMICALS

Purpose

To handle toxic substances during use in a manner that will avoid accidental or intended exposure to staff as well as the general public.

Guiding Principles

Staff and the general public in farms, homes and institutions that use toxic substances are at risk from exposures to toxic substances through dermal contact, inhalation and accidental spills.

Strategies

- 4.3.1 Promote public awareness on the safe handling and application of chemicals and chemical applications to ensure public health safety;
- 4.3.2 Ensure that all staff is provided with protective clothing from head to toe;
- 4.3.3 Ensure that all industries strive to provide for waste treatment facilities, which should be incorporated as part of its production costs;
- 4.3.4 Ensure that all industries promote cleaner production technologies so as to minimise waste;
- 4.3.5 Ensure that all industries have waste recycling and recovery processes for recyclable wastes;
- 4.3.6 Ensure that selling of severely restricted chemicals and pesticides is restricted to only registered wholesalers and retailers, to avoid abuse;
- 4.3.7 Ensure availability of first aid kits and a member or two trained in providing first aid services in case of accidents.

4.4 **HYGIENE IN PROCESSING INDUSTRIES**

Purpose

- (a) To promote hygiene in textile processing, paint, tannery and plastic industries so as to ensure safety to workers and the general public;
- (b) To ensure safe use of metal additives, solvents, paints, dyes, plastics and other toxic substances and toxic additives in accordance with requirements and guidelines.

Guiding Principle

- (a) Metals especially heavy metals can be very toxic to both human health and the environment if poorly used and managed during metal processing.
- (b) Children are the most vulnerable to toxic metals and, therefore, have to be particularly from exposures to heavy metals.

Strategies

4.4.1 Formulate guidelines for safe handling, processing and disposal of metals and metal additives and metal products;

4.4.2 Promote public awareness among staff in metal processing industries;

4.4.3 Ensure monitoring of both workplaces and work environments to determine levels of metals;

4.4.4 Ensure provision of protective clothing to all staff in metal processing industries;

4.4.5 Prohibit eating and smoking in workplaces involved in metal processing;

4.3.8 Ensure availability of first aid kits and personnel trained in providing first aid services in case of accidents.

4.5 **HYGIENE IN LABORATORIES AND OTHER WORK PLACES**

Purpose

- (a) To promote hygiene in laboratories so as to ensure safety to workers and the general public;
- (b) Ensure disposal of waste in accordance with approved guidelines.

Guiding Principle

Awareness on the part of laboratory personnel on the importance of maintaining hygiene in the laboratories is vital for the protection of staff and the general public and should, therefore, be enhanced. This would target government, private, hospital laboratories and all other laboratories that would play a key role in maintaining hygiene in such places so as to reduce unnecessary exposures to staff and the general public.

Strategies

4.5.1 Assess the extent of understanding of laboratory hygiene and safety procedures among laboratory hygiene and safety procedures among laboratory personnel;

4.5.2 Promote awareness programmes on personal safety and hygiene in laboratories through short courses, print and electronic media;

4.5.3 Promote inter-laboratory visits to ensure exchange of information on proper handling and management of laboratory wastes;

4.5.4 Ensure that all personnel in laboratories are supplied with the necessary protective equipment;

4.5.5 Install facilities for retention and treatment of laboratory waste that contains toxic waste chemicals, prior to discharge into public sewers;

4.5.6 Enhance characterisation of waste according to hazardiousness, to ensure that all toxic wastes are disposed of by the most environmentally friendly method;

4.5.7 Enhance formulation, maintenance and regular update of an inventory of obsolete stocks of chemicals and other toxic substances;

4.5.8 Develop programmes that will make it possible to accurately assess human exposure to selected toxic pollutants, by measuring their concentrations in biological tissues and fluids;

4.5.9 Prohibit smoking and eating in the premises handling toxic substances;

4.3.8 Ensure availability of first aid kits and personnel trained in providing first aid services in case of accidents.

4.6 HYGIENE IN HEALTH CARE INSTITUTIONS

Purpose

To promote hygiene in government and private health care facilities to ensure safety for hospital staff and ensure safe use, collection, storage and disposal of waste in accordance with approved guidelines.

Guiding Principles

Health care facilities especially hospitals and clinics use a lot of substances that are potentially toxic and in the process generate waste that is potentially toxic to staff, public health and the environment.

Strategies

4.6.1 Provide regular and on-going staff instructions on proper handling of potential hazards from health care products, chemical formulations and wastes;

4.6.2 Provide guidelines for segregating, packaging, labelling, moving, storing, treating and transporting the various waste types (both on-and off-site, as appropriate);

4.6.3 Institute mechanisms for record-keeping on the quantities of stocks of pharmaceuticals and other medicines and health care waste generated in all health-care facilities;

4.6.4 Provide for well-trained staff in all health-care institutions to be responsible for managing health-care waste;

4.6.5 Carry out periodic waste audits to define sources of health-care wastes;

4.6.6 Ensure availability of first aid kits and adequate personnel trained in providing first aid services in case of accidents.

4.7 AGRICULTURAL RUN-OFF

Purpose

- (a) To reduce the proliferation of toxic agricultural chemicals in the environment caused by uncontrolled application of approved, restricted or banned agrochemicals;
- (b) To reduce application of agrochemicals without due regard to the protection of human health and the environment.

Guiding Principles

Every chemical has safety precautions, which are supposed to be observed by the applicator or user. Failure to observe these precautions would render the chemical or chemical formulation a hazard to human health and the environment.

Strategy

4.7.1 Ensure enforcement of best practices for the application of agrochemicals;

4.7.2 Step up public awareness on safety precautions and procedures for application of agrochemicals;

4.7.3 Protect and restore degraded habitats;

4.7.4 Implement soil stabilisation techniques to reduce soil erosion;

4.7.5 Improve drainage to reduce soil erosion.

5.0 TOXIC WASTE MANAGEMENT

General Management of toxic wastes and chemicals

Purpose

- (a) To promote the use of intermediate technology, i.e., low cost innovative solutions in peri-urban and urban areas in construction of waste treatment facilities to cater for toxic wastes;
- (b) To promote pre-treatment of hazardous and toxic wastes by industries to reduce toxicity and, therefore, increase treatability;
- (c) To institute mechanisms for monitoring compliance with approved guidelines.

Guiding Principles

- (a) Being prime users of public sewers, the community needs to be well informed on the need to ensure that only less toxic and therefore treatable or biodegradable waste is discharged into public sewers and dumpsites;
- (b) Mechanisms should be instituted to ensure compliance with approved guidelines on types of waste to be discharged into public sewers.

Strategies

5.1.1 Develop a regulatory framework for toxic waste disposal;

5.1.2 Avoid accumulating excess stocks to minimise the need for disposal by ensuring the following:

- Purchasing small quantities and avoiding overstocking;
- Evaluating chemicals and pesticide requirements in advance and not accepting donations in excess of these requirements;

5.1.3 Keep detailed records of stocks and clearly labelled containers to avoid the problem of unidentified stocks;

5.1.4 Conduct an assessment of the types of waste currently generated from various sectors in Malawi;

5.1.5 Institute mechanisms for the dissemination of information on the quality of waste to be discharged by various sectors of the community in public disposal sites;

5.1.6 Encourage companies to invest in pre-treatment technologies for waste from their industries prior to discharge in public disposal sites;

5.1.7 Provide for testing units to assess the hazardousness of wastes generated by various institutions, with a view to ascertaining its treatability, and determine proper disposal methodologies;

5.1.8 Assign properly trained analysts to man the unit;

5.1.9 Procure the necessary equipment for testing the level of toxicity of substances;

5.1.10 Impose penalties for contravention of regulations, and set standards to ensure compliance;

5.1.11 Conduct regular supervision and monitoring of activities of the testing units;

5.1.12 Initiate a licensing system and provide discharge licences only on condition of compliance with environmental standards, and upon assurance of provision of waste minimisation and waste recycling technologies;

5.1.13 Encourage companies to redesign consumer products to make them less dangerous (such as reducing or eliminating the mercury content in batteries, and using non-lead fuel, etc), so as to make them easier to treat.

5.2 CHARACTERISATION OF WASTES

Purpose

- (a) To allow for proper handling of toxic substances during transportation, storage and application;
- (b) To avoid mixing of toxic and non-toxic wastes and therefore, allow for safe handling by municipal and other refuse workers;
- (c) To ease disposal of waste as ordinary waste that will not be contaminated by toxic wastes.

Guiding Principle

- (a) A mixture of toxic and non-toxic substances and wastes is as toxic as the toxic component. So contamination of harmless waste with toxic waste turns all the harmless waste into toxic waste.
- (b) Characterisation of wastes and toxic wastes is an important step in the management of wastes. The classes of waste can be used to determine levels of control and management strategies to be adopted to ensure protection of human health and the environment.

Strategies

5.2.1 Identify the types of toxic substances and chemicals requiring consideration to protect human health and the environment;

5.2.2 Adopt international colour coding system for waste containers, e.g., red for highly toxic, yellow for infectious or pathological waste, brown for chemical and pharmaceuticals, and black for low-risk waste;

5.2.3 Train personnel in the colour coding system;

5.2.4 Provide guidelines for classification of waste.

5.3 DISPOSAL OF LIQUID TOXIC WASTES.

Purpose

- (a) To control waste that is deposited into the city sewers with a view to increasing treatability, and reduce risks to human health and the environment;
- (b) Promote dissemination of information on quality of waste that can be discharged through Public sewers into inland waters;

- (c) Promote pre-treatment of hazardous and toxic wastes by industries to reduce toxicity and, therefore, increase treatability in city sewers.

Guiding Principles

- (a) Highly toxic wastes can kill microbes that are required for oxidation of organic and other substances constituting waste.
- (b) Quality control for effluent to be discharged into city sewers requires environmental standards and a testing laboratory in order to reduce chances of having untreated or inadequately treated effluent.
- (c) Proper and adequate treatment of waste prior to discharge through public sewers into inland waters requires the support and understanding of industries and the general public that generate the waste, as well as professionalism from the monitoring teams.

Strategies

- 5.3.1 Promote cleaner production technologies and provide incentives to industries investing in cleaner production technologies;
- 5.3.2 Promote dissemination of information on types of waste that can be discharged into public sewers;
- 5.3.3 Formulate standards based on selected parameters for the quality of effluent to be disposed of in the city sewers and other waste disposal facilities;
- 5.3.4 Conduct comprehensive inspection programmes to ensure compliance with such standards;
- 5.3.5 Produce and circulate appropriate information to the community on waste management strategies;
- 5.3.6 Conduct joint workshops and seminars to share experiences on approved standards;
- 5.3.7 Institute pre-treatment of toxic and potentially hazardous industrial waste as a condition for approval of manufacturing or processing licences;
- 5.3.8 Impose deterrent penalties for contravention of regulations and set standards to ensure compliance;
- 5.3.9 Develop standardised procedures and code of practice for collecting and processing of waste;

- 5.3.10 Layout standardised analytical analysing samples for toxicity.

5.4 DISPOSAL OF SOLID TOXIC WASTES

Purpose

- (a) To ensure that toxic waste or toxic incinerator ash is disposed of in an environmentally friendly manner that doesn't pose a risk to human health and the environment;
- (b) To ensure that landfills undergo impact assessment before actual commences and other environmental conducted regularly;
- (c) To provide guidelines for the disposal of toxic solid wastes destined for land filling.

Guiding Principles

- (a) Highly toxic wastes can kill microbes that are required for oxidation of organic and other substances constituting waste, and can create hazardous leachate.
- (b) Proper management of wastes requires the support and understanding of industries and the general public that generate the waste.
- (c) Site selection should determine the likely affects of the disposal operations; e.g., likelihood of scavenging, impacts on ground water and dispersion of gases to the surrounding environment.
- (d) The landfill design and operation requires that minimal negative impacts are realised on the environment around the landfill site.

Strategies

- 5.4.1 Ensure the conduct of full environmental impact assessments;
- 5.4.2 Develop landfills with full consideration of the type of wastes to be disposed;
- 5.4.3 Prescribe an economic and affordable fee to defray the cost of operating the landfill;
- 5.4.4 Encourage proper engineering designs to ensure effective operation of the landfill;
- 5.4.5 Develop guidelines for disposal of toxic wastes to ensure safe and controlled disposal;

5.4.6 Provide adequate training for staff operating the landfill to avoid accidents;

5.4.7 Develop a mechanism for monitoring impacts of the landfill on the environment, by carrying out regular audits especially on groundwater and air quality,

5.4.8 The government should strive to install a chemical treatment centre. At this centre, wastes from chemical and metal companies should be treated;

5.4.9 Ensure complete reclamation of land covered by the landfill after closure taking into consideration the toxicity of waste that was being disposed;

5.4.10 Provide for colour-coded waste bags as prescribed to encourage segregation of waste and the point of generation;

5.5 CONTROLLED OPEN AIR DUMPING

Purpose

To provide controlled, easy and affordable waste disposal options for the peri-urban and traditional housing settings, which will ensure protection of human health and the environment.

Guiding Principle

(a) This may be considered the smallest disposal site receiving small but traceable quantities of toxic substances and chemicals that could harm human health and the environment.

(b) Depending on the number of households being served by this dump and the availability of high water tables and wild and tame life, the site might require leachate management and covering or burying.

Strategies

5.5.1 Provide guidelines for selection of dumping sites for both toxic and general harmless wastes where small scale entrepreneurs likely to generate toxic waste are anticipated;

5.5.2 Institute village committees to oversee site selection and assuring of compliance with set guidelines;

5.5.3 Promote community participation in site selection and rehabilitation operations for land covered by closed communal disposal site;

5.5.4 Mount awareness campaigns on the importance of compliance with regulations and the dangers of disposing of toxic substances in open dumpsites;

5.5.5 Encourage composting of harmless biodegradable waste so that there is waste minimisation and waste reclamation while maintaining dumpsite;

5.5.6 Provide for containers for characterisation of waste streams, to avoid mixing of toxic and general harmless wastes;

5.5.7 Provide training of community leaders or community representatives in all aspects of waste disposal.

**PART VI:
TOXIC SUBSTANCES AND CHEMICALS LEGAL
COMPONENT REPORT AND PROPOSED DRAFT
REGULATIONS**

TABLE OF CONTENTS

PART I - PRELIMINARY

REGULATIONS

1. Citation
2. Interpretation
3. Application

PART II - MANAGEMENT OF TOXIC SUBSTANCES AND CHEMICALS

4. Particulars, etc. on forms
5. Minimum requirements for manufacture, etc.
6. Duration of licences
7. Production and return of licences
8. Application for renewal of licences
9. Categories for registration
10. Labelling and marking of chemical product
11. Packaging and package inserts
12. Registration of chemical products
13. Rejection of application
14. Procedure for banning or restricting the use of a chemical
15. Chemical products register
16. Certificate of registration for chemical products
17. Production and return of registration certificate for chemical products
18. Importation of chemical product with less than one-half of shelf-life or life span
19. Delivery and sale of chemical products with less than one half of shelf-life or life span
20. Sale of expired chemical products
21. Chemical products to be sold by licensed persons
22. Disclosure of composition of chemical Products
23. Safe keeping of restricted -use chemicals
24. Local authorities to make by-laws for management of toxic substances and chemicals
25. Duty to treat chemical wastes from industrial and medical facilities
26. Compliance Code
27. Application for a licence to operate a chemical waste disposal site or plant
28. Licence to own or operate a chemical waste disposal site or plant
29. Environmental impact assessment
30. Disposal of highly toxic substances and wastes
31. Prevention of pollution from disposal sites and treatments plants

PART III - NOTIFICATION AND PRIOR INFORMED CONSENT PROCEDURES

32. Designated National Authority
33. Notification and prior informed consent procedures
34. Control of imports
35. Restrictions on importing severely restricted chemicals
36. Control of exports
37. Restrictions on exporting severely restricted chemicals
38. Ports of entry and routes

PART IV - MISCELLANEOUS PROVISIONS

39. Reporting procedures
40. Duty to keep records
41. Communication of decision of licences
42. Improvement notice
43. Cancellation of licence
44. Offences and penalties

SCHEDULES

1. First Schedule
 - Categories of pesticides and industrial chemicals to be controlled which are toxic
2. Second Schedule
 - Application for registration of toxic substances and chemicals
3. Third schedule
 - Application for registration to manufacture or repackaged chemicals
4. Fourth Schedule
 - Application for a licence to import toxic substances and chemicals
5. Fifth Schedule
 - Application for a licence to export chemicals
6. Sixth Schedule
 - Application for a licence to transport toxic substances and chemicals
7. Seventh Schedule
 - Application for a licence to distribute chemicals
8. Eight Schedule
 - Licence to manufacture / repackaged chemicals
9. Ninth schedule
 - Licence to import chemicals
10. Tenth schedule
 - Licence to export chemicals
11. Eleventh schedule
 - Licence to transport chemicals
12. Twelfth schedule
 - Licence for distribution of chemicals
13. Thirteenth schedule
 - Fees
14. Fourteenth schedule
 - Application for renewal of a licence
15. Fifteen schedule
 - Minimum requirements for
 - (a) Manufacture or repackaging of chemicals
 - (b) Transportation and storage of chemicals
 - (c) Distribution of chemicals
16. Sixteenth schedule
 - Application for licence to own/operate a chemical waste disposal site/plant
17. Seventeenth schedule
 - Licence to own/operate a chemical waste disposal site plant
18. Eighteenth schedule
 - Notification scheme for banned and severely restricted chemicals.

IN EXERCISE of the powers conferred by section 40 of the Environment Management Act, I, HARRY IAN THOMSON, Minister of Natural Resources and Environmental Affairs, make the following Regulations -

PART I – PRELIMINARY

CITATION

1. These Regulations may be cited as the Toxic Substances and Chemicals Management Regulations, 1999.

INTERPRETATION

2. In these Regulations unless the context otherwise requires-

No. 23 of 1996 “Act” means the Environment Management Act;

“carrier” means any person who carries out the transportation of toxic substances or chemicals and includes his agents or assignees;

“chemical” means a chemical substance in any form whether by itself or in a mixture or preparation whether manufactured or obtained from nature and includes such substances used as industrial chemicals, for consumer use, pesticides and fertilizers but excludes medicines and drugs and for the purposes of these Regulations means toxic chemicals;

“chemical wastes” means any unwanted or waste chemical or chemical formulation generated from any process which can cause danger to both human health and the environment;

“Director of Environmental Affairs” means the Director appointed under section 9 of the Act;

“disposer” means the person licensed to dispose of toxic substances or chemicals under these Regulations;

“disposal” means final placement or destruction of toxic substances, chemicals and chemical formulations, pesticides, and containers of toxic substances from removal actions or accidental releases.

“exporter” means any person under the jurisdiction of the state of export who arranges for toxic substances or chemicals to be exported;

“formulation” means the combination of various ingredients designed to render the product useful and effective for the purpose claimed; the form of the toxic substances or chemical as purchased by users;

“hazardous chemical” means any chemical which has the likelihood of causing adverse effects or injury to human health or the environment and which has been so designated by the Minister;

“hazardous waste” includes all unwanted substances or materials generated in any process be it chemical or otherwise which can cause danger to human health or the environment and which has been so designated by the Minister;

“importer” means any person under the jurisdiction of the state of import who arranges for toxic substances or chemicals to be imported;

“label” means the written, printed or graphic matter on, or attached to, a toxic substance or chemical; or its immediate container and the outside container or wrapper of the retail package of the toxic substances or chemical;

“manufacture” in relation to a chemical means to prepare, compound, formulate, mix, make, pack, label, or otherwise treat the chemical with a view to meeting a specific purpose but does not include the carrying on of a bona fide research relating to the chemical or any act incidental to such research;

“Minister” means the Minister responsible for environmental issues;

“registered user” for the purposes of these Regulations means a person

approved by the Minister to use a restricted chemical or toxic substance;

“restricted chemical” means a chemical registered by the Minister for specific use or to be used only under stipulated conditions;

“toxic substance” means a chemical or mixture that may present an unreasonable risk of injury to health or the environment;

“trade name” means that name under which the chemical or toxic substance is labelled, registered and

promoted by the manufacturer and which can be used exclusively by the manufacturer to distinguish the product from other chemicals containing the same active ingredient.

“transit” means the passage of chemicals from one border to another border through the national territory of Malawi including storage in transit bonds;

APPLICATION

3. These Regulations shall apply to any person in Malawi whose undertaking involves or includes the manufacturing, repackaging, importation, exportation, transportation, distribution, sale or other mode of handling toxic substances and chemicals and in respect of any activity in relation to toxic substances and chemicals which involves a risk of harm to human health or the environment.

PART II - MANAGEMENT OF TOXIC SUBSTANCES AND CHEMICALS

PARTICULARS, ETC ON FORMS

4. (1) (a) No person shall engage in the business of manufacturing repackaging, importing, exporting transportation, storage, distribution, sale or other mode of handling toxic substances and chemicals without first applying for a licence to the Minister in the prescribed form;
 - (b) (i) an applicant for any licence provided for under these Regulations shall be resident in Malawi;
 - (ii) where the applicant is resident outside Malawi, the applicant shall designate a representative who is resident in Malawi;
- (c) an application for a licence under the Act in relation to -
 - i) the manufacturing or repackaging of toxic substances and chemicals shall be the form set out in the Third Schedule;
 - ii) the importation of toxic substances and chemicals shall be in the form set out in the Fourth Schedule;
 - iii) the exportation of toxic substances and chemicals shall be in the form set out in the Fifth Schedule;
 - iv) the transportation of toxic substances and chemicals shall be in the form set out in the Sixth Schedule;

- v) the distribution of toxic substances and chemicals shall be in the form set out in the Seventh Schedule.

- (2) All forms shall be completed in English.
- (3) The Minister may reject any form if any part of the form is illegible or not properly completed.
- (4) A licence to-
 - i) manufacture and repackage toxic substances and chemicals shall be in the form set out in the Eighth Schedule;
 - ii) import toxic substances and chemicals shall be in the form set out in the Ninth Schedule;
 - iii) export toxic substances and chemicals shall be in the form set out in the Tenth Schedule;
 - iv) transport toxic substances and chemicals shall be in the form set out in the Eleventh Schedule;
 - v) distribute toxic substances and chemicals shall be in the form set out in the Twelfth Schedule.
- (5) The applications referred to in sub-regulation (1) shall be accompanied by the fee prescribed in the Thirteenth Schedule.

MINIMUM REQUIREMENTS FOR MANUFACTURE, ETC

5. Any person who applies for a licence under the Act shall ensure that his business complies with applicable conditions as set hereunder
 - (a) in the case of manufacturing or repackaging of toxic substances and chemicals, the minimum requirements set out in Part I of the fifteenth Schedule;
 - (b) in the case of transporting of toxic substances and chemicals, the minimum requirements set out in Part II of the fifteenth Schedule; and
 - (c) in the case of distribution of toxic substances and chemicals as a wholesaler or retailer, the minimum requirements set out in the Part III of the Fifteenth Schedule

DURATION OF LICENCES

6. Every licence which is issued in respect of chemicals and pesticides in the First Schedule to any person

pursuant to the Act shall be valid for one year from the date of issue, and may be renewed thereafter.

chemicals in the First Schedule affected by his decision.

PRODUCTION AND RETURN OF LICENCES

7. (1) Whenever the Minister -

- (a) cancels any licence;
- (b) varies or amends the conditions of any licence; or
- (c) imposes any new condition in respect of or on the renewal of any licence, the Director shall request the holder of the licence to produce such licence within such period as the Director may specify, and the holder thereof shall produce such licence within the specified period.

(2) Any person who fails to comply with a request made in accordance with sub regulation (1) shall be guilty of an offence

(3) Whenever the Minister varies, amends or imposes any new condition in respect of a licence, the Director shall return such licence duly indorsed to the holder thereof within three months.

APPLICATION FOR RENEWAL OF LICENCE

8- (1) Every application for the renewal of a licence shall be-

- (a) in the form set out in the fourteenth Schedule -
- (b) lodged with the Director at least two months before the expiry of the licence; and
- (d) accompanied by the appropriate fee in respect of the licence.

(2) If an application for the renewal of a licence is lodged with the Director after the time limit as specified in subregulation (1) there shall be paid in addition to the renewal fee an appropriate penalty fee in respect of the licence as determined by the Minister.

CATEGORIES FOR REGISTRATION

9. (1) (a) The Minister shall in accordance with section 40 of the Act, from time to time publish in the Gazette a list of toxic substances and chemicals which fit in categories identified under the First Schedule or which have characteristics identified in the First Schedule which needs to be controlled or prohibited

- (b) the Minister shall give written notification to manufacturers and importers dealing with

(2) An application for the registration of a toxic substance or chemical may be made by -

- (a) the person who owns the product; or
- (b) any other person registered by the Minister.

(3) Every application for the registration of a chemical shall be submitted to the Director in the form set out in Second Schedule and shall be accompanied by -

- a) a sample of the chemical product in the smallest of each of the package forms available for distribution to the public, including the identification marks on such products where appropriate, or if the package forms are not yet available, a sample in a package in which the applicant intends to make the toxic substance or chemical product available for distribution to the general public;
- b) detailed information of all advertising material and package inserts which the applicant intends to use;
- c) such samples of the product or the raw materials thereof which the Minister may request for analysis;
- d) a copy of any literature in support of the application: Provided that the Minister may require additional copies of such literature,
- e) additional package inserts and labels or copies of the package;
- f) at least three copies of all records and chemical data sheet which shall include information on chemical composition, properties and antidotes and information relating to manufacture and packaging in process control records, final products analytical records and authorized for release, and any other relevant records; and
- g) the prescribed fee, together with such additional fee as the Minister may require for the purpose of analyzing the chemical product.

(4) Every applicant shall, without delay, inform the Minister either before or after the registration of a chemical product:

- (a) of any alteration of the information or particulars furnished by him in applying for registration in terms of sub regulation(2); and
- (b) whether the chemical product is to be imported as a finished product into, or labeled or repackaged or dealt with in any manner, in Malawi

- (5) for the purposes of paragraph (b) of sub regulation (4), "finished product", in relation to a chemical product, means a chemical which is wholly manufactured outside Malawi and is imported into Malawi ready for sale without having to be relabelled or repackaged.
- (6) An application for the retention of the registration of a registered chemical product shall be submitted to the Director, in the form set out in Eighteenth Schedule at least two months before the expiry of the licence and shall be accompanied by the prescribed fee.
- (2) In the case of a small package containing a chemical product, it shall be adequate to record information required by paragraph (c), (d), (e) and (f) on the outer label.
- (3) Every chemical product shall where possible be marked with the logo of the owner of the chemical product or manufacturer thereof, as the case may be, and such other distinguishing mark for the purpose of identifying such chemical product.

LABELLING OF CHEMICAL

10. (1) Every chemical product shall, unless otherwise directed by the Minister, bear or incorporate a label on the product package or container in which the chemical product is sold, on which is printed in clear and indelible letters in the English language and any other language as the Minister may direct or approve the following particulars which relate to the chemical –
- (a) the name and address of the person who owns the chemical;
 - (b) the name and address of the manufacturer including the physical address;
 - (c) the approved name of the chemical product and the proprietary name or trade mark, if any, of the chemical product;
 - (d) inherent physical and chemical properties, toxicity to human beings and impact on the environment;
 - (e) chemical composition;
 - (f) production batch number, date of manufacture and the expiry date of the chemical;
 - (g) the required storage conditions or other necessary precautions to prevent harm to human health and the environment;
 - (h) the chemical classification as determined in accordance with regulation 9 and directions on safe use including proper disposal methods;
 - (i) any warning notices which shall be in colour or print other than the colour referred to in subparagraph (a) to (j); and
 - (j) the antidote for use in cases of accidents;
 - (k) any other particulars as may be directed by the Minister:

Provided that the label shall contain no warranties, guarantees or liability exclusion clauses inconsistent with the provisions of the Act or these Regulations.

PACKAGING PACKAGE INSERTS

11. (1) The Director shall not approve a container for the packaging of chemicals unless it is satisfied that the container-
- (a) shall not react chemically or physically with the chemical;
 - (b) is of sufficient strength and shall not pose any risk during handling and transportation of the chemical;
 - (c) is durable enough to prevent the chemical from escaping.
- (2) The Director may, at any time, direct the seller of a chemical to submit for inspection an approval the container in which the chemical is contained.
- (3) Every package of a chemical product shall, unless otherwise directed by the Minister, contain a package insert on which is printed in clear and indelible letters in the English language and any other language as may be directed or approved by the Minister the following particulars which relate to the chemical product -
- (a) the name and address of the owner of the chemical product;
 - (b) the name and address of the manufacturer of the chemical product;
 - (c) the approved name of the active ingredient of the chemical product and the proprietary name or trade mark, if any, of the chemical product;
 - (d) the logo, if any, of the owner of the chemical product or manufacturer thereof;
 - (e) the chemical composition and percentage of any toxic agent inherent in the chemical product;
 - (e) adequate directions for handling including safety precautions in transportation, storage, use and disposal of obsolete chemicals or chemical waste

- to prevent harmful effects to human health and the environment;
 - (f) chemical classification as determined in accordance with regulation 9;
 - (g) warnings relating to risks associated with use of the chemical product;
 - (i) identification of the chemical product;
 - (h) the form in which the chemical product is presented whether liquid, dust, granulars, baits or wettable powders and the colour thereof;
 - (i) the date of publication of the package insert including expiry date of the product;
 - (1) a summary of the relevant information concerning the purpose and beneficial, harmful or other effects of the chemical product and the possible dangers that may arise from exposure to the chemical product;
 - (m) relevant information, including particulars in regard to a specific medicinal product as an antidote (if known), concerning the treatment of a user in case of an accident or harmful exposure relating to the chemical product; and
 - (n) any other particulars or warning notices as may be directed by the Minister
- (2) Where the Minister rejects an application for registration of a chemical, he shall state in writing the reasons for so doing, to the applicant.
 - (3) Where an application for registration of a chemical has been rejected by the Minister, the Director shall enter the chemical in the register of banned chemicals stating the identity of the chemical, the reasons for banning it and any other particulars the Director may specify.

PROCEDURE FOR RESTRICTING THE USE OF A CHEMICAL

- 14.- (1) Before making a decision to restrict the use or banning the handling of a chemical, the Director shall –
- a) ensure that there is evidence that the chemical causes or is likely to cause adverse effect to human health, animals, plants or the environment;
 - b) require the applicant to show cause in writing within a period of 30 days from the date of the letter, why the restriction or ban should not be imposed on the chemical;
 - c) publish in the *Gazette* the intention to impose a ban on or restrict the use and handling of the chemical.

REGISTRATION OF CHEMICAL

- 12.- Where the Minister approves registration of a chemical product, he shall fix as a condition of registration, the product's specific use and the conditions under which the chemical is to be used.

REJECTION OF APPLICATION

- 13.- (1) The Minister may reject an application for registration if –
- (a) the application is incomplete;
 - (b) the application contains information which is misleading, erroneous, deceptive or likely to deceive;
 - (c) the chemical is likely to cause adverse effect to human health, animals, plants or the environment even when handled and used according to given instructions;
 - (d) the chemical is provisionally cleared;
 - (e) the container, or label do not meet the requirements of these Regulations;
 - (f) the applicant is considered unsuitable or incapable of carrying out the obligation imposed under these Regulations; or
 - (g) the chemical is toxic contrary to indications on the label
- (2) Upon receipt of the submission of the application the Director shall-
- (a) invite the applicant to attend a meeting and give the applicant the opportunity to make oral submissions in person or through a representative to the Technical Committee on the Environment; and
 - (b) consider another information available to the Technical Committee on the Environment, including submission of experts in the field of chemical management, and thereafter the Director shall make any appropriate recommendation to the Minister.

CHEMICAL REGISTER

15. The Director shall enter in the register in respect of each chemical product registered by the Minister-
- a) date of the application for registration of the chemical product;
 - b) the number allocated to the application for registration;
 - c) proprietary name or trade mark of the chemical product, if any;

- d) the logo of the owner of the chemical product or manufacturer thereof, if any;
- (e) the particulars of the patent of the chemical product, if any;
- (f) the approved name of the chemical product;
- (g) the form in which the chemical product is presented whether liquid or otherwise and the colour thereof;
- (h) inherent physical and chemical properties and the level of toxicity of the chemical product;
- (i) the qualitative and quantitative details of every ingredient in a specified unit of the chemical product;
- (j) name and business address of the owner of the chemical product;
- (k) the name and business address of the manufacturer of the chemical product;
- (l) the country of origin of the chemical product;
- (m) the name and address of the applicant
- (n) the number allocated to the inspection report of the place of manufacture, if applicable;
- (o) the date of registration of the chemical product;
- (p) the registration number of the chemical product;
- (q) the shelf-life or life span of the chemical product;
- (r) the specific use of the chemical product and any other conditions if it falls under regulation 12;
- (s) the classification of the chemical product determined in accordance with regulation 9;
- (t) the date and particulars of any variation in the conditions of registration of the chemical product;
- (u) the payment of any fee for the retention or registration of the chemical product; and
- (v) where applicable, the date of the cancellation of the registration of the chemical product.

CERTIFICATE OF REGISTRATION FOR A CHEMICAL

16. After registering a chemical product, the Director shall issue a certificate of registration in prescribed form.

PRODUCTION AND RETURN OF REGISTRATION CERTIFICATE FOR CHEMICAL PRODUCTS

- 17.- (1) Whenever the Minister –
- (a) cancels the registration of any chemical product;
 - (a) varies or amends the conditions of registration of any chemical product; or
 - (b) imposes any new conditions on the registration of any chemical product,

the Director shall request the holder of the registration certificate concerned to produce such certificate within one

month and the holder thereof shall produce such certificate within the specified period.

- (2) Any person who fails to comply with a request made in accordance with subsection (1) shall be guilty of an offence.
- (3) Whenever the Minister varies, amends or imposes any new condition on any registration certificate, the Director shall return such certificate, duly endorsed, to the holder thereof within a period of three months.

IMPORTATION OF CHEMICAL PRODUCTS

18. No person shall, without prior written approval of importation of a chemical product from the Minister, import into Malawi any chemical product which has one-half or less than one-half of its shelf-life or remaining life span with shelf life or life span remaining upon arrival in Malawi.

DELIVERY AND CHEMICAL PRODUCTS WITH LESS THAN ONE HALF OF SHELF-LIFE OR LIFE SPAN

19. No person shall, without the prior written approval sale of the Minister deliver, receive, accept or sell any chemical product whose shelf-life or remaining life span is less than one-half.

SALE OF EXPIRED PRODUCTS

- 20 (1) No person shall sell any chemical product or chemical after a date later than the expiry date which appears on the package of such chemical product.
- (2) Any person who sells any expired chemical product in contravention of subregulation(1) commits an offence

CHEMICAL BE SOLD BY LICENSED PERSONS

- 21. No person shall sell any chemical product unless his business has been
 - (a) licensed under the Act, or
 - (b) authorized in terms of these Regulations:

CAP 35:01

Provided that this regulation shall not apply to the sale of toxic substances regulated under the Pharmacy, Medicines and Poisons Act.

DISCLOSURE OF CHEMICAL PRODUCTS

22. No person shall sell any chemical product the composition of is not labelled in accordance with the requirements of regulation 14.

SAFE KEEPING OF RESTRICTED CHEMICALS ETC

23. - (1) No person who sells chemicals listed in the first Schedule shall keep such chemicals on an open shelf or in an open area on a part of his premises to which members of the public have access.
- (2) Any person who has under his control or uses chemicals referred in subregulation (1) shall exercise all reasonable care in the custody, safe keeping and use thereof.

LOCAL AUTHORITIES TO MAKE BY-LAWS FOR MANAGEMENT OF TOXIC SUBSTANCES

- 24.- (1) Every local authority shall make by-laws relating to the management of toxic substances and chemical wastes in their respective authorities and chemicals

Provided that -

- (a) such by-laws shall not be in conflict with the Act and these Regulations; and
- (b) such by-laws shall ensure that the disposal method of chemical wastes is in an environmentally sound manner.
- (2) Every local authority shall be responsible for toxic substances and chemicals management, and such an arrangement shall be in accordance with the provisions of the Act and these Regulations.

DUTY TO TREAT CHEMICAL WASTES FACILITIES

- 25.- (1) No industry or medical facility shall discharge any from industries chemical wastes in any state into the environment unless such wastes have been treated in accordance with acceptable international methods that are approved by the local authority in consultation with the Director.
- (2) Any person whose operations discharge chemical wastes into the environment at the date of entry into force of these regulations, shall within ninety (90) days submit a written proposal specifying the time schedule within which compliance with these Regulations shall be achieved.

- (3) It shall be an offence for any person to discharge any chemical waste whether treated or not into a disposal site or plant unless such disposal site or plant has been approved and licensed in accordance with and upon the conditions set out in these Regulations and for such purpose.

COMPLIANCE

26. - (1) Every industry shall develop a voluntary compliance code which shall outline the industry's goals for -
- (a) chemical waste reduction and minimization;
- (b) chemical waste treatment on site and emission standard; and
- (c) disposal plans.
- (2) Any industry whose operations pollutes or contaminate a site shall be liable to pay for clean-up charges at such a site.

APPLICATION TO OPERATE CHEMICAL WASTE DISPOSAL SITE OR PLANT

- 27.- (1) (a) Any person who intends to operate a chemical waste disposal site or plant shall apply to the Minister for a chemical waste disposal licence.
- (b) an application for a licence to operate a chemical waste disposal site or plant shall be in the form set out in the Schedule and shall be accompanied by the appropriate fee.
- (2) Any person carrying out a business of operating a chemical waste disposal site or plant before the commencement of these Regulations shall apply for a licence within ninety (90) days from the date these Regulations come into force.

- (3) A person who operates a chemical waste disposal site or plant without a licence commits an offence.

LICENCE TO OWN OR OPERATE A CHEMICAL WASTE SITE OR PLANT

28. The Minister may grant a licence in the form set out in the seventeenth Schedule to own or operate a chemical waste disposal site or plant, if -
- (a) a written approval has been obtained by the applicant from the environmental officer of the local authority within which the chemical waste disposal site or plant is located;

- (b) the local authority is satisfied that the owner or operator of the site has the ability and the appropriate facilities to manage the site or plant without causing any damage to public health or the environment, taking into account the findings and recommendations of the environmental impact assessment submitted by the owner or operator; and
- (c) notice has been given by the applicant in the *Gazette* and such local newspapers of daily circulation as the Minister shall deem fit on the proposed chemical waste disposal site or plant, sixty (60) days before to issue of the licence.
- (2) The Minister shall subject a licence to own or operate a chemical waste disposal site or plant to the following conditions -
- (a) the site or plant shall be located away from a residential or commercial area and water sources;
- (b) the site or plant shall have hazard and safety signs displayed in appropriate places indicating the disposal site or plant and the nature of operations it carries out.
- (c) the site or plant shall be enclosed and secure from scavenging; and
- (d) the site or plant shall be operated in a way which would avoid pollution of surface and underground water;
- (e) highly toxic or hazardous chemical wastes shall be disposed of or treated in accordance with conditions specified in the licence or in accordance with any general guidelines issued by the Minister in consultation with the Minister responsible for local government;
- (f) suitable ventilation shall be provided at the disposal site or plant to prevent harmful effects to personnel;
- (g) the personnel working at the chemical waste disposal site or plant shall be provided with –
- (i) adequate training;
- (ii) adequate protective and safety clothing;
- (iii) adequate and appropriate equipment or facilities for the operations of the disposal site or plant;
- (iv) shelter;
- (v) first aid training and facilities; and
- (vi) communication facilities;
- (i) the personnel working at the chemical disposal site or plant shall undergo a medical check-up, at least once every six months.
- (3) A licence to own or operate a chemical waste disposal site or plant shall be valid for one year and may be renewed for a like period at a prescribed fee.
- Provided that the Minister may, where he deems it necessary, issue a licence to any applicant under Regulation 5 for the temporary storage of any chemical waste pending final disposal provided that such temporary storage meets the standards required for the storage of such a category of chemical waste approved under these regulation.
- (4) Any person who -
- (a) operates or owns a chemical waste disposal site or plant without a licence; or
- (b) discharges chemical waste onto a site or plant which is unlicensed, shall be guilty of an offence.

ENVIRONMENTAL IMPACT ASSESSMENT

- 29.- (1) No disposal site or treatment plant for chemical wastes shall be licensed under these Regulations unless an environmental impact assessment has been carried out in accordance with the provisions of sections 24, 25, 27, 28 and 29 of the Act.
- (2) Any person operating a disposal site or a treatment plant shall carry out annual audits of the environmental performance of his site or plant and shall submit his report to the Minister.

DISPOSAL OF TOXIC SUBSTANCES

30. - (1) Where a person intends to dispose or treat highly toxic substances and wastes he shall, in addition to the provisions of Regulations 24 and 25, indicate in his application for a licence, the disposal operations he intends to carry out in accordance with the categories identified in the First and Second Schedules and shall enclose –
- (a) a detailed description of the process he intends to employ and its possible effects;
- (b) a detailed description of the soil structure and geology of the area;
- (c) a detailed plan for control of emissions;
- (d) a plan for managing leakages;
- (e) a detailed health impact assessment;
- (f) a detailed drawing indicating the structure, construction and surroundings of the disposal site or plant; and

- (g) any other matter that may be required by the Minister.
- (2) In granting a licence for the disposal of highly toxic substances or wastes, the Minister shall clearly indicate the disposal operation permitted and identified in accordance with the categories in the first Schedule.
- (3) Any person who contravenes this regulation commits an offence.

PREVENTION OF POLLUTION FROM DISPOSAL SITES AND TREATMENT PLANTS

- 31. (1) Every person who operates a toxic substances or chemical wastes disposal site or treatment plant shall take all necessary measures to prevent pollution from sites or plants including the erection of necessary works and taking of mitigation measures.
- (2) In taking measures to prevent pollution, the operation of such a waste disposal site or treatment plant shall comply with any directions given by an inspector under section 45 and 46 of the act

PART III - INTERNATIONAL TRADE IN TOXIC SUBSTANCES AND CHEMICALS

DESIGNATED AUTHORITY

- 32. - (1) The Minister shall be the national authority for the operation of the prior informed consent procedure for the import, export or any other Trans-boundary movement of toxic substances and chemicals.
- (2) The Minister shall closely liaise with the designated authorities of other states under any international conventions or arrangements to which Malawi is a party, and international organizations with competence in the field of the management of toxic substances and chemicals under any convention or arrangement to which Malawi is a party, for the purpose of monitoring imports and exports and controlling the movement of toxic substances and chemicals in Malawi territory.
- (3) The Minister shall disseminate information on toxic substances and chemicals management to the public.

NOTIFICATION PROCEDURES AND PRIOR INFORMED CONSENT

- 33.- A licence for export of chemicals shall not be issued by the Minister unless accompanied by -

- (a) the relevant documentation for notification as required by the Prior Informed Consent (PIC) procedure as set out in these regulations and the appropriate fee set out in the Thirteenth Schedule.

CONTROL OF IMPORTS

- 34. - (1) No person shall import a chemical into Malawi without a licence issued by the minister under these Regulations
- (2) (a) In considering every application to import chemicals, the Minister shall ensure that -
 - (i) the applicant is aware of the toxicity of the chemical and the risk involved in its use and handling;
 - (ii) the applicant is capable of handling the risks arising from the importation of such a chemical and has in this behalf, an adequate insurance coverage or similar guarantee;
 - (iii) the applicant has plans and means to dispose of any surplus chemicals and containers in an environmentally sound manner;
 - (iv) the applicant shall distribute the chemical(s) to only those wholesalers and retailers appropriately licensed under these Regulations;
 - (v) the applicant shall comply with such other measures as may be determined by the Minister,
 - (vi) the requirements of the Prior Informed Consent procedure set out in these regulations have been fulfilled; and
- (b) a licence to import a chemical shall be valid for such consignments and for such a period as may be determined by the Minister.

RESTRICTIONS ON IMPORTING SEVERELY RESTRICTED CHEMICALS

- 35. The Minister shall grant a licence to import severely restricted chemicals or other toxic substances if –
 - (a) the exporting country permits the use of chemicals within its jurisdiction;
 - (b) if no other alternative chemical is available; and
 - (c) if there are adequate management plans.

CONTROL OF CHEMICALS

- 36.- (1) No person shall export a chemical from Malawi without a licence issued under these Regulations.

- (2) (a) In considering every application to export chemicals, the Minister shall ensure that -
- (i) the requirements for the Prior Informed Consent Procedure set out in these Regulations, where appropriate, have been fulfilled; and
 - (ii) the application meets such other requirements as may be determined by the Minister and
 - (b) a licence to export a chemical shall relate to such a consignment of chemicals and be for such a period as may be determined by the Minister.

RESTRICTIONS ON SEVERELY RESTRICTED CHEMICALS

37. The Minister shall grant a licence to export severely restricted chemicals or other toxic substances if -

- (a) the importing country permits the use of the chemicals within its jurisdiction;
- (b) the chemical in question is required as a raw material for recycling or recovery in the country of import; and
- (c) the import is in accordance with an agreement or arrangement that conforms with the requirements as contained in these regulations.

PORTS OF ENTRY AND ROUTES

38. A licence issued under these Regulations shall only entitle the licensee to transport chemicals or toxic substances

CAP. 42:01

Customs and Excise Act.

PART IV - MISCELLANEOUS PROVISIONS

REPORTING

- 39.- (1) Any person who is licensed to carry out any procedures or activities under these Regulations shall submit to the Director annual reports on the conduct of the licensed activities.
- (2) Where special reporting procedures are a condition of any licence under these Regulations, such procedures shall take precedence over the provisions of subregulation (1).

DUTY TO KEEP RECORDS

40.- (1) The holder of the regulations shall-

- (a) keep records of the licensed activities and all transactions related thereto and
 - (b) submit the records referred to in paragraph (a) to the Minister every year from the commencement of the licensed activities.
- (2) The Director may order the holder of a licence under these Regulations to install mechanisms at the expense of the holder of the licence or to take samples and analyze them as the Minister may direct.

COMMUNICATION OF DECISION OF LICENCE

41. Where a person applies for a licence under these Regulations, the Minister shall communicate his decision to the applicant within a period of three months.

IMPROVEMENT NOTICE

42. - (1) Where an inspector has reasonable cause to believe that any person is violating these Regulations, he may issue against such a person an improvement notice or take any other measures appropriate for correcting the situation.
- (2) An improvement notice issued under subregulation (1) shall not prejudice criminal proceedings which may be taken under any of the provisions of the Act.

CANCELLATION OF LICENCE

43. The Minister may suspend or revoke a licence issued under these Regulations if he is satisfied that the conditions attached to the granting of the licence have not been complied with or if the Minister is satisfied that continued operation of the activity will be injurious to the health of the neighboring environment in general.

OFFENCES AND PENALTIES

44. Any person who contravenes the provisions of these Regulations shall be subject to the punishment prescribed under section 64, 66 and 67 of the Act.

FIRST SCHEDULE REG. 9

CATEGORIES OF PESTICIDES AND INDUSTRIAL CHEMICALS TO BE CONTROLLED WHICH ARE TOXIC

A PESTICIDES

- Aldrin
- DDT
- Dieldrin
- Dinoseb and Dinoseb Salts
- Fluoroacetamide
- HCH (mixed Isomers)
- Chlordimeform
- EDB (1,2 - dibromoethane)
- Heptachlor
- Mercury compounds such as mercury oxide, mercurous chloride, calomel, other inorganic mercury compounds, alkyl mercury compounds and alkoxyalkyl and aryl mercury compounds
- Captafol
- Chlorobenzilate
- Hexachlorobenzene
- Lindane
- Pentachlorophenol
- 2,4,5-T
- Monocrotophos
- Parathion
- Phosphamidon

B. INDUSTRIAL CHEMICALS

- Crocidolite
- Polybrominated Biphenyls (PBBS)
- Polychlorinated Biphenyls (PCBS)
- Polychlorinated Terphenyls (PCTS)
- Tris (2, 3 dibromopropyl) Phosphate

SECOND SCHEDULE

(To be produced in Triplicate)

REPUBLIC OF MALAWI

ENVIRONMENTAL MANAGEMENT ACT NO. 23 OF 1996 ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS MANAGEMENT) REGULATIONS, 1999

APPLICATION FORM FOR REGISTRATION OF TOXIC SUBSTANCES AND CHEMICALS (REG. 9)

I hereby make application for full registration/provisional registration of the following chemical which we intend to import into Malawi and state that the particulars of the chemical are as follows -

1. Brand name
2. Other common names, if any
3. Nature of the chemical:
4. Formulation: (i.e. emulsifiable, concentrate, wettable powder, etc.)
5. Use:
6. Method of application, if a pesticide:
7. Composition:

(a) active constituents:

common names

chemical names

***percentage**

* proportion in metric units of w/w.w/v, v/v or in acid equivalents

(b) mode of action of each active constituent:

active constituent

mode of action

(c) molecular and structural formulae of each of the active constituents:

active constituent

molecular formulae

structural formulae

8. Residue data:

- (a) nature of residues occurring in or on crops/animals/products treated with the formulation under tropical or subtropical conditions, in case of pesticides:
- (b) information on persistence in soil and water and possible or known breakdown mechanism:

9. Toxicological properties of each active constituent:

- (a) general toxicity to wild life, fish and bees:

active constituent	toxicity to the above
(b) acute toxicity	
active constituent	acute toxicity
	LD50 on test animals
	Oral dermal respiratory

- (c) toxicity to skin and possible danger through inhalation:

active constituent	toxicity as stated above
---------------------------	---------------------------------

- (d) symptoms of poisoning:

active constituent oral	inhalation dermal eyes
--------------------------------	-------------------------------

- (e) first aid and antidotes;

active constituent	first aid antidote
---------------------------	---------------------------

10. Use precautions:

- (a) agents and chemicals with which product is known to be:
 - (i) compatible:
 - (ii) incompatible:
- (b) flammability:
- (c) corrosiveness:
- (d) stability on storage:
- (e) stability on dilution:
- (f) recommendation for cleaning, measuring and spray equipment
- (g) safety precautions for handling and application:
- (h) procedures for both container disposal and disposal or deactivation of the excess chemical:

11. Package material and pack sizes (dimension and net volume/weight proposed for import and marketing)
12. Manufacturers name and address:
13. Action by other authorities:
 - (a) evidence of registration approval, revocation or rejection by other authorities outside Malawi:
 - (b) name countries for which full registration of this product has been granted:
 - (c) if rejected or revoked, give reasons:
14. Name and physical address of proprietor/importer:

(Signature of applicant) (date)

FOR OFFICIAL USE

1. Full registration/provisional registration granted with no restriction
2. Full registration/provisional registration granted with the following restrictions:
3. Registration not granted for the following reasons:
4. Comments:
5. Registration No.:

Director

Date

THIRD SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996

ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS) REGULATIONS, 1999

APPLICATION FOR A LICENCE FOR MANUFACTURING / REPACKAGING OF TOXIC SUBSTANCE AND CHEMICALS

(regulation 4)

I hereby apply for a licence to manufacture/repackage toxic substances and chemicals, of which particulars are given below

1. Name and address of applicant:
2. Location of premises:
3. Name, qualification and experience of supervising chemist (attach curriculum vitae):
4. Physical (describe whether industrial, residential, commercial and whether it is near schools or recreational areas):
5. Other key officers:

Name	Qualification	Title
------	---------------	-------
6. Equipment or technology possessed: _____
7. Type of chemicals to be manufactured or repackaged (indicate number in accordance with first Schedule and describe whether liquid or otherwise and their characteristics):
8. Quantity of chemicals to be manufactured in kg or tonnes for solids or in cm³ if liquid or gases:
9. Registration number
10. Sources of raw materials:
11. Type of containers to be used for packaging or repackaging:
12. Type of labels on the container (describe whether industrial, residential, commercial and whether it is near schools or recreational areas):
13. Describe safety measures at the premises including protective equipment, first aid kits and first aid personnel.
14. Measures for containment and treatment of fumes, dusts, spillage and leakages: -

15. Chemical wastes disposal methods:

- | | | |
|--------------|---|----------------|
| Attachments: | (1) Description of manufacturing equipment | (Appendix I) |
| | (2) Description of manufacturing process | (Appendix II) |
| | (3) An environment impact assessment of proposed manufacturing or formulation | (Appendix III) |
| | (4) Curriculum vitae of key officers in the production process | (Appendix IX) |

Date: _____
Signature of Applicant and title

FOR OFFICIAL USE ONLY

Date received: _____

Fee paid MK: _____ In words

Comments of the lead agency: _____

Date _____
Name and signature of responsible officer

Decision of the Technical Committee on the Environment:

Date: _____
Signature
Minister, Natural Resources and Environmental Affairs

FOURTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996

ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS MANAGEMENT) REGULATIONS, 1999

APPLICATION FOR A LICENCE TO IMPORT TOXIC SUBSTANCES AND CHEMICALS

(regulation 28)

I hereby apply for a licence to import chemicals of which particulars are given below -

1. Name and address of applicant:
2. Type of chemicals to be imported (*indicate number in accordance with First Schedule and describe whether liquid or otherwise*):
3. Country of origin of the Chemical:
4. Regulatory action in country of origin:
5. Status of the chemical in the country of origin:
6. Mode of transporting the chemicals into the country and the safety precautions to be used:
7. Quantity of the chemicals to be imported:
8. The permitted use of the chemical:
9. Proprietary name or the trade name of the chemical:
10. Physical address of premises where storage would be done:
11. Describe safety measures at the premises:
12. Surroundings of the premises:
13. Final destination of the chemicals:
14. Safety considerations in case of an accident:

15. Chemical wastes disposal plans:

16. Any other information:

Date: _____

Signature of Applicant

FOR OFFICIAL USE ONLY

Date received:

Fee paid MK: _____ In words

Comments of the lead agency or designated National Authority:

Date: _____

Signature Minister, Natural Resources and Environmental Affairs

FIFTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT REGULATIONS, 1999**

APPLICATION OF LICENCE TO EXPORT CHEMICALS

(regulation 4)

I hereby apply for a licence to export chemicals, of which particulars are given below -

1. Name and address of applicant: _____
2. Type of chemical(s) to be exported (indicate classification in accordance with regulation 9 and describe whether liquid or otherwise): _____
3. Characteristics of chemical(s): _____
4. The permitted use of the chemicals: _____
5. The proprietary name or trademark of the chemical: _____
6. The registration number of the chemical: _____
7. The recipient country: _____
8. Have the Prior Informed Consent procedures been satisfied? _____
9. Describe the mode of exporting the chemicals to the recipient country and the safety precautions to be used: _____
10. Indicate if the recipient country permits the use of the chemical within its jurisdiction: _____
11. Any other information: _____

Date: _____

Signature of Applicant, Title

FOR OFFICIAL USE ONLY

1. Date received: _____

2. Fee paid MK: _____ In words: _____ Date: _____

Name and Signature of responsible officer

Decision of the Technical Committee on the Environment

Signature, Minister Natural Resources and Environmental Affairs

SIXTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT)
REGULATIONS, 1999**

**APPLICATION FOR A LICENCE FOR TRANSPORTATION
OF TOXIC SUBSTANCES AND CHEMICALS**

(regulation 4)

I hereby apply for a licence to transport toxic substances and chemicals, of which particulars are given below -

1. Name and address of Applicant:
2. Type of chemicals to be transported (indicate number in accordance with First or Second Schedule and describe) whether liquid or otherwise and their characteristics:
3. Characteristics:
4. Origin and destination of the consignment:
5. Number and type of vehicles to transport the chemicals:
6. Quantity of chemicals per vehicle to be transported:
7. Type of containers to be used in transporting chemicals:
8. Type of labels on containers (describe and attach sample):
9. Type of labels to be used on carrier vehicles in case of petrochemicals:
10. Describe safety precautions during transportation:
11. Licensed premises or sites/plants to which toxic substances or chemicals are to be transported:
12. Any other information:

Date: _____ Signature _____
Minister, Natural Resources and Environmental Affairs

Designation/title: _____

FOR OFFICIAL USE ONLY

Application received by: _____ on _____ 20

Fee paid MK: _____ In words: _____

Date: _____

Signature
Minister, Natural Resources and Environmental Affairs

SEVENTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS)
REGULATIONS, 1999
APPLICATION FOR A LICENCE TO DISTRIBUTE CHEMICALS
(REGULATION)**

I hereby apply for a licence to distribute chemicals, of which particulars are given below -

1. Name and physical address of applicant.
2. Qualification and experience in handling chemicals
3. Type of chemical (s) to be distributed:
4. Characteristics of Chemicals.
5. The permitted use of the chemical(s).
6. The proprietary name or trademark of the chemical:
7. The Registration number of the chemical(s):
8. Quantity:
9. Indicate if distribution will be to wholesalers or retailers:
10. Location of premises.
11. Describe safety precautions at the premises:
12. Any other information:

Date _____ Signature _____
Designation/ Title _____

FOR OFFICIAL USE ONLY

Application received by: _____ on _____

Fee paid MK in words _____

Date: _____ Signature _____
Minister, Natural Resources and Environmental Affairs

EIGHTH SCHEDULE

REPUBLIC OF MALAWI
ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT)

REGULATIONS, 1999
LICENCE TO MANUFACTURE/REPACKAGE CHEMICALS

(regulation 4)

Licence No. ER MC/RP/CH

Name: _____

Address : _____

(plot No., Village, town, city, district)

You are hereby licensed to manufacture/repackage the following chemicals :

(classification of chemical indicated by number in _____ Schedule)

1. _____

2. _____

3. _____

Concentration: _____

Quantity: _____

Specific use: _____

Address of licensed premises for manufacture or repackaging: _____

This licence is valid from _____ 20 _____ to _____ 20 _____

This licence is granted subject to the following conditions: _____

Date _____ Signature _____

Director, Department of Environment Affairs

NINTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENTAL MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT) REGULATIONS, 1999**

LICENCE TO IMPORT CHEMICALS

(regulation 4) Licence No. IM/CH

Name: _____

Address: _____
(plot No., village, town, city, district)

You are hereby licensed to import the following chemicals: _____
(indicated by number in _____ Schedule)

1. _____

2. _____

3. _____

Purposes for which the imported chemicals are licensed: _____

From (Name and address) _____

Quantity: _____

Concentrations: _____

The import shall be made through _____
(border/customs control post)

Address of licensed premises for storage or repackaging where necessary: _____

This licence is valid from _____ 20 to _____ 20

This licence is granted subject to the following conditions: _____
(attach a copy of authorization by the state from which importation is to be made)

Date _____ Signature _____

Director of Environmental Affairs

TENTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT)
REGULATIONS, 1999**

LICENCE TO EXPORT CHEMICALS

(regulation 4) Licence No. EX/CH

Name: _____

Address: _____
(plot No., village, town, city, district)

You are hereby licence to export the following chemicals
(indicated by number in _____ Schedule)

1. _____

2. _____

3. _____

To: _____

(Name and address): _____

This export shall be made through _____ (border/customs control post)

This licence is subject to the following conditions

(attach a copy of authorization by the state to which export is to be made)

1. _____

2. _____

3. _____

Date: _____ Signature _____

Director of Environmental Affairs

ELEVENTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENTAL MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT) REGULATIONS, 1999**

LICENCE TO TRANSPORT CHEMICALS

(regulation 4) Licence No. TR/CH

Name: _____

Address: _____

You are hereby licensed to transport the following chemicals (indicated by number in Schedule): _____

1. _____

2. _____

To (Location, district) _____

From: (Location, district) _____

Number, type and registration number of vehicles licensed:

This licence is valid from _____ 20 _____ to _____ 20 _____

This licence is granted subject to the following conditions: _____

Date: _____ Signature _____

Director, Department of Environmental Affairs

TWELFTH SCHEDULE

REPUBLIC OF MALAWI

**ENVIRONMENTAL MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT) REGULATIONS, 1999**

LICENCENO.DS/CH

Name: _____

Address _____

(No., village, town, city, district)

You are hereby licensed to distribute the following chemicals -
(indicated by number in Schedule)

1. _____

2. _____

3. _____

To: (wholesalers, retailers, etc.)

Quantity: _____

Specific use: _____

This licence shall be valid from _____ 20 to _____ 20

This licence is subject to the following conditions: _____

Date: _____ Signature _____

Director, Department of Environmental Affairs

THIRTEENTH SCHEDULE

FEEs		
Column 1 Matter	Column 2 Upon first application Kt	Column 3 Upon renewal of licence Kt
1. Application for licence to manufacture/repackage chemicals		
2. Application for a licence to import chemicals		
3. Application for a licence to export chemicals		
4. Application for a licence to transport chemicals (carrier)		
5. Application for a licence to distribute chemicals		
6. Application for a licence to operate/ own a disposal site or plant.		

FOURTEENTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

**ENVIRONMENT MANAGEMENT ACT
ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS
MANAGEMENT) REGULATIONS, 1999**

APPLICATION FOR RENEWAL OF A LICENCE (REG. 8)

NAME OF APPLICANT: _____

ADDRESS: _____

APPLICATION FOR RENEWAL OF A LICENCE FOR: _____

manufacturing/repackaging chemicals _____

importing chemicals _____

exporting chemicals

transportation of chemicals

wholesale/distribution of chemicals

retail of chemicals

Location of business: _____

Current licence number: _____

Chemical applied for: _____

Does the applicant seek any changes in the conditions of the current licence?

I certify that the information provided is complete and correct

Date _____ Signature of applicant _____

Title:

FOR OFFICIAL USE

1. Date of receipt of application: _____
2. Application fee K _____ in words:
3. Date of inspection of premises (a separate inspection report is required) _____
4. Approved
5. Rejected Licence number
6. Further information required
7. Reasons if (5) is applicable _____

FIFTEENTH SCHEDULE

PART I - MINIMUM REQUIREMENTS FOR MANUFACTURING OR REPACKAGING OF CHEMICALS

1. PREMISES

- 1.1 Premises should be located away from homes, drinking water sources and areas liable to flooding.
- 1.2 Premises should be maintained in a good state of repair. The condition of buildings should be reviewed regularly and repairs effected where necessary.
- 1.3 Premises should have sufficient space to provide hygienic working conditions, allow an efficient flow of work, and permit effective communication and supervision, and clear access to fire fighting equipment.
- 1.4 Floors in processing areas should be made of imperious materials, laid on, and even surface, free from cracks and open joints, and should allow prompt and efficient removal of any spillage. Walls should be sound and finished with a smooth, imperious, washable and nonflammable surface.
- 1.5 Premises in which chemical products are stored, manufactured or repackaged should be made secure, with access restricted to authorized personnel.
- 1.6 Roofing must be able to keep out rain and must be designed to allow for fumes and heat to be vented in case of fire
- 1.7 Pretreatment facilities should be provided to reduce the amounts and toxicity of wastes.
- 1.8 Drains should be of adequate size, and should have trapped quellies and proper ventilation. Open channels should be avoided where possible, but if they are necessary, they should be shallow to facilitate cleaning or easy recovery of the chemical for reuse or disposal. Drainage should be directed to pretreatment facilities.
- 1.9 Air intakes and exhausts, and associate pipe work and trucking should be sited to avoid occupational safety hazards and reduce emissions into the environment.
- 1.10 Manufacturing areas should not be used as a general right of way for personnel or except of materials used in the manufacturing process, for storage of materials.
- 1.11 Waste material should not be allowed to accumulate but should be collected in suitable receptacles for removal to collection points outside the building and disposed of in accordance with the requirements under regulation Special care is necessary over the disposal of waste containing dangerous, highly toxic chemicals. Disposal of raw materials printed packing materials and rejected products should be carefully controlled and documented.
- 1.12 There should be made available written clearing procedures and schedules for manufacturing or repackaging and storage areas. The amounts of harmful chemicals stocked should be reported and the quantities emitted into the environment.
- 1.13 Adequate space, preferably separated from the processing areas, should be provided for storing equipment, and storage of cleaning materials, signs should be available indicating non smoking, non eating areas, location of emergency equipment. Emergency phones and emergency exit routes.

2. STORAGE AREAS

- 2.1 Goods must be checked on arrival for identity, quantity and condition.
- 2.2 Storage areas should be designed, laid-out and be of sufficient capacity to permit effective and orderly segregation of the various categories of material stored and where possible access should be restricted to authorized personnel.
- 2.3 Segregated storage should be provided for rejected, recalled, expired or returned goods. There should also be physical separation of chemicals that react with each other and separation of chemicals from foodstuffs, feedstuffs and pharmaceutical.
- 2.4 Labels and other printed packaging materials, should be stored in a secure manner that will permit issue only to authorized persons in accordance with formal

documented procedures. Storage arrangements should permit separation of different labels and other printed materials and avoidance of a mix-up.

- 2.5 All goods should be stored under cover to avoid risk of harmful exposure to personnel.
- 2.6 Every area for the bulk storage under cover to avoid risk of harmful exposure to personnel.
 - (a) adequately ventilated;
 - (b) capable of containing not less than seventy five percent of spillage; and
 - (c) have an inventory of the substances in storage maintained and prominently displayed.
 - (d) Provide for separate locations for solid and liquid products.
- 2.7 Products in storage shall have –
 - (a) product data sheets;
 - (b) hygiene and safety instructions ; and
 - (c) emergency instructions and procedures.

- 2.8 Storage facilities should only stock the quantity needed in the immediate future.

3.0 EQUIPMENT

- 3.1 Equipment should be designed and located to suit the process and products for which it is to be used. Equipment should be maintained so as to be fit to perform the contemplated functions and present no hazard to personnel.
- 3.2 All necessary and protective equipment should be provided.
- 3.3 Manufacturing equipment should be easily and conveniently cleanable, both inside and outside. There should be available written instructions for cleaning of equipment and suitable clearing facilities should be provided.
- 3.4 Equipment should not be a hazard to human health and the environment through leaking joints, lubricant drips or through inappropriate modifications or adaptations.

- 3.5 Equipment used for weighing, measuring, testing and recording should be subject to regular recorded checks for accuracy and working order, in accordance with a written planned maintenance schedule.

- 3.6 Emergency equipment should be available, for example, fire fighting, and emergency showers.

4. PERSONNEL

- 4.1 The key personnel are the person responsible for production or repackaging and the person responsible for quality control, who should be different persons, neither of whom should be responsible to the other, but who should both have a responsibility for achieving the requisite quality.

- 4.2 Manufacturing or repackaging operations shall be carried out under the supervision of a chemist with adequate relevant post graduate training with the support of suitably qualified personnel such as a chemical technologist or assistant.

- 4.3 All quality control operations shall be carried out under the supervision of an appropriately trained chemist with relevant postgraduate training with the support of suitably qualified personnel such as laboratory technologist or chemist.

- 4.4 Personnel involved in the manufacturing or repackaging of toxic substances or chemicals shall be provided with

- (a) adequate protective and safety clothing;
- (b) adequate and appropriate equipment or facilities for handling toxic substances and chemicals;
- (c) proper training and information of potential health hazards to which he may be exposed to and the measures available for prevention and control and protection against health hazards as required under section 65 of the Occupational Safety Health and Welfare Act.

5. PRODUCTION

- 5.1 Manufacturers are required to use less harmful chemicals during production to reduce the amount of hazardous wastes.
- 5.2 The quality of the chemical shall comply with the requirements under these Regulations.

PART II - MINIMUM REQUIREMENTS FOR TRANSPORTATION AND STORAGE OF TOXIC SUBSTANCES AND CHEMICALS

FACILITIES

- 1.1 Adequate and appropriate facilities and equipment to transport, store or handle toxic substances and chemicals in an environmentally sound manner is a prerequisite.
- 1.2 The facility should be in a position to report the amounts of harmful chemicals they stock and the quantities emitted into the environment.
- 1.3 The collection and transportation of toxic substances and chemicals shall be conducted in a manner that would not cause spillage, harmful emissions, leakages and scattering of the substances.
- 1.4 The vehicle, pipelines and equipment for the transportation of toxic substances and chemicals shall be in such a state as not to cause the scattering, harmful emissions or the flowing of the substances.
- 1.5 Chemicals must not be loaded together with food and other materials destined human or animal consumption and use.

2. PERSONNEL

- 2.1 The personnel involved in the collection, transportation or storage of toxic substances shall be provided with -
 - (a) adequate protective and safety clothing;
 - (b) adequate and appropriate equipment or facilities for handling toxic substances and
 - (c) proper training and information.
- 2.2 Drivers in particular should be given written summaries of emergency response procedures to be followed in case of an accident involving chemicals.
- 2.3 The personnel involved in the collection, transportation or storage of toxic substances and chemicals shall undergo such medical check-ups as are necessary commensurate to the risks faced by the employees and the medical report of fitness shall be kept by the town clerk of every local authority.

3.0 VEHICLES

- 3.1 The vehicles for transporting or other means of conveyance and the premises for storage of toxic substances and chemicals shall be labelled in such a manner as prescribed by the Minister

- 3.2 The condition of the vehicle must be checked before loading, and unsound floors and protrusions likely to damage the packs must be avoided.

3.3 STABILITY OF THE LOAD MUST BE ENSURED.

- 3.4 Vehicles must carry documents, for example Transport Emergency (TREM) card, that will identify the following, in the event of an accident -

- a) The dispatching company, including its address and phone numbers.
- b) The products being carried.
- c) Basic hazards and precautions to be taken

- 3.5 Suitable fire extinguisher, protective and clean-up equipment should be available for the driver.

- 3.6 The quality of the chemical shall comply with the requirements under these regulations.

PART III - MINIMUM REQUIREMENTS FOR DISTRIBUTION OF TOXIC SUBSTANCES AND CHEMICALS

DOMESTIC SALE

- 1.1 A person may sell chemicals if he has been granted a licence by the Minister under regulation 4

- 1.2 A chemical shall be distributed and used for specific purposes only as stipulated under these regulations e.g. restricted to agricultural, industrial, domestic or public health purposes.

- 1.3 A chemical shall be produced or manufactured in the form (i.e. whether liquid or otherwise) as indicated by these Regulations and the concentration levels shall conform to the specifications under these Regulations.

- 1.4 A distributor of chemicals must comply with labeling, packaging, storage and other requirement stipulated under these Regulations.

ADVERTISING

- 2.1 The use of false or misleading statements or visual presentations is strictly prohibited. In particular, the use of statements and pictures that exaggerate or otherwise misrepresent the safety and effectiveness of a chemical.
- 2.2 Adverts should consist of accurate, factual statements that can be substantiated by testing and technical information.
- 2.3 Adverts should stress the importance of reading the label and following appropriate safety precautions.

3. IMPORT AND EXPORT

- 3.1 A person may import chemicals into Malawi if he is licensed to do so under regulation 4.
- 3.2 A licensed person shall import into Malawi only those chemicals registered under regulation 9
- 3.3 A licensed importer of chemicals shall display proof of his license or other documentation to customs officials when bringing shipments of chemicals into the country.
- 3.4 The importer shall be required to certify in writing that a shipment complies with these Regulations.
- 3.5 A person may export chemicals if he is licensed to do so under regulation 4.
- 3.6 Severely restricted chemicals shall be exported only with the prior consent of the recipient country.

SIXTEENTH SCHEDULE

(To be completed in triplicate)

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996

**ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES AND CHEMICALS)
REGULATIONS, 1999**

**APPLICATION FOR A LICENCE TO OWN/OPERATE
A CHEMICAL WASTE DISPOSAL SITE / PLANT (REGULATION 27)**

I hereby apply for a licence to own /operate a chemical waste disposal site/plant, of which particulars are given

Name and Address of applicant: _____

Location and District of site /plant: _____

Approval by the Local Authority (attach a written approval by the environmental officer of the Local Authority.

Type of chemical(s) to be disposed off at site / plant. _____

Characteristics of the chemical(s): _____

Form of the chemical(s): _____

(a) liquid _____

(b) dust _____

(c) granulars _____

(d) baits _____

(e) wettable powders _____

(f) Other (specify) _____

Quantity being disposed off/per annum

(a) liquid _____

(b) dust _____

(c) granulars _____

(d) baits _____

(e) wettable powders _____

Estimated life span of plant / site:

9. (a) Proposed hectarage /area of site/plant (include site plan and designation):

(b) Description of soil structure and geology of the area

10. Executive summary of environmental impact assessment (please attach)

Any other information

Signature

Designation/Title

FOR OFFICIAL USE

Application received by

MK _____ in words

Signature

Minister, Natural Resources and
Environmental Affairs

SEVENTEENTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO.23 OF 1996

**ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES
AND CHEMICALS MANAGEMEN1')
REGULATIONS, 1999**

LICENCE NO. WD/CH

Name:

Physical address.

You are hereby licensed to own /operate a chemical waste disposal site /plant at plot no.
(Village, Town, City, District)

This licence is valid from 1 _____ 20 _____ to _____ 20 _____

This licence is subject to the following conditions:

Date: _____ Signature _____

Minister, Natural Resources and Environmental Affairs

EIGHTEENTH SCHEDULE

REPUBLIC OF MALAWI

ENVIRONMENT MANAGEMENT ACT NO. 23 OF 1996 ENVIRONMENT MANAGEMENT (TOXIC SUBSTANCES ANT) CHEMICALS) REGULATIONS, 1999

NOTIFICATION SCHEME FOR BANNED ANT) SEVERELY RESTRICTED CHEMICALS

A. INFORMATION REGARDING EXPORT

regulation 33

1. Country of export:
2. Ministry/Department and Responsible authority/Firm:
3. Name(s) of chemical
(common name; trade name)
4. Specification, if relevant for control action:
5. Code numbers
 - Chem. Abstr. Services Reg. No. (CAS):
 - Other number(s) specify:
6. Country of destination
7. Designated National Authority(ies) to which this information is addressed:
8. Notification of control action sent
 - Date(s):
 - Copy attached:
 - Reference address of Designated National Authority:
9. Information regarding export
10. Name, title and address of person providing this information:
11. Date:

B. Notification for control action

1. Country
2. Ministry/Department and Responsible Authority
3. Name(s) of chemical (chemical name) (IUPAC): common name; trade names:
4. Specification, if relevant for control action (eg. for pesticides)
5. Code numbers
 - Chem. Abstr. Service Reg. No. (CAS):
 - Customs Co-operation Council No. (CCC):
 - Other number(s) specify:
6. Control action

USE(S) CONTROLLED AND SUMMARY OF CONTROL ACTION	EFFECTIVE DATE	REF. TO NATION DOCUMENT

7. Reasons supporting the control action (relevant to protection of human health and the environment:

8. Contact point where additional information may be obtained:

9. Designated *alien* authority:

10. Name and title of official issuing this notification:

11. Date:

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