

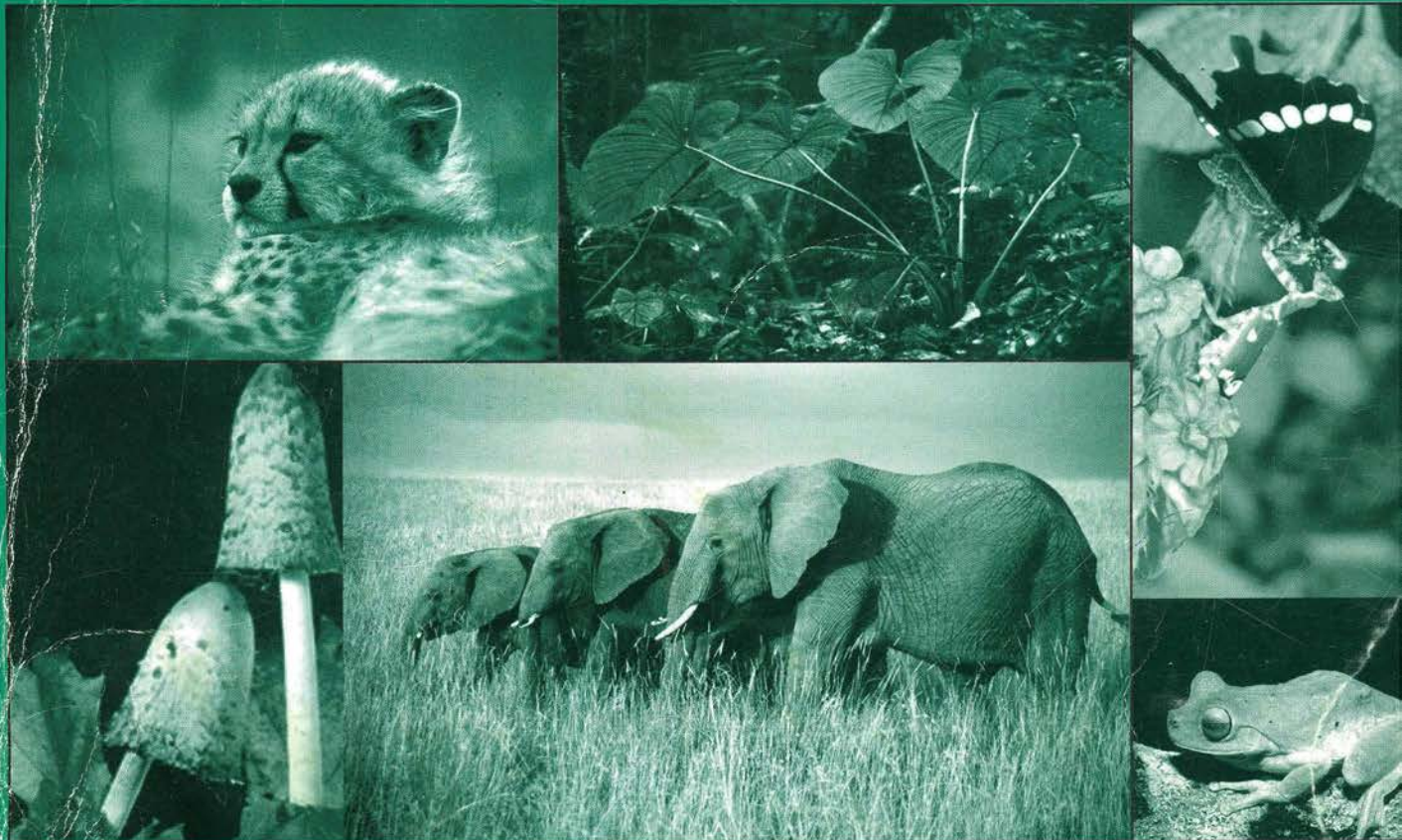


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UNEP/UNDP/DUTCH JOINT PROJECT
ON ENVIRONMENTAL LAW AND INSTITUTIONS
IN AFRICA



HANDBOOK ON THE IMPLEMENTATION
OF CONVENTIONS RELATED TO
BIOLOGICAL DIVERSITY
IN AFRICA



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

**Handbook on the Implementation of Conventions
Related to Biological Diversity in Africa**

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Preface

This *Handbook* has been developed under the aegis of the UNEP/UNDP/DUTCH Joint Project on Environmental Law and Institutions in Africa. The five-year project, which commenced in 1994, is funded by the Dutch Government to support the development of environmental law in selected African countries and to enhance the institutional capacity of such countries towards improved implementation and enforcement of the laws. While under the day-to-day management of UNEP, the Joint Project is, at the policy level, under the direction of a Steering Committee comprising, besides UNEP and the Donor, the UNDP, The World Bank, FAO and IUCN. UNEP's general support of this initiative has been vital to its success.

The project has been conducted systematically in seven countries, namely, Burkina Faso, Malawi, Mozambique, Sao Tome and Principe and the three East African countries: Kenya, Tanzania and Uganda. The activities related to environmental legislation in the first four countries were country-specific. In other words, the project moved from development of framework environmental laws to sectoral statutes and implementing regulations. On the other hand, the three East African countries were handled as a Sub-Regional Project, where the focus was on environmental issues with prominent sub-regional characteristics and the activities directed at development and harmonization of the respective laws and policies.

Apart from the development of laws, the Joint Project placed special emphasis on intensive and interactive workshops designed to enhance the capacity and build up expertise of the nationals of the relevant countries. The many workshops conducted included those on the following themes: methodology for development of environmental standards; judicial intervention in environmental causes; environmental litigation; regional harmonization of environmental laws; promotion of compliance with environmental law by industries; and implementation of conventions related to biological diversity. Several non-project countries were invited to these workshops, with funding secured from different sources to cover the expenses of participants coming from such countries.

It was, in fact, the workshop held at Maputo in June/July 1997, attended by a total of 14 countries to discuss the implementation of conventions related to biological diversity, that stimulated the interest culminating in the present *Handbook*. Convinced about the merits of a concerted effort to implement environmental conventions in general and, in particular, conventions which are applicable to Africa, the participants urged for the development of a concrete handbook as a practical tool, which they could use in their respective countries. In March 1998 the East African countries raised the question once more and stressed that such a document should be part of the process of consolidating the work done during the five years of the Joint Project.

Such a handbook, focusing only on conventions related to biological diversity seemed eminently justified. A handbook covering environmental treaties in general is possible but it has the danger of being overly general and woolly. A detailed and precise one, on the other hand, runs into the danger of being huge and unwieldy. A handbook focusing on conventions related to biological diversity would be more focused, whatever the criteria for selection. Properly applied, such a handbook would also have far-reaching impact on the enforcement of environmental law, given the pervasive nature of biological diversity and its protection. It was also found legitimate that the handbook should have a regional focus. Development of regional international law, in general, and environmental law in particular is a fairly well accepted practice. That principle complements the fact that the project had an African constituency which requested for such a document. It is also a relevant fact that while problems of biodiversity protection are global, necessitating the 1992 Convention on Biological Diversity, in fact, they have unique regional characteristics which require that the framework convention should be given effect at regional and sub-regional levels. That is the significant point for the 1968 African Convention for the Conservation of Nature and Natural Resources, the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources and the numerous conventions already concluded in Europe. A successful launching of a handbook applicable to Africa would strengthen the argu-

ment for similar initiatives in other regions, possibly with greater improvement beyond the current initiative. All the Secretariats of conventions related to biological diversity have reported that they have been directed by their Conferences of the Parties to intensify regional implementation of the respective Conventions.

The first draft of the *Handbook* was completed in March 1999. It was presented at an Expert Workshop held at Garden Hotel, Machakos, Kenya on 14 and 15 June 1999. The Secretariats of the Ramsar Convention, CITES, OAU, Lusaka Agreement attended. In addition the following experts attended in their personal capacities: Ms. Theresa Agyekum-Obeng (OAU); Mr. Robert Wabunoha (Uganda); Mr. G.Z. Banda (Malawi); Mr. Larsey Mensah (Ghana); Prof. Margaret Okorodudu-Fubara (Nigeria); Ms. Janet Sallah-Njie (Gambia); and Prof. Essam El Badry (Egypt).

The Secretariats of the Conventions on Biological Diversity and Migratory Species did not attend but sent detailed written comments. The Expert Workshop and the written comments resulted in drastic reorganization and re-writing of the draft *Handbook*. As a consequence, the ownership of the current volume shifts to the experts who made crucial inputs to its development. The financial support for the Expert Workshop was provided by UNEP's Biodiversity Programme.

The report of the Machakos Workshop was so impressive that the Executive Director of UNEP decided to provide financial support for a similar exercise but with broader participation of African countries and for a slightly longer duration. The second Expert Workshop on the Handbook on the Implementation of Conventions Related to Biological Diversity in Africa was held

at UNEP Headquarters in Nairobi from 11th to 14th October 1999. This time experts attending were from Burkina Faso, Cameroon, Comoros, Congo, Djibouti, Eritrea, Ethiopia, Ghana, Equatorial Guinea, Guinea, Madagascar, Malawi, Mali, Nigeria, Sao Tome and Principe, Senegal, Sudan, Swaziland, Togo and Uganda. Representatives of the following Secretariats also attended: Ramsar Convention, CMS, CITES and the OAU. By a resolution at the Workshop, they declared their support for the contents of the *Handbook*, subject to their additional recommendations which have since been incorporated in the text.

The consultant who worked with UNEP in the preparation of the *Handbook* is Professor Jackton B. Ojwang from the Faculty of Law, University of Nairobi. His contribution to this important work is gratefully acknowledged. Sincere appreciation also goes to the experts who participated at the two workshops, for indeed, the structure and content of the *Handbook* reflects their explicit instructions. Additional gratitude is also due to the Secretariats of the CBD, CITES, CMS, Lusaka Agreement and Ramsar who ensured that the *Handbook* would reflect the challenges they are faced with in implementation of the conventions. Special gratitude is reserved for the Executive Director of UNEP for his support and encouragement to this initiative.

It will be clear from the history of the *Handbook* that its final quality and content is a result of joint efforts and collective inputs. Therefore, it does not necessarily and in any specific way, reflect the official position of UNEP, except in its broad principle. It is hoped, however, that the initiative will inspire other regions of the world to develop similar tools. They should improve on the current output.

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Contents

Preface	iii
Introduction	1
Chapter One: The Status of Biological Diversity in Africa	4
1.1 Notable Aspects of Africa's Biological Diversity	4
1.2 Africa's Biological Diversity and its Contribution to the Continent's Social and Economic Development	4
1.3 Biodiversity Loss in Africa	5
1.4 Approaches to Biological Diversity Conservation	6
Chapter Two: Characteristics of Biological Diversity Conventions	8
2.1 The Main Traits of the Biological Diversity Conventions	8
2.1.1 Convention on Fishing and Conservation of the Living Resources of the High Seas (1958)	9
2.1.2 African Convention on the Conservation of Nature and Natural Resources (1968)	9
2.1.3. Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)	12
2.1.4 Convention for the Protection of the World Cultural and Natural Heritage (1972)	14
2.1.5 Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)	14
2.1.6 Convention on the Conservation of Migratory Species of Wild Animals (1979)	17
2.1.7 United Nations Convention on the Law of the Sea (1982)	17
2.1.8 Convention on Biological Diversity (1992)	18
2.1.9 Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)	20

2.1.10	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)	22
2.2	Observations on the Main Traits of the Key Biological Diversity Conventions	22
2.3	Approaches to the Classification of Biological Diversity Conventions	24
Chapter Three: A Classification of Biological Diversity Conventions Applicable to Africa		26
3.1	General Conventions on Biological Diversity	26
3.2	African Regional Conventions Relating to Biological Diversity	33
3.3	Regional Conventions Relating to Biological Diversity, Involving African "Range States"	36
3.4	Categorisation of the Biodiversity - related Conventions: Some Remarks	39
Chapter Four: The Critical Elements in the Biodiversity Conventions		40
4.1	The concept of Domestication of Treaty Law	40
4.2	Biological Diversity Issues Amenable to Domestication	41
4.2.1	Conventions that generate principles for domestication	41
4.2.2	Conservation principles for domestication	42
4.3	A Summary of the Principles Emerging from the Biodiversity-related Conventions	51
4.4	Analytical Comments	55
4.4.1	General observations	55
4.4.2	Common conservation principles	55
4.4.3	Concluding remark	57
Chapter Five: Approaches to the Domestication of Biodiversity Conventions in Africa		58
5.1	Preliminary Remarks	58
5.2	Design of Machinery Favourable to the Domestic Implementation of International Biodiversity Law	58
5.2.1	A co-ordinated scheme of biodiversity management	58
5.2.2	Framework statutes	58
5.2.3	Constitutional provisions	59
5.3	Domesticating the General Conservation Principles	62

5.4	Domesticating the Principles of Recourse to Scientific Methods	64
5.5	Domesticating the Principle Concerning Indigenous Conservation Experience	65
5.6	Domesticating the Principles Relating to Technology Transfer and Equitable Access to Genetic Resources	65
5.7	Domesticating Environmental Conservation Technologies: Environmental Impact Assessment	67
5.8	Domesticating the Principle of Intellectual Property Rights Protection	67
5.9	Domesticating the Principle Regarding Enhancement of Public Education and Awareness	68
5.10	Domesticating the Principles Relating to Protective Public Management	68
5.11	Domesticating the Terminology of the Biodiversity-related Conventions	69
5.12	Complementary Non-Legal Mechanisms	69
5.13	Concluding Remark	70
Chapter Six: Conclusion and Recommendations		71
6.1	General Concluding Remarks	71
6.2	Recommendations	71
6.2.1	Participation in biodiversity conventions	71
6.2.2	Domestication of biodiversity conventions	72
6.2.3	Facilitation of the domestication process	72
6.3	Indicators of Due Implementation of Biodiversity Treaty Law	73
Glossary		78
Index		79
 Appendices		
Appendix 1	Status of Ratification in Respect of the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1981)	74
Appendix 2	Status of Ratification in Respect of the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985)	74

Appendix 3	Status of Ratification in Respect of the Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985)	74
Appendix 4	Status of Ratification in Respect of the Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (1987)	75
Appendix 5	Status of Ratification in Respect of the Convention for the Establishment of the Lake Victoria Fisheries Organisation (1994)	75
Appendix 6	Status of Ratification in Respect of the Convention for the Protection of the Mediterranean Sea Against Pollution (1976)	75
Appendix 7	Status of Ratification in Respect of the Protocol Concerning Mediterranean Specially Protected Areas (1982)	76
Appendix 8	Status of Ratification in Respect of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995)	76
Appendix 9	Status of Ratification in Respect of the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982)	76
Appendix 10	Status of Ratification in Respect of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (1996)	77
Appendix 11	Status of Ratification in Respect of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (1995)	77
Appendix 12	African States Parties to the Successor Agreement to the International Tropical Timber Agreement (1994)	77
 <i>Figures</i>		
Figure 0.1	Diagrammatic Representation of the Character of Biological Diversity Conventions	3
 <i>Tables</i>		
Table 1.2	Foreign Exchange Earnings of Selected African Countries Accruing from Certain Biological Products	5
Table 2.1(1)	African States Parties to the Convention on Fishing and Conservation of the Living Resources of the High Seas (1958)	10
Table 2.1(2)	States Parties to the African Convention on the Conservation of Nature and Natural Resources (1968)	11
Table 2.1(3)	African States Parties to the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)	13

Table 2.1(4)	African States Parties to the Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1982)	14
Table 2.1(5)	African States Parties to the Convention for the Protection of World Cultural and Natural Heritage (1972)	15
Table 2.1(6)	African States Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)	16
Table 2.1(7)	African States Parties to the Convention on the Conservation of Migratory Species of Wild Animals (1979)	18
Table 2.1(8)	African States Parties to the United Nations Convention on the Law of the Sea (1982)	19
Table 2.1(9)	African States Parties to the Convention on Biological Diversity (1992)	21
Table 2.1(10)	States Parties to the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)	22
Table 2.1(11)	African States Parties to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)	23
Table 3.1.1	Classification of the Convention on Fishing and Conservation of the Living Resources of the High Seas (1958)	26
Table 3.1.2	Classification of the African Convention on the Conservation of Nature and Natural Resources (1968)	27
Table 3.1.3	Classification of the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)	27
Table 3.1.4	Classification of the Convention for the Protection of World Cultural and Natural Heritage (1972)	28
Table 3.1.5	Classification of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)	28
Table 3.1.6	Classification of the Convention on the Conservation of Migratory Species of Wild Animals (1979)	29
Table 3.1.7	Classification of the United Nations Convention on the Law of the Sea (1982)	29
Table 3.1.8	Classification of the Convention on Biological Diversity (1992)	30
Table 3.1.9	Classification of the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)	31
Table 3.1.10	Classification of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)	31

Table 3.2.1	Classification of the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1981)	33
Table 3.2.2	Classification of the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985)	34
Table 3.2.3	Classification of the Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985)	34
Table 3.2.4	Classification of the Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (1987)	35
Table 3.2.5	Classification of the Convention for the Establishment of the Lake Victoria Fisheries Organization (1994)	35
Table 3.3.1	Classification of the Convention for the Protection of the Mediterranean Sea Against Pollution (1976)	37
Table 3.3.2	Classification of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995)	38
Table 3.3.3	Classification of the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982)	38
Table 3.3.4	Classification of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) (1996)	38
Table 3.3.5	Classification of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (1995)	39

Introduction

The objective of this *Handbook* is to provide a reference point for biodiversity conservation programmes in Africa. The book is formulated around the main biodiversity conventions of relevance to Africa. This design is based on the recognition that the overwhelming national and international concern to conserve and sustainably utilise biological diversity, has taken expression in well designed, and largely comprehensive treaty law. It is desirable that the African continent, with its wealth of biodiversity that is rapidly declining on account of human activity, should put in place arrangements for conservation incorporating the vital elements of such treaty law.

It is considered that the existing international biodiversity law — meritorious as it may be — has to be lodged within the sovereign legal machinery of States Parties, in order to have an effective application. So long as the vital biodiversity conservation principles rest only at the level of international law, national legislatures, executives and judiciaries may not consider themselves obliged to apply all of them. The principles must be domesticated and made part of the constitutional processes in the individual countries of Africa, if they are to be assured of implementation.

Implementing biodiversity conventions in Africa has both benefits and burdens. On the benefits side, the principles embedded in these conventions today carry some of the most enlightened ideas for the sustainable utilisation of environmental resources and, consequently, offer the best approach to the conservation of Africa's biodiversity. Besides, some of the global conventions have provided a framework for technological and financial assistance to developing countries involved in environmental protection.

It is to be noted in this regard, that the Convention on Biological Diversity (CBD) (1992) provides (Art.25) for the establishment of a Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). This body is open to all Parties, and is required to provide scientific and technical assessments on the status of biodiversity, and to give advice on scientific programmes

and on matters pertaining to international co-operation in research and development. In similar terms a Committee on Science and Technology is established under the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (CCD) (1994) (Art.24). The CCD also provides that Parties shall "extend technology co-operation to affected developing country Parties, including, where relevant, joint ventures" (Art.18.1). Similarly, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) (1979) has established a Scientific Council and both CMS and the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (1995) (adopted under the aegis of CMS) call for assistance for certain countries.

Another example of benefits attached to the implementation of the biodiversity conventions is with regard to financial matters. The CBD, for instance, provides (Art.21) for "a mechanism for the provision of financial resources to developing country Parties for purposes of this Convention on a grant or concessional basis". The relevant mechanism is currently the Global Environment Facility (GEF), which has been facilitating the provision of financial assistance in appropriate cases to Parties. This mechanism serves the same purpose also for the CCD, under which developed country Parties have undertaken to "mobilise substantial financial resources, including grants and concessional loans, in order to support implementation of programmes to combat desertification and mitigate the effects of drought" (Art.20.2).

The biodiversity-related conventions also carry obligations for States Parties. The Parties are expected to make appropriate legal and institutional adjustments to enable them to implement and enforce the provisions of the conventions. This obligation requires political commitment to biodiversity conservation, on the part of African governments. They need to adopt policies favourable to biodiversity conservation, and to commit financial resources for the establishment of programmes and machinery for implementation.

Considering the onerous character of such obligations, it is desirable that African States Parties should exercise circumspection at the various stages of participation in the biodiversity conventions. While they should in principle ratify or accede to these conventions, they should at the same time be guided by the conviction that they will be able to implement them. Where they have serious doubts about their capacity to fulfil an aspect of the conventions, they should consider registering a reservation — where the convention allows this — at the time of attaining membership status.

This *Handbook*, apart from identifying critical elements in the treaty law for domestic application, provides indications on approaches to be taken by the domestic law, in endeavouring to implement the conventions.

A major justification for the *Handbook* is that it will serve as a facility/mechanism for the adoption of common practices among African states. Although the treaty law speaks in the same terms for all States Parties, each one has full freedom in the formulation of the scheme of domestic legislation; and in consequence there is a real possibility of the existence of wide variations in national schemes of policy, law and administration for biodiversity conservation. This fact could easily derogate from the essential demands of the conventions themselves. The *Handbook*, by proposing approaches to implementation, will help to create a measure of uniformity in State-Party understanding and mode of implementation of international environmental law.

At an earlier stage during consultations on the idea of a handbook, there were suggestions that the book's limitation to Africa might lead to a duplication of other more widely-based projects that were on the drawing board. However, greater weight of opinion supported the project. One reason for this was that, Africa has a considerable number of regional environmental interests focussed on biodiversity; and these called for a *regional approach* to the implementation of treaty law. Besides, national authorities would be somewhat hesitant to employ treaty implementation guidelines that failed to address their particular regional or sub-regional characteristics and concerns. These authorities bear political mandates whose most immediate objectives are problems of local or regional character. It should be noted also that, Conferences of the Parties to the CBD have commended regional initiatives as a constructive approach to biodiversity conservation.

It is now well recognised that biodiversity is in the first place, and with regard to each and every country,

a national endowment in respect of which national sovereignty applies. African countries thus enjoy sovereignty over their biodiversity, and they bear the primary obligation to ensure its sustainable utilisation. As they proceed with national programmes for biodiversity conservation, African countries are likely to draw substantial benefits in terms of ideas and institutional arrangements from collaboration with one another, under the auspices of regional systems and agreements.

It thus made good sense to prepare a guidebook that focussed on specific, regionally-based clusters of issues.

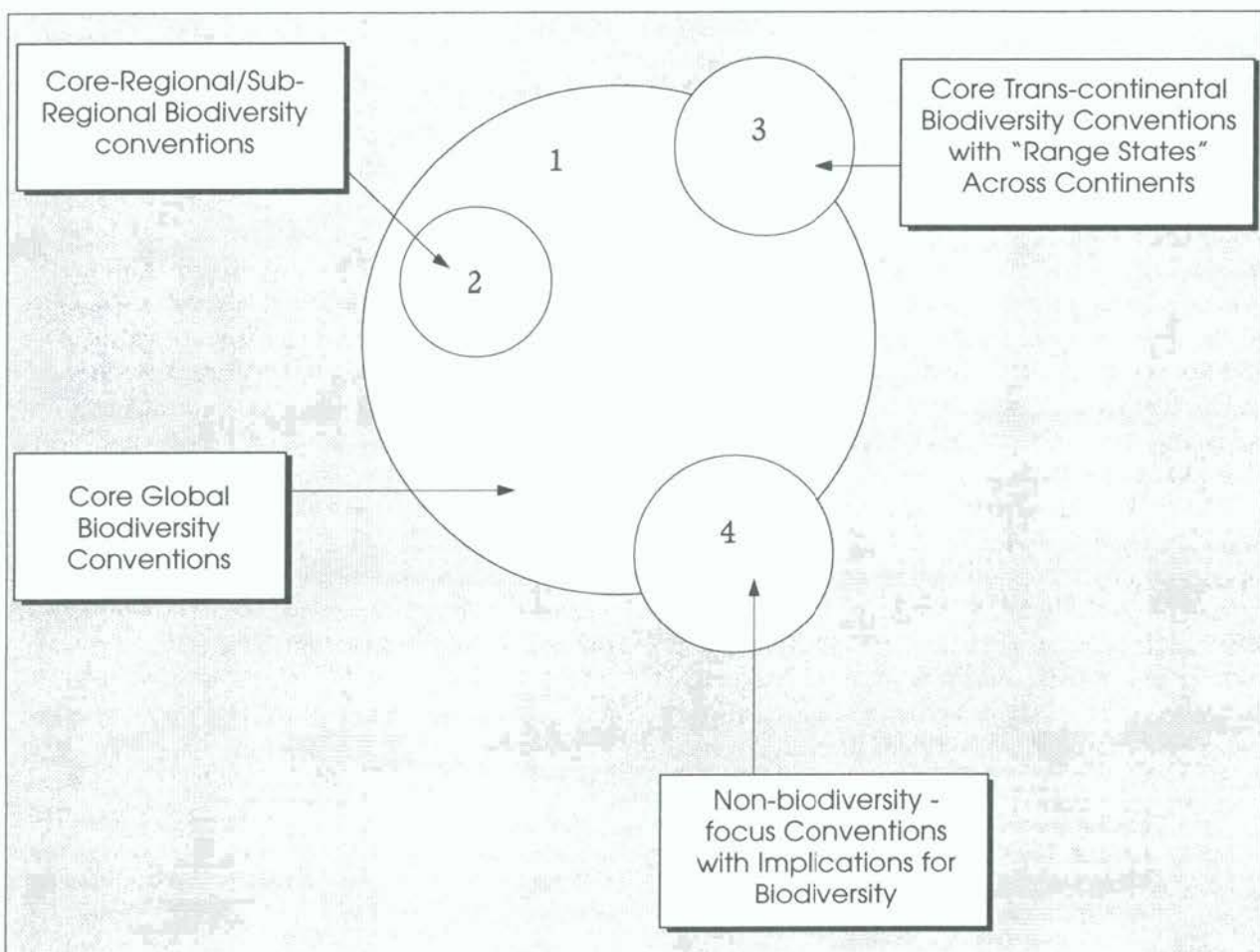
The determination of the specific conventions to be covered, and the extent of coverage to be given, had to be done judiciously. Out of the present multilateral environmental conventions, which exceed two hundred in number, the bulk deal with biological diversity, in one way or another. All such conventions may be placed in four categories. The first category includes the core global biological diversity conventions, such as: (i) Convention on Fishing and Conservation of the Living Resources of the High Seas (Geneva, 1958); (ii) Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar, 1971); (iii) Convention for the Protection of the World Cultural and Natural Heritage (Paris, 1972); (iv) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Washington, D.C, 1973); (v) Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979); (vi) Convention on Biological Diversity (Nairobi, 1992). The second category includes core biological diversity conventions of a regional or sub-regional character. Examples are: (i) African Convention on the Conservation of Nature and Natural Resources (Algiers, 1968); (ii) Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Lusaka, 1994); (iii) Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (Nairobi, 1985). In the third category are core biological diversity conventions of a trans-continental kind involving African "range states". The following are examples: (i) Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean Sea (Barcelona, 1995); (ii) Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (Monaco, 1996); (iii) Agreement on the Conservation of African–Eurasian Migratory Waterbirds (The Hague, 1995). The fourth category includes those conventions that are not, in

their essential structure, biological diversity conventions in the most direct sense, but they relate to biological diversity either indirectly, or carry quite important provisions on the conservation of one or more types of biological diversity. In this category the following examples may be cited: (i) United Nations Convention on the Law of the Sea (Montego Bay, 1982); (ii) United National Framework Convention on Climate Change (New York, 1992); (iii) United Nations Convention to Combat Desertification in Those Countries Experiencing Drought and/or Desertification, Particularly in Africa (Paris, 1994); (iv) Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Geneva, 1976). Such a cat-

egorisation of biological diversity conventions is set out diagrammatically in Fig.0.1 below.

While the first category of conventions provides the model scheme for the conservation of biological diversity, their requirements and standards are well reflected in a good number of the conventions in the remaining categories. The *Handbook*, thus, while according the greatest emphasis to the core global biodiversity conventions, also identifies the more remarkable ones in the other categories, that are likely to provide the best lessons for African countries, in their conservation initiatives.

Fig. 0.1 Diagrammatic representation of the character of biological diversity conventions



Chapter One: The Status of Biological Diversity in Africa

1.1 Notable Aspects of Africa's Biological Diversity

The Convention on Biological Diversity (1992) defines biological diversity (i.e. biodiversity) as follows: "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (Art.2). The term "biological diversity" thus covers all fauna, terrestrial and aquatic; all flora, terrestrial and aquatic; all micro-organisms, terrestrial and aquatic; and the term covers the entire ecological context in which these resources occur and survive.

Africa is home to about 25 per cent of the global biodiversity, and some of this comprises unique plants and animal species of great economic and ecological value. The continent has vast tropical forests, savannahs, deserts, wetlands and wildlife populations. These endowments have retained for Africa a position of comparative advantage in biodiversity status, notwithstanding increased rates of loss of biological resources in all parts of the world. Norman Myers in his article "Threatened Biotas: 'Hot Spots' in Tropical Forests" (in *The Environmentalist* 8(3): 187-208 (1988)), identified ten regions ("Hot Spots") that are characterised by high concentrations of endemic species and are experiencing exceptionally fast rates of habitat modification or loss. Out of the ten, four are located in Africa, namely: (i) the Cape Region; (ii) Madagascar; (iii) the Eastern Arc Mountains of Tanzania; and (iv) South-West Côte d'Ivoire. Madagascar is the richest in endemic species, in Africa; it is also the sixth richest area in relation to higher vertebrates – mammals, birds, amphibians—with more than 300 endemic species. The Democratic Republic of Congo is the most plant-rich in Africa, followed by Tanzania and then Madagascar. Eastern Africa has the highest number of endemic species of mammals (55%); birds (63%); reptiles (49%); and amphibians (40%). The Cape Floral Kingdom is one of the six most important concentrations of plants in the world. More than 10,000 marine plant and ani-

mal species (15% of all known coastal species) are found in South African waters, with about 12% of these not occurring anywhere else. The countries of West and Central Africa, in particular Cameroon, Côte d'Ivoire, Ghana and Nigeria, harbour a wide variety of plant species. Nigeria has over 4,600 different plant species occurring in various ecological zones in the country. Cameroon has more than 15,000 plant species. In East Africa, Kenya has 8,000 plant species.

1.2 Africa's Biological Diversity and its Contribution to the Continent's Social and Economic Development

More than virtually all other continents, Africa relies for its well-being on biological resources. These resources define the scope for agriculture, which is the main economic activity in most African countries and which employs some 60 per cent of the continent's vast rural population. The basis of subsistence, employment, export earnings and economic output in most of the continent rests upon agriculture, livestock rearing, forest products and fisheries. Subsistence agriculture is the basis of food security, and biomass is the overwhelming source of energy. In Zambia, for example, charcoal is used for cooking by as much as 97% of the rural households, and 83% of the urban households. And in Mauritius and Nigeria, biomass in forms of sugarcane and sawmill residues, is a major source of energy for agro-industrial complexes. In most countries of sub-Saharan Africa, exports of agricultural products represent more than half of the foreign exchange earnings in the various countries. Indeed, in a number of cases only one or two crops account for well over half of all export revenues (see Table 1.2).

Tourism, which is a major foreign exchange earner in certain African countries (notably Egypt, Kenya, Mauritius, Morocco, Seychelles, South Africa, Tanzania, Tunisia and Zimbabwe), is in a number of cases based on the presence of such biological systems as open savannah and coral reefs. In the case of Kenya, for instance, tourism taken together with two export crops

Table 1.2: Foreign Exchange Earnings of Selected African Countries Accruing from Certain Biological Products

Country	Main Exports	% of Foreign Exchange Earning
1. Benin	Cotton	90%
2. Comoros	Fish; tourism	98%
3. Equatorial Guinea	Cocoa; timber	63%
4. Gabon	Forest products	15%
5. Ghana	Cocoa	60%
6. Malawi	Tobacco	64%
7. Kenya	Coffee; tea	60%
8. Mauritania	Fish	32%
9. Rwanda	Coffee; tea	70%
10. Sudan	Cotton	42%

Source: P. Chabeda, N. Sharma, H. Okusu, Status of Biological Diversity in Africa (Nairobi, UNEP, 1999).

(coffee and tea) accounts for more than 90% of its foreign exchange earnings, thus exemplifying total dependence on biological systems. Similar patterns of dependence may be given in respect of other countries. In the case of Zambia, charcoal and forestry account for 5.3% of the GDP. In Cameroon, agriculture accounts for 25% of the GDP; forestry 14.7%; fisheries 0.6%; and wildlife 0.3%.

Africa's economic and social welfare is thus integrally linked to the prevailing state of its biological diversity. Its countries, therefore, have a profound interest in the good management and sustainable utilisation of biological diversity. This interest is all the more significant for ecological reasons. Biological resources play the essential role of interplaying with the wider environment to provide the requisite climatic and ecological conditions for agriculture and similar economic activities. Flora in the form of forests is not only vital for stable rainfall patterns and as a carbon sink, but is also a major source of energy and of forest products. Forests also serve as habitat for another component of biodiversity, wildlife, which is the centrepiece of the tourist industry in many African countries. This industry thrives on the attractions of landforms, landscapes and

vegetation, and of the larger, charismatic animals such as the elephant, rhino, buffalo, lion, giraffe, etc.

Quite apart from the ecological and economic considerations, Africa's biodiversity is a basis for cultural development, as plants and animals have played major roles in the evolution of its societies. The Turkana of Kenya's arid lands of the north-west, for example, have developed a cuisine that involves some 53 wild plant species. The Sukuma of Tanzania use more than 300 plant species and have evolved a wide knowledge base in the identification, characterisation and conservation of plants.

1.3 Biodiversity Loss in Africa

In recent times, particularly over the last two decades, Africa has experienced serious food insecurity and other manifestations of poverty which are partly due to environmental degradation. Loss of biodiversity is one of the forms of such degradation, and it has been due to various causes that are linked to excess demand for biological resources, as compared to the supply of these resources. There is only a limited supply of biological

resources to meet the needs of growing populations, of urbanising communities and of global trade. In some cases the demands made on species and ecosystems far exceed their natural rates of regeneration. Over-exploitation thus results, leading to the collapse of certain biological systems.

There are many threats to Africa's biological diversity, and the following are now well recognised: (i) population and migration pressure; (ii) inappropriate agricultural methods; (iii) commercial land-use practices; (iv) over-harvesting of natural resources; (v) climatic changes; (vi) introduction of invasive, alien species.

Much of the original wildlife habitat of sub-Saharan Africa has been lost due to human interventions. Such interventions have taken the forms of: expansion of urban areas; expansion of permanent cropland; construction of infrastructure such as roads, as well as other activities. Specific examples include large-scale cultivation of cotton in the Sahel; coffee in the East African highlands; cocoa in West Africa; and the establishment of permanent pastoral areas in Southern Africa. Not only has such commercial farming involved the large-scale clearing of natural habitat, it has also destabilised traditional production systems with their rich varieties of species, and led to monocultural farming. This trend has entailed much soil degradation, and has greatly narrowed the food base, thereby causing food scarcities.

International commerce is also to blame for Africa's biodiversity loss. There has been an over-exploitation of medicinal and aromatic plants to meet international demand, and quite often this has been accompanied by illegal trade. Thus, precious medicinal plants such as *Aloe polyphylla* in Madagascar have been exploited to dangerous levels. This is equally true for *Prunus africana* (phygeum) in Kenya.

After habitat degradation, the greatest threat to Africa's biodiversity is the introduction of invasive alien species. These species have displaced native vegetation and adulterated the original habitat. To give an example, parts of the *fynbos* in South Africa and the eastern highland grasslands in Zimbabwe were invaded by exotic Australian *Acacia* and *Pinus* species, which threatened the indigenous *Resisto*, *Erica*, and *Protea* species. Alien shrubs such as *Chrysocoma*, *xanthium*, *stromarium* and *xanthium spinosum* have affected both rangelands and cultivated fields in Lesotho.

Coastal and marine biodiversity have come under in-

creasing threat from development activities. Coastal ecosystems in Africa have contributed significantly to the economies of the coastal countries, especially through fishing and tourist activities. Land-based marine pollution, as well as pollution from vessels, leads to the degradation of waters that support marine life, and this poses a serious threat to marine biodiversity.

1.4 Approaches to Biological Diversity Conservation

International concern for the sustainability of human development activities has led to the adoption of hundreds of environmental conventions. The objective of these conventions is to establish a legal framework for environmental conservation. Most of these conventions deal, to a greater or lesser degree, with the subject of biodiversity conservation.

Africa has a special interest in such conventions, in particular in so far as they relate to techniques for biodiversity conservation; to conservation policies and programmes; to technology transfer for conservation programmes; to sharing of benefits from biological resources; and to intellectual property rights for biodiversity conservation innovations. Africa's interests call for, among other things, careful attention to the issue of the protection of traditional conservation technologies. Failure to address this question and establish appropriate safeguards could lead to loss of the continent's genetic resources to the industrialised countries which currently have overwhelming dominance in biotechnology.

African countries have become members of the major global biodiversity conventions in large numbers (see Chap.2). They have also adopted about 20 regional multilateral environmental agreements. Such regional conventions serve to reinforce the global ones, filling any gaps and providing a basis for joint action and for common State approaches to policy and management. The African Ministerial Conference on the Environment (AMCEN) holds biennial meetings during which it reviews the status of regional environmental co-operation. This organisation has entrusted the responsibility for regional networking on biodiversity matters to the African Plant Genetic Resources Centre located at Addis Ababa, Ethiopia. Further institutional arrangements for biodiversity protection are found at the sub-regional level, e.g.: the Environmental Unit at the Secretariat of the Economic Community of West African States (ECOWAS); and the Inter-Governmental Author-

ity on Development (IGAD), which brings together the three countries of East Africa and Djibouti, Eritrea, Ethiopia, Somalia and Sudan.

The Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) (1992) at its second meeting (Decision II/17) called on all Parties to formulate national biodiversity reports, among other things, informing other Parties on measures taken for the implementation of the convention at the national level.

It is apparent from national reports already submitted, that African countries prefer the ecosystem approach to biodiversity conservation, to the old species-based approach which had sought in particular to pre-

serve game populations for hunters and tourists; or to address specific biodiversity-related matters such as deforestation, or the control of tsetse fly, rinderpest, etc.

While the first category of conventions considered in the *Handbook* provides the model scheme for the conservation of biological diversity, their requirements and standards are well reflected in a good number of conventions in the remaining categories. The *Handbook*, thus, while according the greatest emphasis to the core global biodiversity conventions, also identifies the more remarkable ones in the other categories, that are likely to provide the best lessons for African countries, in their conservation initiatives.

Chapter Two: Characteristics of Biological Diversity Conventions

2.1 The Main Traits of the Biological Diversity Conventions

There are many international instruments in the form of resolutions, declarations and conventions that deal with the subject of biological diversity. The conventions create obligations for the Parties, and are required to be implemented once they enter into force. They are, in this regard, "hard law", as contrasted to the resolutions and declarations, which are regarded as "soft law". "Soft law" is not binding in law, though it certainly expresses the spirit that has guided the participants. Quite often the path charted by "soft law" is what crystallises into binding conventions; and thus, compliance with soft law is a fair reflection of a Party's commitment to the terms of the relevant convention.

Some of these various instruments address biodiversity in express, broad terms while others are concerned only with specific components of the subject. In the context addressed by this *Handbook*, the main biological diversity-related conventions that have provided the fundamental principles of conservation are the following:

- (a) *Convention on Fishing and Conservation of the Living Resources of the High Seas* (Geneva, 1958).
- (b) *African Convention on the Conservation of Nature and Natural Resources* (Algiers, 1968);
- (c) *Convention on Wetlands of International Importance Especially as Waterfowl Habitat* (Ramsar, 1971).
- (d) *Convention for the Protection of the World Cultural and Natural Heritage* (Paris, 1972);
- ✓ (e) *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (Washington, D.C., 1973).
- (f) *Convention on Migratory Species of Wild Animals* (Bonn, 1979);

(g) *United Nations Convention on the Law of the Sea* (Montego Bay, 1982);

✓ (h) *Convention on Biological Diversity* (Nairobi, 1992).

(i) *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* (Lusaka, 1994);

✓ (j) *United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa* (Paris, 1994).

It has to be emphasised that there exist many other conventions which also contain the principles of biodiversity conservation; but the ten listed above, by dint of their broad-based global or regional character, and their centrality in Africa's participation in environmental treaty-making, can rightly claim to provide the vital directions for this continent in biodiversity conservation.

It is to be noted that the ten listed conventions are not in all respects identical. For example, the 1971 Ramsar Wetlands Convention is concerned with the general development of wetlands, including their protection and management as habitat for biological diversity. The kind of biodiversity conservation in contemplation here, is clearly—in essence—*in situ* conservation. The 1972 Paris Convention on World Cultural and Natural Heritage is concerned with both cultural and natural heritage, and is clearly broader than the concept of *in situ* conservation. The 1979 Bonn Convention is concerned with migratory species of wild animals, and, again, embodies a concept that is broader than *in situ* conservation.

Both the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention to Combat Desertification (CCD) are, for the most part, concerned with other objects except that they touch on biodiversity at various points. UNCLOS, for instance, has a much wider scope, covering the entire legal regime for the seas and oceans; but it also deals with the subject of marine biological resources.

The objective of the CCD is to "combat desertification and mitigate the effects of drought in countries experiencing serious drought and /or desertification, particularly in Africa" (Art.2.1). One of the strategies for achieving that objective is "long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the *rehabilitation, conservation and sustainable management of land and water resources*" (Art.2.2.) It is evident from this strategy, and from the interconnectedness of land and water with biodiversity in the overall ecological process, that one of the CCD's preoccupations is the *conservation of biological diversity*.

Of broader character, in their conservation strategy, are the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the 1992 Convention on Biological Diversity. However, the two conventions, between themselves, have certain significant differences. Whereas CITES is confined to international trade issues touching on endangered species of fauna and flora, CBD has the broadest sweep - that covers *all* biological diversity, as well as both *in situ* and *ex situ* conservation, all over the world.

The above-listed conventions have a pioneering character that has commended itself to a large number of initiatives in conservation treaty-making at the regional and sub-regional level. It is notable too that the generality of those conventions, in relation to biodiversity conservation, has commended itself to a large number of African countries which have signed or acceded to or ratified them (see Tables 2.1(1) to 2.1(11) below). These conventions, as they deal in different ways with the theme of biodiversity conservation for sustainable development, do provide important reference points and useful practical ideas for wider adoption, at sub-regional as well as regional levels. This is, therefore, a logical starting point for the main part of this *Handbook*, in the analysis of the African context of biodiversity conservation, and in the charting out of a possible course towards the sustainable utilisation of biological resources. This treatment will lead towards more specific suggestions on ways of implementing relevant biodiversity conventions at the national level.

It is clear from the above selection of relevant conventions that current biodiversity conservation trends were not well reflected in the treaty law of the first half of the twentieth century. That period had been dominated by colonial empire building, as well as the pursuit of sheer economic prosperity, somewhat unattended by a significant environmental consciousness. Moreover, that

era did not have the benefit of the abundant information available today on ecosystems and their interplay with economic forces. The first significant biodiversity-related agreement was the Convention Relative to the Preservation of Fauna and Flora in Their Natural State (London, 1933), which focussed on *in situ* conservation of natural fauna and flora in certain parts of the world, and hardly reflected current ecosystem-based approaches, nor some of the modern objects of biodiversity conservation. It was not until the late 1950s that biodiversity began to feature prominently in treaty-making; but the real commencement of growth for modern trends in biodiversity conservation law is traceable to the late 1960s and the early 1970s.

2.1.1. Convention on Fishing and Conservation of the Living Resources of the High Seas (1958)

The Convention on Fishing and Conservation of the Living Resources of the High Seas was one of the four Conventions adopted by the first United Nations Conference on the Law of the Sea (UNCLOS) (1958). This convention recognised the general right of all States to engage in fishing on the high seas. This right, however, was not unlimited. The convention required states to adopt measures for their nationals "as may be necessary for the conservation of the living resources of the high seas" (Arts. 1 and 2). The convention also recognised the special interests of coastal States in maintaining the productivity of living resources of adjacent areas of high seas; and coastal states could take unilateral measures of conservation for any stock of fish or other resources in any areas of the high seas, to maintain the productivity of the living resources of the sea (Arts. 6 and 7). The convention was guided by the principle that the high seas should continue to be a dependable source of food for humankind; yet exploitation using modern techniques had tended to become excessive and to endanger marine resources. The convention required co-operation between states in conservation efforts.

The principles contained in the High Seas Fishing and Conservation Convention were later restated in an expanded form in the United Nations Convention on the Law of the Sea (1982).

2.1.2 African Convention on the Conservation of Nature and Natural Resources (1968)

The 1968 African Convention on the Conservation of Nature and Natural Resources was adopted under the

Table 2.1(1) African States Parties to the Convention on Fishing and Conservation of the Living Resources of the High Seas (1958) as at 31 December 1996.

Country	Date of Signature	Date of Ratification/Accession/Succession
1. Burkina Faso	29.04.1958	04.10.1965
2. Ghana	-	20.06.1968
3. Kenya	-	23.20.1973
4. Lesotho	27.05.1958	23.10.1973
5. Liberia	-	31.07.1962
6. Madagascar	-	03.11.1965
7. Malawi	-	05.10.1970
8. Mauritius	-	26.06.1961
9. Nigeria	-	25.04.1961
10. Senegal	-	13.03.1962
11. Sierra Leone	-	09.04.1963
12. South Africa	30.10.1958	09.04.1963
13. Tunisia	04.10.1965	-
14. Uganda -	-	14.09.1964

Date of entry into force: 20.3.1966

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment (1996)*.

aegis of the Organisation of African Unity. This convention, in respect of the African region, was a replacement for the 1933 London Convention Relative to the Preservation of Fauna and Flora in Their Natural State. The London Convention is essentially an *in-situ* conservation instrument, being concerned entirely with fauna and flora and their natural habitat. This convention had been adopted largely at the behest of the main colonial powers, and its main area of operation was the African continent. Its strategy was the creation of protection zones, in the form of national parks and reserves. It sought to preserve natural fauna and flora in certain parts of the world, and particularly in Africa. The convention entered into force on January 14, 1936. Its entire membership (membership was open to any government), by 1962, was only eleven, including four African States (Egypt, South Africa, Sudan and the United Republic of Tanzania). The London Convention requires States Parties to establish national parks and nature reserves in their territories (Art.3); to control human settlements in these territories (Art.4); to preserve forest areas and to domesticate economically utilisable wild animals (Art.7); and to regulate hunting and the collection of species (Art.9).

The London Convention is associated with the era of colonial empire. It is the successor to the Convention on the Protection of African Wild Fauna, which was concluded by the colonial authorities controlling most of Africa, in London, on May 19, 1900, but never entered into force. The objective of that convention was to prevent the uncontrolled killing of wild animals in Africa, and to ensure the conservation of animal species that were useful to humankind. The convention was never ratified, but was in 1933 replaced by the Convention Relative to the Preservation of Fauna and Flora in Their Natural State, which entered into force on January 14, 1936. This convention provided the basis for the establishment of many of Africa's most famous national parks, such as the Gorongosa Park in Mozambique; the Garamba Park in the Democratic Republic of Congo; the Tsavo National Park in Kenya; the Serengeti National Park in Tanzania; and the Kagera Park in Rwanda.

The 1968 African Convention, which incorporated and expanded the principles of the London Convention, seeks to encourage individual and joint action for the conservation, utilisation and development of soil, wa-

Table 2.1(2): States Parties to the African Convention on the Conservation of Nature and Natural Resources (1968)

Country	Date of Signature	Date of Deposit of Instrument of Ratification/Adhesion
1. Algeria	15.09.1968	24.05.1983
2. Benin	15.09.1968	-
3. Botswana	15.09.1968	-
4. Burundi	15.09.1968	-
5. Burkina Faso	19.09.1968	29.08.1969
6. Cameroon	15.09.1968	29.08.1978
7. Central African Republic	15.09.1968	16.03.1970
8. Chad	15.09.1968	-
9. Congo, Republic of	15.09.1968	29.04.1981
10. Congo, Democratic Republic of	15.09.1968	14.10.1976
11. Côte d'Ivoire	15.09.1968	15.01.1969
12. Djibouti	-	17.04.1978
13. Egypt	15.09.1968	16.03.1972
14. Ethiopia	15.09.1968	-
15. Gabon	15.09.1968	18.11.1988
16. Gambia	15.09.1968	-
17. Ghana	15.09.1968	17.05.1969
18. Guinea	15.09.1968	-
19. Kenya	15.09.1968	12.05.1969
20. Lesotho	15.09.1968	-
21. Liberia	15.09.1968	22.11.1978
22. Libyan Arab Jamahiriyah	15.09.1968	-
23. Madagascar	15.09.1968	23.09.1971
24. Malawi	-	12.03.1973
25. Mali	15.09.1968	20.06.1974
26. Mauritania	15.09.1968	-
27. Mauritius	15.09.1968	-
28. Morocco	15.09.1968	11.11.1977
29. Mozambique	-	01.4.1981
30. Niger	15.09.1968	27.01.1970
31. Nigeria	15.09.1968	07.05.1974
32. Rwanda	-	04.02.1980
33. Senegal	15.09.1968	24.02.1972
34. Seychelles	-	14.10.1977
35. Somalia	15.09.1968	-
36. Sudan	-	30.10.1973
37. Swaziland	15.09.1968	07.04.1969
38. Togo	15.09.1968	20.11.1974
39. Tunisia	15.09.1968	04.02.1977
40. Uganda	15.09.1968	30.11.1977
41. United Republic of Tanzania	15.09.1968	15.11.1974
42. Zambia	15.09.1968	01.05.1972

Date of entry into force: 16.6.1969

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment (1996)*, and UNEP files as at July 1999.

ter, flora and fauna, for the present and future welfare of humankind, from an economic, scientific, educational, cultural and aesthetic point of view. States Parties undertake "to adopt the measures necessary to ensure conservation, utilisation and development of soil, water, floral and faunal resources in accordance with scientific principles and with due regard to the best interests of the people" (Art.II). Parties are required to take effective measures to conserve and improve the soil and to control erosion and land use (Art. IV). They are required to establish policies to conserve, utilise and develop water resources, prevent pollution and control water use (Art.V); to protect flora and ensure its best utilisation, the management of forests, and the control of burning, land clearance and overgrazing (Art.VI); to conserve faunal resources and use them wisely, manage populations and habitat, control hunting, capture and fishing; to prohibit the use of poisons, explosives and automatic weapons in hunting (Art.VII). The convention carries protected lists A and B. Species listed under List A enjoy full protection, while those listed under category B may be taken but only with authorisation (Art.VIII). Strict control of traffic in trophies is required (Art.IX). States Parties are required to establish and maintain conservation areas (Art.X). They are also required to undertake conservation education, and to take ecological factors into account in development planning (Arts. XIII, XIV).

The 1968 African Convention was in many respects a futuristic instrument, as it not only incorporated the now well accepted principle of intergenerational equity, but also carried the basic scheme of species protection that was later (1973) provided for under CITES. The convention was highly innovative, as it represented an all-round concern for the conservation of biodiversity and its habitat and, in effect, advocated an ecosystem approach to conservation.

The fact that the 1968 African Convention has received no more than 30 ratifications (for 53 states) may call for explanations. This relatively early environmental convention had made no provision for a facilitative financial mechanism, or for a dependable management structure. The Organisation of African Unity (OAU) Secretariat working in consultation with the United Nations Environment Programme, has recently set up an in-house consultative group to review the convention, with a view to updating it, and aligning it to the major global conventions such as CITES and the CBD. This action was taken at the behest of a recent OAU Summit decision.

2.1.3. *Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)*

The Ramsar Convention on Wetlands was the first global instrument to address the conservation of a particular habitat. It reflected new international legal efforts aimed at conservation by protecting a habitat rather than a species. The convention's origin was mainly the research activities conducted by a non-governmental organisation, the International Waterfowl Research Bureau. In many ways, the convention represented the path leading to the ecosystems approach to biodiversity conservation, which is today generally accepted as the most effective approach.

The official name of this convention reflects its emphasis on the conservation and wise use of wetlands primarily to provide habitat for birds. It is to be noted, however, that, over the years, the convention has expanded in scope to cover all aspects of *wetland conservation and wise use*. In this regard wetlands are recognised as ecosystems that are highly important for biodiversity conservation and for the well-being of human communities. Thus the treaty has come to be known in common parlance simply as the "Convention on Wetlands" (or the Ramsar Convention). Over the years, the Conferences of the Parties have developed and construed the basic tenets of the treaty text, so as to reflect changing world perceptions in environmental matters. For instance, the Strategic Plan 1997-2002, adopted at the sixth Conference of the Parties held in Brisbane, calls for the integration of conservation and wise use of wetlands into national planning processes (including national biodiversity strategies, and national environment action plans). The Strategic Plan further seeks to promote the integration of wetland conservation and wise use into national, provincial and local planning and decision-making on land use, ground-water management, catchment/river basin and coastal zone planning as well as all other environmental planning and management.

The mission of the Ramsar Wetlands Convention is the conservation and wise use of wetlands through national action and international co-operation, as the means for achieving sustainable development throughout the world. The convention recognises the fundamental ecological functions of wetlands, including biological productivity and their economic, cultural, recreational and scientific values (including biodiversity conservation). This convention directly addresses the conser-

Table 2.1(3): African States Parties to the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971), as April 30 1999.

Country	Date of Ratification/Accession	Date of Entry into force
1. Algeria	04.11.1983	04.03.1984
2. Botswana	09.12.1996	09.04.1997
3. Burkina Faso	27.06.1990	27.10.1990
4. Chad	13.06.1990	13.10.1990
5. Comoros	09.02.1995	09.06.1995
6. Congo, Republic of	18.06.1998	18.10.1998
7. Congo, Democratic Republic of	18.01.1996	18.05.1996
8. Cote d'Ivoire	27.02.1996	27.06.1996
9. Egypt	09.09.1988	09.09.1988
10. Gabon	30.12.1986	30.04.1987
11. Gambia	16.09.1996	16.01.1997
12. Ghana	22.02.1988	22.06.1988
13. Guinea	18.11.1992	18.03.1993
14. Guinea Bissau	14.01.1990	14.05.1990
15. Kenya	05.06.1990	5.10.1990
16. Madagascar	23.09.1998	25.01.1999
17. Malawi	14.11.1996	14.03.1997
18. Mali	25.05.1987	25.09.1987
19. Mauritania	22.10.1982	22.02.1983
20. Morocco	20.06.1980	20.10.1980
21. Namibia	23.08.1995	23.12.1995
22. Niger	30.04.1987	30.08.1987
23. Senegal	11.07.1977	11.11.1977
24. South Africa	12.03.1975	21.12.1975
25. Togo	04.07.1995	04.11.1995
26. Tunisia	24.11.1980	24.03.1981
27. Uganda	04.03.1988	40.07.1988
28. Zambia	28.08.1991	28.12.1991

Source: Ramsar Information Paper No.14 update, April 13, 1999.

vation of biological diversity. It seeks to secure the maintenance of the ecological integrity of wetlands, and to promote resource development. States Parties are required to designate at least one national wetland for inclusion in the List of Wetlands of International Importance (Art.2). The designation of a wetland in this respect is governed by eight specific criteria. A wetland should be considered internationally important if it:

- a) contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region;
- b) supports vulnerable, endangered, or critically endangered species or threatened ecological communities;

- c) supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographical region;
- d) supports plant and/or animal species at a critical state in their life cycles, or provides refuge during adverse conditions;
- e) regularly supports 20,000 or more waterbirds;
- f) regularly supports one per cent of the individuals in a population of one species or sub-species of waterbird;
- g) supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are

representative of wetland benefits and/or values and thereby contributes to global biological diversity;

- h) is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend.

Due to the centrality of biodiversity conservation in the Ramsar Wetlands Convention, the secretariats of the CBD and the Wetlands Convention have signed a Memorandum of Co-operation and have adopted a Joint Work Plan which recognises that the two treaties have several areas of common interest, especially in relation to inland/freshwater ecosystems and coastal/marine ecosystems. Under the Memorandum of Co-operation, and the Joint Work Plan, the Wetlands Convention is the specialist treaty for matters relating to the conservation and sustainable use of wetlands. The Contracting Parties to the two conventions have, at their respective Conferences of the Parties, recognised the areas of synergy between these conventions.

On December 3, 1982 the Ramsar Wetlands Convention was amended at Paris, by the adoption of the Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat. The purpose of this Protocol was to enhance the effectiveness of the Convention. Article 1 of the Protocol provides for the inclusion in the Convention of a new article, 10 *bis*, which sets out a mechanism for effecting amendments. The status of African countries as regards this Protocol is set out in Table 2.1 (4).

Table 2.1 (4): African States Parties to the Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1982), as at May 31, 1999.	
Country	Definitive Signature/Ratification/ Accession
1. Egypt	09.09.1988
2. Guinea Bissau	14.05.1990
3. Mauritania	31.05.1989
4. Morocco	3.10.1985
5. Senegal	15.05.1985
6. South Africa	26.05.1983
7. Tunisia	15.05.1987
Date of entry into force:	1.10.1986

Source: UNEP files as at May 1999.

2.1.4 Convention for the Protection of the World Cultural and Natural Heritage (1972)

The 1972 Paris Convention on World Cultural and Natural Heritage is the primary international instrument establishing rules for the conservation of cultural and natural heritage. Although its provisions are not primarily aimed at the conservation of biological diversity, nature or natural resources, they are generally broad enough to allow them to serve in biodiversity conservation efforts. This UNESCO-sponsored convention establishes a "system of collective protection of the cultural and natural heritage of outstanding universal value, organised on a permanent basis and in accordance with modern scientific methods".

The Cultural and Natural Heritage Convention is based on the principle that "deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world". It seeks to establish an effective system of collective protection of the cultural and natural heritage of outstanding universal value. Parties are required to integrate the protection of their cultural and natural heritage into comprehensive planning programmes; to set up services for the protection of their heritage; to develop relevant scientific and technical studies; and to take necessary legal, scientific, administrative and financial steps to protect their heritage (Art.5). The convention addresses the interests of conservation in terms of the best interests of future generations. It states that "Each State Party... recognises that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage... and situated on its territory, belongs primarily to the State" (Art.4).

2.1.5 Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)

The critical initiatives for the adoption of a convention on endangered species of wild fauna and flora date back to the 1960s, when the IUCN first called for an international convention to regulate trade in threatened species. The adoption of CITES in 1973 was the culmination of a process which began in 1960 at the Seventh General Assembly of the IUCN, and IUCN General Assembly Resolution of 1963 calling for an international convention, and a first draft of a treaty formulated in 1964. The United Nations Conference on the Human Environment at Stockholm in 1972

Table 2.1(5): African States Parties to the Convention for the Protection of World Cultural and Natural Heritage (1972), as at July 1, 1999.

Country	Date of Ratification /Acceptance/Accession/Succession
1. Algeria	24.06.1974
2. Angola	07.11.1991
3. Benin	14.06.1982
4. Botswana	23.11.1998
5. Burkina Faso	02.04.1987
6. Burundi	19.05.1982
7. Cameroon	07.12.1982
8. Cape Verde	28.04.1988
9. Central African Republic	22.12.1980
10. Chad	23.06.1999
11. Congo, Republic of	10.12.1987
12. Congo, Democratic Republic of	23.08.1974
13. Cote d'Ivoire	09.01.1981
14. Egypt	07.02.1974
15. Ethiopia	06.07.1977
16. Gabon	30.12.1986
17. Gambia	01.07.1987
18. Ghana	04.07.1975
19. Guinea	18.03.1979
20. Kenya	05.06.1991
21. Libyan Arab Jamhiriya	13.10.1978
22. Madagascar	19.07.1983
23. Malawi	05.01.1982
24. Mali	05.04.1977
25. Mauritania	02.03.1981
26. Mauritius	19.09.1995
27. Morocco	28.10.1975
28. Mozambique	27.11.1982
29. Niger	23.12.1974
30. Nigeria	23.10.1974
31. Senegal	13.02.1976
32. Seychelles	09.04.1980
33. South Africa	10.07.1997
34. Sudan	06.06.1974
35. Togo	15.04.1998
36. Tunisia	10.03.1975
37. Uganda	20.11.1987
38. United Republic of Tanzania	02.08.1977
39. Zambia	04.06.1984
40. Zimbabwe	16.08.1982
Entry into force: 17.1.2.1975	

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment (1996)* and UNEP files as at July, 1999.

adopted Recommendation 99.3, which led to the convening of a plenipotentiary conference in Washington D.C. in 1973, at which CITES was adopted. It entered into force on July 1, 1975.

The overriding goal of the convention is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species

traded. Its object is to prevent damage to species of wild animals and plants by trade.

CITES requires that each Party designate one or more management authorities to be responsible for administering the convention, and one or more scientific authorities to advise them on technical issues. Parties are required to adopt domestic legislation which

Table 2.1(6): African States Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973), as at 31 May, 1999

Country	Date of Ratification/Acceptance/Approval/ Accession/ Notification of Succession	Date of Entry into Force
1. Algeria	23.11.1983	21.02.1984
2. Benin	28.02.1984	28.05.1984
3. Botswana	04.11.1977	12.02.1978
4. Burkina Faso	13.10.1989	11.01.1990
5. Burundi	08.08.1988	06.11.1988
6. Cameroon	05.06.1981	03.09.1981
7. Central African Republic	27.08.1980	25.11.1980
8. Chad	02.02.1989	03.05.1989
9. Comoros	23.11.1994	21.02.1995
10. Congo, Republic of	31.01.1983	01.05.1983
11. Congo, Democratic Republic of	20.07.1976	18.10.1976
12. Cote d'Ivoire	21.11.1994	19.02.1995
13. Djibouti	07.02.1992	07.05.1992
14. Egypt	04.01.1978	04.04.1978
15. Equatorial Guinea	10.03.1992	08.06.1992
16. Eritrea	20.10.1994	22.01.1995
17. Ethiopia	05.04.1989	04.07.1989
18. Gabon	13.02.1989	14.05.1989
19. Gambia	26.08.1977	24.11.1977
20. Ghana	14.11.1975	12.02.1976
21. Guinea	21.09.1981	20.12.1981
22. Guinea Bissau	16.05.1990	14.08.1990
23. Kenya	13.12.1978	13.03.1979
24. Liberia	11.03.1981	09.06.1981
25. Madagascar	20.08.1975	18.11.1975
26. Malawi	05.02.1982	06.05.1982
27. Mali	18.07.1994	16.10.1994
28. Mauritania	13.03.1998	13.06.1998
29. Mauritius	28.04.1975	27.07.1975
30. Morocco	16.10.1975	14.01.1976
31. Mozambique	25.03.1981	23.06.1981
32. Namibia	18.12.1990	18.03.1991
33. Niger	08.09.1975	07.12.1975
34. Nigeria	09.05.1974	01.07.1975
35. Rwanda	20.10.1980	18.01.1981
36. Senegal	05.08.1977	03.11.1977
37. Seychelles	08.02.1977	09.05.1977
38. Sierra Leone	28.10.1994	16.01.1995
39. Somalia	02.12.1985	02.03.1986
40. South Africa	15.07.1975	13.10.1975
41. Sudan	26.10.1982	24.01.1983
42. Togo	23.10.1978	21.01.1979
43. Tunisia	10.07.1974	01.07.1975
44. Uganda	18.07.1991	16.10.1991
45. United Republic of Tanzania	29.11.1979	27.02.1980
46. Zambia	24.11.1980	22.02.1981
47. Zimbabwe	19.05.1981	17.08.1981

Date of entry into force: 1.7.1975

Source: UNEP/CITES Secretariat for the Convention on International Trade in Endangered Species of Wild Fauna and Flora as at May 1999.

prohibits international trade in specimens in violation of the convention, penalises such trade, and provides for the confiscation of specimens illegally traded or possessed. The convention classifies species in three categories: Appendix I concerns "all species threatened with extinction which are or may be affected by trade" (Art. II (1)). Appendix II is concerned with (a) all species which although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation in order to avoid a mode of utilisation incompatible with their survival; and (b) other species which must be subject to regulation in order that trade in certain species may be brought under effective control. Appendix III lists all species which any Party may identify as being subject to regulation within its jurisdiction, for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties in the control of trade. Based on continuous biodiversity assessments, Conferences of the Parties have from time to time moved particular species from one appendix to another. Appendices I and II are amended (by additions, deletions or transfer between appendices) at every regular meeting of the Conference of Parties. For instance, at the 1997 COP the decision was taken to move the African elephant from Appendix I to Appendix II, with respect to Botswana, Namibia and Zimbabwe, for certain specified purposes.

Implementation of CITES involves two quite different interests: wildlife conservation and foreign trade. Each of these aspects may have its own specific regulatory regime (legislation, institutions, procedures etc) within a State Party. There may also be several other laws applicable to particular aspects of international trade in wild animals, plants and parts and derivatives thereof. Each Party is required to implement the provisions of the convention through domestic legislation.

2.1.6. Convention on the Conservation of Migratory Species of Wild Animals (1979)

The background to the Migratory Species Convention is traceable to Recommendation 32 of the 1972 Stockholm Action Plan, and also to an initiative by the government of what was then West Germany, to prepare a draft migratory species convention. At the time there existed a number of agreements in this field, but they lacked uniformity and were largely ineffective. The improvements of the new convention included: covering a wide range of threats to listed species; providing clear restrictions to activities endangering migratory spe-

cies; establishing a framework for the making of subsidiary agreements regarding particular species.

The Convention on the Conservation of Migratory Species of Wild Animals seeks to protect migratory species in danger of extinction as they migrate across or outside national boundaries. The convention has Appendix I, which carries the list of endangered migratory species for which the range states have to provide strict protection (Art.III); and Appendix II, which contains a list of species with an unfavourable conservation status and which on this score require international agreements for their conservation or management. Included in Appendix II are those species which would significantly benefit from international co-operation such as would be achieved through an international agreement. Protective measures for such species include the conservation or restoration of their habitats, and the removal of threats in their way as well as impediments to their movements. Species may be listed in both Appendix I and II. Conservation measures are broadly defined to include research and monitoring, habitat protection, prohibition of taking, harmonisation of legislation, capacity building, training, and education. The CMS provides for a wide range of measures for the protection of migratory species. These include conservation of habitat in particular oceans, freshwater, wetlands, deserts, mountains, etc.

Appendix II of the CMS lists species whose conservation should be the subject of other (subsidiary) agreements to be negotiated by member States. It is the basis upon which two important agreements have recently been adopted, namely: Agreement on the Conservation of African – Eurasian Migratory Waterbirds (AEWA) (1995) (see Append. 11); and Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) (1996) (see Append. 10).

2.1.7 United Nations Convention on the Law of the Sea (1982)

The United Nations Convention on the Law of the Sea was negotiated over a period of about two decades. In this process, the subject of fisheries rights and obligations, including conservation, was an important issue. Certain countries (including most of the developing ones) sought an extension of the jurisdictional rights of coastal states over fisheries. Other states proposed a management approach which took into account the migratory characteristics of different species; they urged

Table 2.1(7): African States Parties to the Convention on the Conservation of Migratory Species of Wild Animals (1979), as at April 30, 1999.

Country	Date of Ratification/Accession	Date of Entry into Force
1. Benin	14.01.1986	01.04.1986
2. Burkina Faso	09. 10.1989	01.01.1990
3. Cameroon	07.09.1981	01.11.1983
4. Chad	26.03.1997	01.09.1997
5. Congo, Democratic Republic of	22.06.1990	01.09.1997
6. Egypt	11.02.1982	01.11.1983
7. Ghana	19.01.1988	01.04.1988
8. Guinea	21. 05.1993	01.08.1993
9. Guinea Bissau	19.06.1995	01.09.1995
10. Kenya	26.02.1999	01.05.1999
11. Mali	28.07.1987	01.10.1987
12. Mauritania	19.02.1998	01.07.1998
13. Morocco	12.08.1993	01.11.1993
14. Niger	03.07.1980	01.11.1983
15. Nigeria	15.10.1986	01.01.1987
16. Senegal	18.03.1988	01.06.1988
17. Somalia	11.11.1985	01.02.1986
18. South Africa	27.09.1991	01.12.1991
19. Togo	09.11.1995	01.02.1996
20. Tunisia	27.05.1987	01.08.1987
21. United Republic of Tanzania	23.4.1999	01.07.1999

Date of Entry into force: 1.11.1983

Source: UNEP/CMS Secretariat for the Convention on the Conservation of Migratory Species of Wild Animals, as at April, 1999.

that highly migratory species should be regulated by international fisheries commissions, and other species be primarily under the jurisdiction of coastal states. Articles 192-237 of the convention are devoted to the protection and conservation of the marine environment.

It also has more specific provisions on the conservation and utilisation of living resources in the exclusive economic zone (Articles 61-68), and on the management and conservation of the living resources of the high seas (Articles 116 - 120). Under Article 56, Parties have sovereign rights for the purpose of exploring and exploiting, preserving and managing the natural resources of the exclusive economic zone. In the context of Articles 63 and 64 of the Convention, the *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (New York, 1995) was adopted, to ensure long-term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks. This agreement is not yet in force, as at August, 1999, as only 22 (as against the required 30) ratifications/accessions have been received. So far, only four African states have attained membership of the agreement.

2.1.8 Convention on Biological Diversity (1992)

Two Conventions, namely the CBD and the United Nations Framework Convention on Climate Change (UNFCCC), are vital legal instruments that came out of the Rio de Janeiro Earth Summit in 1992. The two, taken together and with the several resolutions including the seminal Agenda 21 concluded at Rio, constitute the most ambitious initiative to-date by the international community in the sphere of environmental management and sustainable development.

The Convention on Biological Diversity seeks to conserve biological diversity, to promote the sustainable use of its components, and to encourage equitable sharing of the benefits arising from the utilisation of genetic resources (Art.1). Article 3 of the CBD reaffirms the principle of *national sovereignty over natural resources*. In the period leading to the Rio Earth Summit (1992) there were attempts to characterise biodiversity as the "common heritage of mankind", but these attempts did not succeed. Had they succeeded, these attempts would have qualified national sovereignty over natural resources and implied some kind of collective national ownership of these resources. Instead, the Earth Sum-

Table 2.1(8): African States Parties to the United Nations Convention on the Law of the Sea (1982), as at March 30, 1998

Country	Date of Signature	Accession/Succession
1. Algeria	10.12.1982	11.06.1996
2. Angola	10.12.1982	05.12.1990
3. Benin	30.08.1983	16.10.1997
4. Botswana	05.12.1982	02.05.1990
5. Burkina Faso	10.12.1984	-
6. Burundi	10.12.1982	-
7. Cameroon	10.12.1982	19.11.1985
8. Cape Verde	10.12.1982	10.08.1987
9. Central African Republic	04.12.1984	-
10. Chad	10.12.1982	-
11. Comoros	06.12.1984	21.06.1994
12. Congo, Republic of	10.12.1982	-
13. Congo, Democratic Republic of	22.08.1983	17.02.1989
14. Cote d'Ivoire	10.12.1982	26.03.1984
15. Djibouti	10.12.1982	08.10.1991
16. Egypt	10.12.1982	26.08.1983
17. Equatorial Guinea	30.01.1984	21.07.1997
18. Ethiopia	10.12.1982	-
19. Gabon	10.12.1982	11.03.1998
20. Gambia	10.12.1982	22.05.1984
21. Ghana	10.12.1982	07.06.1983
22. Guinea	04.10.1984	06.09.1985
23. Guinea Bissau	10.12.1982	25.08.1986
24. Kenya	10.12.1982	02.03.1989
25. Lesotho	10.12.1982	-
26. Liberia	10.12.1982	-
27. Libyan Arab Jamahiriya	03.12.1984	-
28. Madagascar	25.02.1983	-
29. Malawi	07.12.1984	-
30. Mali	19.10.1983	16.07.1985
31. Mauritania	10.12.1982	17.07.1996
32. Mauritius	10.12.1982	04.11.1994
33. Morocco	10.12.1982	-
34. Mozambique	10.12.1982	13.03.1997
35. Namibia	10.12.1982	18.04.1983
36. Niger	10.12.1982	-
37. Nigeria	10.12.1982	14.08.1986
38. Rwanda	10.12.1982	-
39. Sao Tome and Principe	13.07.1983	03.11.1987
40. Senegal	10.12.1982	25.10.1984
41. Seychelles	10.12.1982	16.09.1991
42. Sierra Leone	10.12.1982	12.12.1994
43. Somalia	10.12.1982	24.07.1989
44. South Africa	05.12.1984	23.12.1997
45. Sudan	10.12.1982	23.01.1985
46. Swaziland	18.01.1984	-
47. Togo	10.12.1982	16.04.1985
48. Tunisia	10.12.1982	24.04.1985
49. Uganda	10.12.1982	09.11.1990
50. United Republic of Tanzania	10.12.1982	30.09.1985
51. Zambia	10.12.1982	07.03.1983
52. Zimbabwe	10.12.1982	24.02.1993

Date of entry into force: 16.11.1994

Source: UNEP, *Register of International Treaties and other Agreements in the Field of Environment (1996)*, and UNEP files as at July, 1999.

mit introduced the concept of “common concern of humankind”, to underline the significance of the human interest in general without undermining the rights of states over their natural resources. There was a recognition during the negotiation process of the CBD that most biodiversity is in fact located under the sovereignty of individual nations; hence the adoption of the expression “common concern”, to imply the common responsibility for biodiversity but without detracting from the principle of national sovereignty.

The convention places upon Parties the duty to conserve biodiversity within their jurisdictions, as well as outside their jurisdictions in certain cases (Art.4). States Parties are required to undertake co-operative initiatives in respect of areas falling outside their respective jurisdictions (Art.5). They are charged with responsibility for the formulation and implementation of strategies, plans or programmes for the conservation and sustainable use of biodiversity (Art.6). The Convention asserts the precautionary principle, which advocates a preventive approach to conservation, as well as the taking of prudent actions even when the best scientific evidence of damage has not yet been received. States Parties are required to apply environmental impact assessment in respect of projects that are likely to have adverse effects on biodiversity (Art.14). The CBD makes detailed provisions on matters such as: *in situ* and *ex situ* conservation; sustainable use of the components of biodiversity; research and training for biodiversity conservation; public education and awareness; access to genetic resources; transfer of technology; exchange of information; technical and scientific co-operation; access to biotechnology and distribution of its benefits; financial resources and mechanisms; etc. Article 10 requires each Contracting Party to integrate the conservation and sustainable use of biological resources into national decision-making; to support local populations to develop and implement remedial action in degraded areas; to encourage co-operation between governmental authorities and the private sector in developing methods of sustainable use of biological resources.

Although it is often thought that the CBD may provide the answer to long-standing difficulties in biodiversity conservation, its provisions still contain problematic issues that African countries must work to resolve at international negotiation fora. One of the most intractable of these (to be considered more fully in Chapter 5, under section 5) is with regard to the “knowledge, innovations and practices of indigenous and local communities” (Art.8 (j), CBD). The protection of such knowl-

edge, innovations and practices is problematic within the existing intellectual property rights (IPR) regimes. This is so firstly because the rights involved are collective and intergenerational in character; secondly because such rights may not satisfy the criteria for IPR protection under current regimes such as novelty, inventiveness and capability of industrial application. Such rights are in many cases preserved through oral tradition and this will not lend itself to ready protection under the schemes of modern IPR regimes. African countries, therefore, run the risk of losing their genetic resources to the industrialised countries which then retain and protect these as their own intellectual property; and this would undermine equitable exchanges between donors of genetic resources, on the one hand, and those of technology on the other hand. A possible panacea to this problem is to enact national legislation that institutionalises *prior informed consent* in respect of genetic resources while at the same time providing some protection to indigenous people with traditional knowledge and medicinal plants and animal extracts. With this arrangement, communities with indigenous knowledge can be granted entitlement to royalties accruing from the use of medicinal plants by multinational pharmaceutical companies. This would also serve as incentive for conservation of biological diversity by indigenous communities.

2.1.9 Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)

The Lusaka Agreement aims “to reduce and ultimately eliminate illegal trade in wild fauna and flora and establishes a permanent Task Force for this purpose” (Art.2). This agreement arose from the realisation among African States, that there exists a wide scope for illegal trade in fauna and flora, and that this situation has given rise to large-scale poaching and depletion of the continent’s biological diversity. This agreement, which was developed by African States in collaboration with the United Nations Environment Programme (UNEP), is an expression of the synergistic functioning of the various environmental and biodiversity treaties. The Lusaka Agreement provides a basis for the enforcement of measures applicable under both CITES and CBD and is in fact a regional device for the implementation of the provision of CITES. The CBD Conference of the Parties at its fourth meeting (Bratislava, May 1998) recognised “the importance of mutually supportive activities under the [CBD] and activities under conventions, processes and institutions

Table 2.1(9): African States Parties to the Convention on Biological Diversity (1992) as at June 16, 1999

	Country	Date of Signature	Date of Ratification/Acceptance/ Approval/Accession
1.	Algeria	13.06.1992	14.08.1995
2.	Angola	12.06.1992	01.04.1998
3.	Benin	13.05.1992	30.06.1994
4.	Botswana	8.06.1992	12.10.1995
5.	Burkina Faso	12.06.1992	02.09.1993
6.	Burundi	11.06.1992	15.04.1997
7.	Cameroon	14.06.1992	19.10.1994
8.	Cape Verde	12.06.1992	29.03.1995
9.	Central African Republic	13.06.1992	15.03.1995
10.	Chad	12.06.1992	07.06.1994
11.	Comoros	11.06.1992	29.09.1994
12.	Congo, Republic of	11.06.1992	01.08.1996
13.	Congo, Democratic Republic of	11.06.1992	03.12.1994
14.	Cote d'Ivoire	10.06.1992	29.11.1994
15.	Djibouti	13.06.1992	01.09.1994
16.	Egypt	09.06.1992	02.06.1994
17.	Equatorial Guinea	-	06.12.1994
18.	Eritrea	-	21.03.1996
19.	Ethiopia	10.06.1992	05.04.1994
20.	Gabon	12.06.1992	14.03.1997
21.	Gambia	12.06.1992	10.06.1994
22.	Ghana	12.06.1992	29.08.1994
23.	Guinea	12.06.1992	07.05.1993
24.	Guinea Bissau	12.06.1992	27.10.1995
25.	Kenya	11.06.1992	26.07.1994
26.	Lesotho	11.06.1992	10.01.1995
27.	Liberia	12.06.1992	-
28.	Libyan Arab Jamahiriya	29.06.1992	-
29.	Madagascar	08.06.1992	04.03.1996
30.	Malawi	10.06.1992	02.02.1994
31.	Mali	22.09.1992	29.03.1995
32.	Mauritania	12.06.1992	16.08.1996
33.	Mauritius	10.06.1992	04.09.1992
34.	Morocco	13.06.1992	21.08.1995
35.	Mozambique	12.06.1992	25.08.1995
36.	Namibia	12.06.1992	16.05.1997
37.	Niger	11.06.1992	25.07.1995
38.	Nigeria	13.06.1992	29.08.1994
39.	Rwanda	10.06.1992	29.05.1996
40.	Sao Tome and Principe	12.06.1992	29.09.1999
41.	Senegal	13.06.1992	17.10.1994
42.	Seychelles	10.06.1992	22.09.1992
43.	Sierra Leone	-	12.12.1994
44.	South Africa	04.06.1993	02.11.1995
45.	Sudan	09.06.1992	30.10.1995
46.	Swaziland	12.06.1992	09.11.1994
47.	Togo	12.06.1992	04.10.1995
48.	Tunisia	13.06.1992	15.07.1993
49.	Uganda	12.06.1992	08.09.1993
50.	United Republic of Tanzania	12.06.1992	08.03.1996
51.	Zambia	11.06.1992	28.05.1993
52.	Zimbabwe	12.06.1992	11.11.1994
Date of entry into force: 29.12.1993			

Source: UNEP, "Updated Ratification List of the Convention on Biological Diversity", January 18, 1999 and UNEP files as at June 1999.

Table 2.1(10): States Parties to the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994) as at June 16, 1999

Country	Date of Signature	Date of Deposit of Instrument of Ratification/Accession
1. Congo, Republic of	-	14.05.1997
2. Ethiopia	01.02.1995	-
3. Kenya	08.09.1994	17.01.1997
4. Lesotho	-	20.06.1995
5. South Africa	08.09.1994	-
6. Swaziland	08.09.1994	-
7. Uganda	08.09.1994	12.04.1996
8. United Republic of Tanzania	08.09.1994	11.10.1996
9. Zambia	08.09.1994	09.11.1995
Date of entry into force: 10.12.1996		

Source: Lusaka Agreement Interim Secretariat database as at July 1999.

relevant to the objectives of the Convention, while avoiding unnecessary duplication of activities and costs on the part of the Parties..." [UNEP/CBD/COP4/27.Pt.IV/15]. By performing their obligation that they should "individually and/or jointly, take appropriate measures, investigate and prosecute cases of illegal trade" in wild fauna and flora (Art.4), States Parties under the agreement will have performed at a regional level the principal tasks specified in major international conventions on the conservation of biological diversity.

2.1.10 United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)

The Convention to Combat Desertification, which was adopted two years after the Earth Summit at Rio de Janeiro, falls in many respects in the same category as the CBD and the Climate Change Convention—forming part of the United Nations' initiative to put in place a broad-based legal framework for the preservation and protection of the earth's surface, the maintenance of the climate balance, and the sustenance of biodiversity. The CCD was called for during the Earth summit, and has been conceived against the background of that Summit's Agenda 21.

The objective of the convention is to combat desertification and to mitigate the effects of drought in seriously affected countries, especially those in Africa. The convention seeks to achieve these goals through integrated development, supported by international co-operation and partnership arrangements in the relevant countries. It lays emphasis on long-

term strategies focussing on improved productivity of the land, the "rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level" (Art.2.2). Lands previously productive and supportive of life tend to become desertic, largely due to uncontrolled human activity. Combating desertification entails putting in place soil and water conservation measures aimed at regenerating the life-supporting capacity of these ecosystems.

The convention gives centre stage to Africa in its overall scheme of implementation. African States Parties are to be accorded special consideration in the rendering of different kinds of support, for action programmes implemented under the Convention. The convention includes both an annex on regional implementation for Africa, and a resolution on urgent action for Africa.

The CCD recognises that its implementation requires synergy with other relevant treaties, and it expressly mentions its operational relationship with the Climate Convention and the CBD (Art.8.1).

2.2 Observations on the Main Traits of the Key Biological Diversity Conventions

The main biological diversity conventions are concerned with one or more aspects of three phenomena—*ecosystems, habitat, or species*. "Ecosystem" is defined in the CBD (Art.2) as: "a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit"; and "habitat" is defined (Art.2) as: "the place or type of site where an organism or population naturally occurs". "Habitat"

Table 2.1(11): African States Parties to the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994), as at June 30, 1999

Country	Date of Signature	Date of Ratification/Acceptance/ Accession
1. Algeria	14.10.1994	22.05.1996
2. Angola	14.10.1994	30.06.1997
3. Benin	14.10.1994	29.08.1996
4. Botswana	12.10.1995	11.09.1996
5. Burkina Faso	14.10.1994	26.01.1996
6. Burundi	14.10.1994	06.01.1997
7. Cameroon	14.10.1994	29.05.1997
8. Cape Verde	14.10.1994	08.05.1995
9. Central African Republic	14.10.1994	05.09.1996
10. Chad	14.10.1994	27.09.1996
11. Comoros	14.10.1994	03.03.1998
12. Congo, Republic of	15.10.1994	12.07.1999
13. Congo, Democratic Republic of	14.10.1994	12.09.1997
14. Cote d'Ivoire	15.10.1994	04.03.1997
15. Djibouti	15.10.1994	12.06.1997
16. Egypt	14.10.1994	07.07.1995
17. Equatorial Guinea	14.10.1994	27.06.1997
18. Eritrea	14.10.1994	14.08.1996
19. Ethiopia	15.10.1994	27.06.1997
20. Gabon	-	06.09.1996
21. Gambia	14.10.1994	11.06.1996
22. Ghana	15.10.1994	27.12.1996
23. Guinea	14.10.1994	23.06.1997
24. Guinea-Bissau	15.10.1994	27.10.1995
25. Kenya	14.10.1994	24.06.1997
26. Lesotho	15.10.1994	12.09.1995
27. Liberia	-	02.03.1998
28. Libyan Arab Jamahiriya	15.10.1994	22.07.1996
29. Madagascar	14.10.1994	25.06.1997
30. Malawi	17.1.1995	13.06.1996
31. Mali	15.10.1994	31.10.1995
32. Mauritania	14.10.1994	07.08.1996
33. Mauritius	17.3.1995	23.01.1996
34. Morocco	15.10.1994	07.11.1996
35. Mozambique	28.9.1995	13.03.1997
36. Namibia	24.10.1994	16.05.1997
37. Niger	14.10.1994	19.01.1996
38. Nigeria	31.10.1994	08.07.1997
39. Rwanda	22.06.1995	22.10.1998
40. Sao Tome and Principe	04.10.1995	08.07.1998
41. Senegal	14.10.1994	26.07.1995
42. Seychelles	14.10.1994	26.06.1997
43. Sierra Leone	11.11.1994	25.05.1997
44. South Africa	09.01.1995	30.09.1997
45. Sudan	15.10.1994	24.11.1995
46. Swaziland	27.07.1995	07.10.1996
47. Togo	15.10.1994	07.10.1996
48. Tunisia	14.10.1994	11.10.1995
49. Uganda	21.11.1994	25.06.1997
50. United Republic of Tanzania	14.10.1994	19.06.1997
51. Zambia	15.10.1994	19.09.1996
52. Zimbabwe	15.10.1994	23.09.1997

Date of entry into force: 26.12.1996

Source: UNEP, *Register of International Treaties and other Agreements in the Field of the Environment* (1996), and UNEP files as at June 1999.

thus describes an aspect of the ecosystem and thus, the two concepts can be considered together.

The conventions are concerned with ecosystem/habitat and species, as they deal with matters such as the following: wetlands, forests, plants, soil and land, marine living resources, birds, polar bears, migratory species, etc. Furthermore, such conventions:

- (a) while formally acknowledging the concept of State permanent sovereignty over its natural resources, at the same time view biological diversity as the common concern of humankind.
- (b) often make reference, express or implied, to the interests of future generations in today's biological resources, and underline the imperative of protecting those interests. This notion incorporates the principle of *intergenerational equity*.
- (c) to varying degrees, do make a case for the sharing of biological resources, and for equity in the derivation of benefits from these resources.
- (d) have the effect of placing obligations on States Parties to ensure wise use of biological resources.
- (e) urge the sustained use of technical and scientific methods of biological diversity conservation.
- (f) require preventive and precautionary approaches to conservation in suitable cases, so that urgent courses of action do not have to await the submission of foolproof scientific evidence.
- (g) require co-operation among States Parties, in the management of biological diversity where the situation transcends the limited remit of a particular State.
- √ (h) require environmental education and suitable capacity development, as a basis for effective biodiversity management.
- (i) require the establishment of appropriate institutional arrangements for the task of biodiversity conservation.
- (j) require financial commitment to the task of conservation, by States Parties.

2.3 Approaches to the Classification of Biological Diversity Conventions

For effective implementation of the biodiversity-related conventions, it is necessary as a first step, to classify them. For a better understanding of these conventions, it is necessary to analyse, categorise and simplify their cardinal elements.

The several existing works containing compilations of environmental conventions rarely rationalise their approach and format; and thus, minimal insights will be gained from their modes of classification

A more rational approach to the classification of biological diversity conventions would be that based on certain natural units of biodiversity. Such a classification can be achieved by dealing separately with three hierarchical categories that address different aspects of living systems: *genetic diversity*; *species diversity*; and *ecosystem/habitat diversity*. Within such a framework, the various conventions would then be arranged regardless of their global or regional or bilateral character.

While such a mode of classification would have much to commend it, it cannot be applied in all situations. This is because the various biodiversity-related conventions are rarely confined to just one of the elements in the biotic hierarchy. Moreover, the scheme of conservation of biological diversity has invariably proceeded on the basis of the interdependence of species, habitats and ecosystems. It should be noted in this respect, that at both the third and fourth Conferences of the Parties to the CBD, the "ecosystem approach", and "ecosystem-based approach" was expressly adopted as a guiding principle in the conservation of biodiversity.

As an illustration, the African Convention on the Conservation of Nature and Natural Resources (1968) is concerned with the conservation, utilisation and development of soil and water, just as it is concerned with the conservation of floral and faunal resources (Arts IV, V, VI, VII). The Ramsar Wetlands Convention (1971) is concerned with wetlands (i.e. *habitat*), and with the biological diversity (e.g., *waterfowl*) (i.e. *species*) of these wetlands (Art.2). The Paris Convention on World Cultural and Natural Heritage (1972) is concerned with all kinds of cultural and natural heritage; and this is not restricted to habitats or species. CITES (1973) is concerned with all endangered species, in

the context of international trade. This convention, in many respects, may be said to be one of the most focussed in its objective; it is concerned with *species*. Of a similar character is the Convention on the Conservation of Migratory Species of Wild Animals (1979), which is primarily concerned with a particular category of biological species. The Convention on Biological Diversity, which is today the primary international instrument on biological diversity, is extremely broad and addresses matters of species (Arts.4,5,6,8), genetic resources (Art.15), habitat (Arts.8,14), and many other related issues. (Arts.16,18,19). Article 8 of this convention is devoted to *in situ* conservation and requires States Parties to promote "the protection of ecosystems, natural habitats and maintenance of viable populations of species in natural surroundings" (Art.8(d)), and "environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas" (Art.8(e)). Hence the "ecosystem approach" to

biodiversity conservation that has been underlined by the last two Conferences of the Parties to the CBD.

It is clear then, that it will be difficult to achieve a perfect classification for biological diversity. Any attempt at classification will serve no better purpose than to provide a relatively dependable perspective from which to perceive the relevant conventions. With such perception, it will be possible to abstract the main principles and guidelines embodied in these conventions, and to consider ways of incorporating them into municipal legal and management regimes.

In this chapter, an attempt has been made to illuminate the primary characteristics of the principal biodiversity conventions of special relevance to Africa. These characteristics have been analysed, and the analysis used as a basis for proposing an approach to the classification of conventions. This approach is applied in Chapter 3.

Chapter Three: A Classification of Biological Diversity Conventions Applicable to Africa

3.1 General Conventions on Biological Diversity

The main biological diversity-related conventions, and the degree of Africa's participation in them have been considered in chapter 2. As these conventions have a broad-based coverage of biodiversity phenomena, it is extremely difficult to classify them as conventions devoted either to ecosystems/habitat, or to species, or to genetic resources. Tables 3.1.1 to 3.1.10 will indicate the main attributes of these conventions.

It is clear from the following analytical charts, that the primary biodiversity conventions each spreads over several classification categories, and thus cannot be neatly pigeon-holed as typifying just one or another of these categories. The following comments may be made on the conventions in question:

- a) The essence of the 1958 *Convention on Fishing and Conservation of the Living Resources of the High Seas* is incorporated into the 1982 *United Nations Convention on the Law of Sea*. The relevant part of the earlier convention falls under the species classification, and deals with such matters as: the duty to conserve the living resources of the high seas, role of coastal states in the implementation of marine conservation measures; etc.
- b) *The African Convention on the Conservation of Nature and Natural Resources* (1968) has a fairly broad coverage, and has specific provisions on ecosystem/habitat and species, and also has provisions of a facilitative kind. Its facilitative aspects, however, have not as yet served to ensure the effective implementation of the convention. This, is largely because of inadequate secretariat arrangements, and due partly to lack of a financial mechanism under the convention. Current OAU/UNEP initiatives should lead to a rectification of these shortcomings in the future.
- c) *The Convention on Wetlands of International Importance Especially as Waterfowl Habitat* (1971) has a coverage similar to that of the African Convention. It addresses issues of ecosystem/habitat as well as species. It also has provisions of a facilitative character.
- d) *The Convention for the Protection of World Cultural and Natural Heritage* (1972), by contrast, is more concerned with the natural heritage which provides habitat for biological diversity, as well as the cultural milieu that the human being evolves around that heritage, mainly on the basis of the floral, faunal and other ingredients of that heritage. The cultural heritage embodies vital knowledge and experience founded upon the natural heritage; and these provide part of the strategy for the conservation of the natural heritage with its biodiversity and habitat.

Table 3.1.1: Convention on Fishing and Conservation of the Living Resources of the High Seas (1958)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
	-Art.1 (duty to conserve the living resources of the high seas);		-Art.6.7 (scientific findings as a basis of conservation measures);
	Arts.6.7 (power of coastal states to adopt unilateral conservation measures).		-Arts. 9.11 (dispute settlement in relation to conservation initiatives).

Table 3.1.2: African Convention on the Conservation of Nature and Natural Resources (1968)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Art.II (ensuring the conservation, utilisation and development of soil, water):	-Art.II (ensuring the conservation, utilisation and development of floral and faunal resources);	-	-Art.XI (customary rights to be reconciled with the requirements of the convention):
-Art IV (Parties to take effective measures to conserve and improve the soil and to control erosion and land use);	-Art.VI (Parties to protect flora and ensure its best utilisation, the management of forests and control of burning);		-Art.XIII (conservation education to be undertaken at all levels);
-Art V (Parties to establish policies to conserve, utilise and develop water resources, prevent pollution and control water use);	-Art VII (Parties to conserve faunal resources and use them wisely, manage populations, control hunting, capture and fishing, prohibit the use of poisons explosives and automatic weapons hunting);		-Art.XIV (conservation and ecological factors to be integrated into development plans)
-Art VI (Parties to control land clearance and overgrazing);			-Art.XVI (Parties to cooperate whenever necessary in the implementation process).
-Art VII (Parties to manage habitats);	-Art. VIII (protected species List A enjoy full protection; those in List B may be taken without authorisation);		
-Art X (conservation areas to be established and maintained).	-Art IX (traffic in trophies to be tightly controlled)		

Table 3.1.3: Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Art.2 (Parties to designate at least one national wetland); Art.4 (Parties to establish wetland nature reserves)	- Art.2(6) (Parties to consider their international responsibilities for conservation, management and wise use of migratory stocks of wildfowl).	-	Art.4 (Parties to cooperate in exchange of information and train personnel for wetland management).

Table 3.1.4 Convention for the Protection of World Cultural and Natural Heritage (1972)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Art.4 (duty of States Parties to ensure the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage);</p> <p>-Art.8-11 (preparation of inventories of the natural and cultural heritage)</p>	-	-	<p>Art.5 (Parties to integrate the protection of cultural and natural heritage into their planning programmes, set up services for the protection of their heritage, develop scientific and technical studies, take legal, scientific, administrative and financial steps to protect their heritage;</p> <p>-Art.6 (Parties to assist each other in the protection of the cultural and natural heritage);</p> <p>-Art.15 (establishment of the World Heritage Fund).</p>

Table 3.1.5: Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
	<p>-Art.I (restriction of trade in animals and plants whether dead or alive);</p> <p>-Appendix I (tight control on trade in endangered species);</p> <p>-Appendix II (species that may become endangered unless trade is regulated);</p> <p>-Appendix III (species that any party might wish to regulate).</p>	-	<p>Art.IV (national CITES Scientific Authority to monitor trade in relation to performance of the wild population of the relevant species; procedures that must be followed for international trade in listed species);</p> <p>-Art.VIII (responsibility of the Parties);</p> <p>-Art. IX (designation of Management Authority and Scientific Authority at national level);</p> <p>-Art.XIV (effect on domestic legislation and international conventions).</p>

Table 3.1.6: Convention on the Conservation of Migratory Species of Wild Animals (1979)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
	<p>-Art.III (endangered migratory species to be listed in Appendix I);</p> <p>-Art.IV (migratory species to be subject to agreements to be listed in Appendix II);</p> <p>-Art.V (protective agreements for migratory species)</p>		Art.VIII (Scientific Council to provide advice on scientific matters).

Table 3.1.7: United Nations Convention on the Law of the Sea (1982)			
Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Arts.56,73 (management of the natural resources of the exclusive economic zone);</p> <p>-Art.192 (general obligation placed on States Parties to protect and preserve the marine environment).</p>	<p>-Arts.56,61-68 (preservation of the natural resources of the exclusive economic zone);</p> <p>-Arts.116-120 (management and conservation of the living resources of the high seas);</p> <p>-Art.64 (conservation of highly migratory species);</p> <p>-Art.65 (conservation of marine mammals).</p>		<p>-Art.279 (conduct of marine scientific research; development and transfer of marine technology);</p> <p>-Art.266 (co-operation in marine science and technology).</p>

Table 3.1.8: Convention on Biological Diversity (1992)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Art.8 (establishment and management of protected areas; promotion of the protection of ecosystems and natural habitats; promotion of environmentally sound and sustainable development in areas adjacent to protected areas; rehabilitation and restoration of degraded ecosystems; control of environmental impacts of genetically modified organisms; control of alien species which threaten ecosystems or habitats);</p> <p>-Art.14 (requirement of environmental impact assessment on projects that may have adverse effects on biological diversity).</p>	<p>-Art.4 (conservation of species within as well as outside the jurisdiction of States Parties);</p> <p>-Art.8 (conservation responsibility in respect of <i>In situ</i> and <i>ex situ</i> biological diversity);</p> <p>-Art.9 (<i>ex situ</i>) Collections of biological resources);</p> <p>- Art.10 (sustainable use of components of biological diversity).</p>	<p>-Art.15 (access to genetic resources).</p>	<p>-Art.5 (requirement of co-operation between States Parties in the preservation of biological diversity);</p> <p>-Art.6 (general measures for conservation and sustainable use of biological diversity);</p> <p>-Arts.12,13 (State obligation to provide for research, training, education and awareness in relation to biodiversity conservation);</p> <p>-Arts.16,18,19 (access to transfer of technology for conservation and sustainable use of biological diversity);</p> <p>-Art.8 (respect for and cultivation of traditional knowledge relevant to the conservation of biodiversity);</p> <p>-Arts.20,21 (financial resources for biodiversity conservation);</p> <p>-Art.15 (access to genetic resources to be subject to the prior informed consent of party providing the resources);</p> <p>- Art.26(States Parties to present to COPs reports on measures taken in the implementation of the provisions of the convention).</p>

Table 3.1.9: Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-	-Art.5 (prevention of illegal trade in wild fauna and flora).	-	-Art.5 (effective application of preventive laws; co-operation among Parties in effective enforcement of the law, and in the collection and dissemination of relevant information); -Art.4 (provision of scientific and technical assistance; administrative measures).

Table 3.1.10: United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)

Ecosystem/Habitat Facilitative Objects	Species	Genetic Resources	Technical/
-Arts.2.4 (requirement for long-term, integrated strategies for improved productivity of land; and rehabilitation, conservation and sustainable management of land and water resources).	-	-	-Art.3 (requirement for the participation of populations and local communities); -Art.8 (synergies with other relevant conventions, especially the CBD and the UNFCCC); -Art.17 (technical and scientific co-operation); -Art.16 (co-operation in the preparation of information and data); -Arts.3,6,20 (financial resources; financial assistance by developed country Parties); -Art.18 (transfer, acquisition, adaptation and development of technology); -Art.19 (capacity building).

The World Cultural and Natural Heritage Convention also carries several facilitative provisions, for the implementation of the conservation task. For instance, States Parties are required to integrate the protection of cultural and natural heritage into their planning programmes, to develop scientific and technical studies on matters related to cultural and natural heritage, to assist each other in the protection of the cultural and natural heritage; etc.

- e) The *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) has its focus on wild fauna and flora (i.e., species), and their protection in relation to international trade activities. Besides the species focus, the convention has elaborate provisions of a technical and facilitative kind, e.g., the formation of a national CITES Scientific Authority to monitor trade activities as they affect the relevant species; procedures to guide international trade in listed species, etc.
- f) Like CITES, the *Convention on the Conservation of Migratory Species of Wild Animals* (1979) has a species focus – the conservation and effective management of species which migrate across or outside national jurisdictional boundaries. The convention also provides for a Scientific Council to provide advice on scientific matters pertaining to endangered migratory species.
- g) The *United Nations Convention on the Law of the Sea* (1982), insofar as it establishes a comprehensive legal regime for the seas and oceans and squarely addresses issues such as the pollution of the marine environment, necessarily concerns itself with ecosystems and habitat. It also deals directly with species, especially their conservation within the exclusive economic zone. It is today the principal international legal instrument setting out the rights and obligations of states for the conservation and sustainable use of marine living resources. This convention has a special significance at the level of practice: although it entered into force only recently (November 16, 1994), it reflects age-old customary international law on certain matters, especially on the management and conservation of fisheries. It was indeed the basis for deliberations at UNCED on international legal aspects of conservation. It is described in UNCED's Agenda 21 (paras.17.44 –17.69) as setting forth "rights and obligations of states with respect to conservation and utilisation" of marine living resources. The convention also makes facilitative provisions relating to resource management, marine research, and co-operation in marine science and technology.
- h) The *Convention on Biological Diversity* (1992) is the most wide-ranging of all the main biodiversity conventions in terms of its coverage of the several classification categories. The CBD is in every respect an ecosystem/habitat instrument, providing as it does for the establishment and management of protected areas, the promotion of the protection of ecosystems and natural habitats, the promotion of environmentally sound technology and sustainable development in areas adjacent to protected areas; etc. It also makes detailed provisions for the conservation of biological species both *in situ* and *ex situ*. Besides, of all the main biodiversity conventions, it is the CBD alone that bears specific provisions on genetic resources in those terms. The convention has elaborate provisions of a facilitative kind, e.g.: requirement for co-operation between Parties in the task of conservation; the need to provide for research, training, capacity building and awareness, within the territories of the States Parties undertaking conservation initiatives; the need to cultivate traditional knowledge in the conservation process; etc.
- i) The *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* (1994) resembles CITES, as regards classification, and has a clear focus on biological species. It also has facilitative provisions, especially that relating to the effective application of preventive laws, and to administrative and scientific matters.
- j) The *United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa* (1994), insofar as it seeks to achieve sustainable development through better management of land and water resources, is essentially concerned with ecosystems and habitat. The convention makes detailed facilitative provisions in that regard, such as: the need to establish synergies among certain related conventions (especially CBD, CCD and UNFCCC), technical and scientific co-operation, financial assistance to developing country Parties by developed country Parties; etc.

3.2 African Regional Conventions Relating to Biological Diversity

Apart from the African Convention on the Conservation of Nature and Natural Resources (1968) and the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994), which have already been discussed under "general biodiversity conventions" (Section 3.1), a number of other conventions have been adopted in more limited areas which largely reflect the principles of the general conventions. In this regard the following conventions are relevant:

- a) *Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region* (Abidjan, 1981);
- b) *Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region* (Nairobi, 1985);
- c) *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region* (Nairobi, 1985);
- d) *Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System* (Harare, 1987);

- e) *Convention for the Establishment of the Lake Victoria Fisheries Organisation* (Kisumu, 1994).

An attempt is made below to classify the five agreements, on the basis of the classification scheme adopted in Section 3.1. (The ratification status of these agreements is set out in the appendices (Appendix 1,2,3,4,5) to this *Handbook*).

Such regional or sub-regional conventions, in their essence, reflect the basic character of the general conventions already considered. More specific comments may be made about these conventions in the following terms:

- a) The regional/sub-regional conventions have particular foci related to biodiversity, and thus do not spread across all the classification categories. The constant classification type in all of them is ecosystem/habitat, and in each case provision is made for the facilitation of implementation. As with the general biodiversity-related conventions, there is no express reference to genetic resources as a classification category. Only two of the five conventions are directly concerned with species as a classification category.
- b) The *Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region*

Table 3.2.1: Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1981)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Art.4 (measures to prevent, reduce, combat and control pollution of the Convention area); -Art.10 (obligation to prevent, combat and control coastal area erosion); -Art.11 (obligation to protect and preserve rare or fragile ecosystems, as well as the habitat of depleted, threatened or endangered species and other marine life in specially protected areas).	-	-	-Art.12 (co-operation in dealing with pollution emergencies); -Art.14 (co-operation in exchange of data and other scientific information); -Art.13 (developing technical and other guidelines regarding development projects).

Table 3.2.2: Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Art.10 (protection and preservation of rare or fragile ecosystems and habitat of depleted or endangered species and other marine life);</p> <p>-Art.12 (reduction and combating of environmental damage in the Convention area resulting from dredging, land reclamation and other engineering activities);</p> <p>-Art.13 (planning of major development projects).</p>			<p>-Art.13 (development of procedures for dissemination of information);</p> <p>-Art.14 (co-operation in scientific research and monitoring).</p>

Table 3.2.3: Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Arts.3,4 (protection of endangered species of flora and fauna (listed in Annex I and Annex II) against destruction of habitat);</p> <p>-Art.5 (protection of critical habitats of breeding stocks of threatened or depleted fauna species);</p> <p>-Art.8 (establishment of protected areas to safeguard important ecosystems, especially ecosystems providing habitat for species of fauna and flora that are endangered, endemic, migratory, or economically important).</p> <p>-Arts.3,4 (protection of endangered species of flora and fauna (listed in Annex I and Annex II)</p>	<p>against capture, killing, possession and sale);</p> <p>-Art.5 (regulating of the harvest and sale of threatened or depleted fauna species listed in Annex III);</p> <p>-Art.6 (co-ordination of efforts to protect migratory species);</p> <p>-Art.7 (prevention of the introduction of potentially harmful alien species).</p>		<p>-Art.11 (conservation initiatives to take into account traditional activities of local populations);</p> <p>-Arts.9,10 (co-operation in the development of guidelines for the management of conservation areas);</p> <p>-Arts.13,16 (co-ordination of conservation initiatives in frontier areas);</p> <p>-Arts.14,15 (involvement of the public in protection initiatives, and creation of awareness);</p> <p>-Art.17 (encouragement of scientific research).</p>

Table 3.2.4: Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (1987)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Art.1 & Annex I (management of the water resources and the environment of the Common Zambezi River System).	-	-	-Art.2 (co-ordination of individual country efforts); -Art.3 (establishment of national focal points to harmonise implementation).

Table 3.2.5: Convention for the Establishment of the Lake Victoria Fisheries Organisation (1994)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Art.II (creation of forum for deliberating upon initiatives on environmental and water quality in Lake Victoria).	-Art.II (commitment to the sustainable utilisation of the living resources of Lake Victoria; conservation and management measures; consideration of effects of introducing non-indigenous aquatic animals or plants into the waters of the lake).	-	-Art.II (enhancement of capacity building in existing institutions, and development of new ones; training and extension activities in all aspects of fisheries; conduct of research on the waters of the lake; co-operation among Contracting Parties in the harmonisation of national measures of implementation); -Arts.III, V, VI, VII, IX (establishment of secretariat and management structure); -Art. VIII (establishment of working groups and scientific committee); -Art. X (establishment of national committees); -Art. XII (enforcement of national laws); -Art. XIII (access to research material and information); -Art. XIV (budgeting and funding arrangements); -Art. XVIII (co-operation with other organisations and institutions).

(1981), forms part of the strategy of the UNEP Regional Seas Programme for the control of marine pollution and the management of marine and coastal resources. The specific objective of the convention is to ensure sound management of the marine and coastal areas of the West and Central African Region. In terms of biodiversity conservation, the importance of the convention is mainly at the ecosystem/habitat level. Its object is to control pollution of the convention area; to prevent, combat and control coastal area erosion; to protect and preserve rare or fragile ecosystems; etc.

- c) The Nairobi *Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985)*, together with its *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985)*, are also part of the Plans of Action in UNEP's Regional Seas Programme. Their primary objective is the management of the marine and coastal areas of the Eastern African region. The convention has significant provisions on ecosystem/habitat, such as: requirement for the protection and preservation of rare or fragile ecosystems and habitat of depleted or endangered species and other marine life; undertaking to reduce and combat environmental damage in the convention area resulting from activities such as dredging and reclamation. The convention also has facilitative provisions such as, the requirement for co-operation in scientific research and monitoring, the call for the development of procedures for dissemination of information, etc.

The Protocol has a greater focus on biodiversity, and it significantly covers the ecosystem/habitat and the species categories in the classification scheme. Under ecosystem/habitat, the Protocol deals with such matters as: protection of endangered species of flora and fauna against destruction of habitat, protection of critical habitats of breeding stocks of threatened or depleted fauna species; establishment of protected areas to safeguard important ecosystems; etc. And under the species classification category, the protocol covers such matters as: protection of endangered species of flora and fauna against capture or killing; possession and sale; regulation of the harvest and sale of threatened or depleted fauna species; the protection of migratory species; prevention of the introduction of potentially harmful alien species; etc. The Protocol also has facilitative provisions

including: the need to draw on traditional conservation experience; co-operation in the development of guidelines for the management of conservation areas; co-ordination of conservation initiatives in frontier areas; involvement of the public in conservation initiatives; etc.

It is to be noted that the Nairobi Convention and Protocol were adopted before the Convention on Biological Diversity, and on this account they are not in all respects in tune with the CBD. For this reason the two (and in particular the Protocol) are currently under review by the *Ad Hoc* Legal and Technical Working Group established by the first Conference of the Parties in 1992.

- d) The Harare *Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (1987)* mainly falls in the ecosystem/habitat classification category, as its focus is *the management of water resources*. It also has facilitative provisions such as those relating to the co-ordination of individual country efforts, and to the establishment of national focal points for the harmonisation of implementation initiatives.
- e) The *Convention for the Establishment of the Lake Victoria Fisheries Organisation (1994)* is concerned with fish resources as well as their habitat. With regard to habitat, the convention seeks to ameliorate and improve the environment and water quality of Lake Victoria. And in the species classification category, the convention calls for a commitment to the sustainable utilisation of the living resources of the lake, the adoption of conservation and management measures; etc. The convention has detailed facilitative provisions that include the establishment of a secretariat and a management structure; arrangements concerning research and the sharing of data and information; requirement for co-operation in implementation arrangements among the Contracting Parties; budgeting and funding; research agencies; etc.

3.3 Regional Conventions Relating to Biological Diversity, Involving African "Range States"

There are several conventions relating to biological diversity which, while not being African in scope, have drawn membership from African range states. In this regard the following treaties may be noted:

- a) *Convention for the Protection of the Mediterranean Sea Against Pollution* (Barcelona, 1976);
- b) *Protocol Concerning Mediterranean Specially Protected Areas* (Geneva, 1982);
- c) *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean* (Barcelona, 1995);
- d) *Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment* (Jeddah, 1982);
- e) *Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)* (Monaco, 1996);
- f) *Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)* (The Hague, 1995).

Most of the above treaties are classified below, on the basis of the classification scheme adopted in Section 3.1. (The ratification status of these agreements is set out in the appendices (Appendix 6,7,8,9,10,11) to this *Handbook*).

The Convention for the Protection of the Mediterranean Sea (Table 3.3.1), in its initial form, was only indirectly related to the conservation of biological diversity and its primary area of relevance was ecosystem/habitat. However, this position changed with the adoption in 1982 of the Protocol Concerning Mediterranean Specially Protected Areas. The Protocol made provisions on such matters as: establishment, maintenance and restoration of protected areas, including

buffer areas in which activities are less severely restricted (Art.5); regulation of any act likely to harm or disturb flora and fauna (Art.7); regulation of trade in animals which originate in protected areas and are subject to measures of protection (Art.7). This Protocol has recently been replaced by a more biodiversity-focused one, i.e. the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, which is analysed in Table 3.3.2.

The Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982) (Table 3.3.3) is only indirectly related to the conservation of biological diversity, and its main concern in this respect is ecosystem/habitat.

The Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (1966) (Table 3.3.4), which is known by the acronym ACCOBAMS, includes among its range states the North African countries with a Mediterranean coastline (the ratification status is set out in Appendix 10). It is a regional treaty concluded under the auspices of the Convention on the Conservation of Migratory Species of Wild Animals (1979) (considered under Section 3.1).

Membership of the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) (Table 3.3.5) is open to African and Eurasian states (referred to as "Range States") within the area of the migration systems of African-Eurasian waterbirds, and regional economic integration organisations at least one member of which is a Range State. (The ratification status of this treaty is set out in Appendix 11 to the *Handbook*).

Table 3.3.1: Convention for the Protection of the Mediterranean Sea Against Pollution (1976)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Arts.5-8 (measures to prevent and abate pollution of the sea caused by dumping from ships and aircraft, or by discharges from ships, or from rivers, coastal establishments or other land-based sources).	-	-	-Art.9 (co-operative measures to deal with pollution emergencies); -Art.10 (co-operation in establishing monitoring programmes); -Art.11 (co-operation in scientific and technical research).

Table 3.3.2: Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995).

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Arts. 3,5 (protection, preservation and sustainable management of particular natural and cultural objects and values, notably by the establishment of specially protected areas);</p> <p>-Art.6,7,17 (planning, supervision and monitoring of measures for specially protected areas, including environmental impact assessment);</p> <p>-Art.8 (compilation of inventories of national areas that contain rare or fragile ecosystems, or are reservoirs of biological diversity).</p>	<p>-Art. 13 (regulation of the introduction on non-indigenous or genetically modified species, and the regulation of those already introduced).</p>	-	<p>-Art.24 (Parties to designate National Focal Points to liaise with the Regional Activity Centre for Specially Protected Areas).</p>

Table 3.3.3: Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>-Arts.IV, V, VI, VII, VIII (prevention of pollution from ships, aircraft, land-based sources, etc.)</p>	-	-	<p>-Arts. IX, X (co-operation in the fields of science and technology, and in dealing with pollution emergencies)</p>

Table 3.3.4: Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (1996)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
<p>- Art.II (Parties to cooperate and maintain a network of specially protected areas to conserve cetaceans).</p>	<p>- Art.II (Parties to take coordinated measures to achieve and maintain a favourable conservation status for cetaceans; prohibition of deliberate taking of cetaceans).</p>	-	<p>- Arts.II, VII, (Scientific Committee to advise on conservation);</p> <p>- Art.III (Meeting of the Parties);</p> <p>- Art IV (Secretariat);</p> <p>- Art V (sub-regional co-operation in conservation);</p> <p>- Art IX (financial arrangements).</p>

Table 3.3.5: Agreement on the Conservation of African - Eurasian Migratory Waterbirds (1995)

Ecosystem/Habitat	Species	Genetic Resources	Technical/ Facilitative Objects
-Arts.III to IV (Parties to undertake habitat conservation in accordance with the terms of Annex 3).	-Art. III (measures to conserve migratory waterbirds, with special attention to endangered species); -Art.IV (Parties to undertake species conservation).	-	-Art.IV (requirement for the management of human activities, research and monitoring, education and information); -Art V (Parties to designate implementing authority and a contact point); -Art VIII (establishment of a Technical Committee to facilitate scientific activities).

3.4 Categorisation of the Biodiversity - related Conventions: Some Remarks

It is clear that the various biodiversity-related agreements deal at the same time with one or more elements of biodiversity. Consequently, some of them are much more integrally bound up with the conservation principle than others.

Most of the conventions have certain provisions falling under ecosystem/habitat, and others under species. It is only rarely, however, that the main biological diversity conventions deal explicitly with genetic resources — “any material of plant, animal, microbial or other origin containing functional units of heredity”. This may suggest that the conventions, in their general orientation, seek to provide protection for biodiversity *in gross*, rather than by specific technical ingredients. The main exception to this pattern is the Convention on Biological Diversity (1992) which, apart from providing the most comprehensive framework for the conservation of biological diversity, devotes several articles (15,16,17) to the subject “access to genetic resources”. This convention, it is to be noted, concerns itself with the conservation of all forms of biological diversity as compared to most of the other conventions which are focussed on flora and fauna, without any mention of micro-organisms.

The various African regional/sub-regional conventions, as well as other regional/sub-regional conventions which involve African “range states”, have broadly followed the pattern set by the more broad-based conventions. Rarely do these conventions fall in all the three classification categories; indeed, in most cases they cover only one or two categories.

It may be noted too that, as with the major global conventions, so it is with the regional or sub-regional ones: a fourth classification category may be created that covers technical, scientific and management arrangements designed to ensure implementation of the law. The matters generally included in this category are: inter-state co-operation; financial arrangements; training and capacity development; scientific and research back-up for the conservation process; education; information and the creation of public awareness; involvement of populations and communities in the conservation process; and administrative arrangements.

From the classification set out in this chapter, we are now in a position to attempt an identification of specific elements in treaty law that ought to be incorporated in national management schemes, as part of the process of domestication of suitable principles of biodiversity conservation.

Chapter Four: The Critical Elements in the Biodiversity Conventions

4.1 *The concept of Domestication of Treaty Law*

Treaty law represents the consensus of a plurality of Parties, and on this account generally provides a standard of broad-based character, in respect of a given matter of public interest. A treaty once adopted and enters into force, requires the Parties to give it fulfilment under their domestic policy, legal and administrative framework. Such implementation of treaty law has, in the perspective of history, raised its special difficulties. There used to be two theories on this issue, thought to separate those countries that implement treaty obligations automatically upon ratification, from those that sought to conform these treaties to their domestic law first, before implementing the treaties. The first category of countries would be pursuing the monist tradition and the latter the dualist tradition. It is, however, clear from authoritative sources that the practice of states did not show such sharply contrasted notions. Even in countries associated with the monistic tradition, the ratification of a treaty is often followed by deliberate national law-making processes to set the stage for the implementation of the treaty. And in countries associated with the dualistic tradition, such as Great Britain, obligations emanating from international law have sometimes been applied as a matter of course under the judicial process.

It thus makes more practical sense to see treaty law, for purposes of implementation, as either self-executing or non-self-executing. Self-executing treaties require no special measures in domestic legislation for implementation, as they readily fit into the operative scheme of the national legal process. But non-self-executing treaties require deliberate legislative or other related decisions at the national level, as a basis for carrying out the required implementation. Thus, in the case of biodiversity conventions, some of their provisions may be self-executing, while others may be non-self-executing.

Such formal legislative adoption of treaty law may be regarded as the technical aspect of the broader process of domestication. The notion of domestication of

treaty law essentially addresses the acceptance of such law and its principles within the policy, legal and administrative structure a particular jurisdiction. When the discrete elements of the treaty are implanted into the national governance apparatus and the routine motions of regular administration, they are then assured of application, in the same manner as the ordinary law of the land. The treaty law, in this respect, undergoes a process of transformation, and is assimilated into the domestic law. Only in this way is it possible to achieve the most effective scheme of implementation for treaty law.

In the sphere of biological diversity, the course of human experience has led to the conclusion that the precious biological resources are destined to disappear through human destruction and waste, and that, in the circumstances, a new approach should be adopted that expresses itself in such principles as: the integration of environmental factors in national development planning; the subjection of major development projects to impact assessment and to monitoring procedures; the precautionary principle, which requires preventive strategies as well as prudent use of biological resources even when accurate scientific assessment of potential risks has not yet been carried out; the principle of equitable sharing of the benefits accruing from genetic resources; the principle of sustainable development — which requires that the environmental capital supporting economic and social activities be kept stable; the principle of intragenerational equity — which requires equitable access to, and equitable sharing of the benefits accruing from, national biodiversity endowments for all members of any given generation; and the principle of intergenerational equity — which requires present generations to bequeath to future generations a patrimony that will still be having its essential life-supporting amenities.

The concept of domestication of treaty law, with regard to the environment in general and to biodiversity in particular, provides a basis for the incorporation of such principles of international environmental law into the scheme of national policy-making, legislation and administrative

conduct. Where such incorporation is achieved, enlightened principles of treaty law come to benefit from the implementation and enforcement powers attached to the scheme of national sovereignty — and this will provide a real fulfilment to the goals of international law.

The influence of international law's conservation principles upon municipal law will also be strengthened, where States Parties are willing and able to apply *soft law* — i.e., principles that are not legally binding, and usually coming from influential international declarations, resolutions and conference documents. Instruments in this category include the Stockholm Declaration (1972), the World Conservation Strategy (launched in 1980), the World Charter for Nature (1983), the Rio Declaration and Agenda 21 (1992). Such instruments have influenced the shaping of national development policies touching upon wild species of flora and fauna and their life-support systems.

4.2 *Biological Diversity Issues Amenable to Domestication*

4.2.1 *Conventions that generate principles for domestication*

Consideration of the regional/sub-regional biodiversity conventions shows that, for the most part, they introduce no new principles that are not already part of the more broad-based conventions. As already noted, for instance, the African Convention on the Conservation of Nature and Natural Resources (1968) largely reproduces the provision of the London Convention Relative to the Preservation of Fauna and Flora in Their Natural State (1933). The objective of the London Convention was stated as: "To preserve the natural fauna and flora of certain parts of the world, particularly of Africa, by means of national parks and reserves, and by regulation of hunting and collection of species" (*Register of International Treaties*, 1996). And that of the 1968 African Convention is stated as: "To encourage individual and joint action for the conservation, utilization and development of soil, water, flora and fauna for the present and future welfare of mankind, from an economic, nutritional, scientific, educational, cultural and aesthetic point of view" (*Register*, 1996). These objectives are, in substance, the same, except that the African Convention sets out in more detail the ecosystem/habitat and the species elements involved in the common goal of biodiversity conservation. Article X of the African Convention states that "The Contracting States shall maintain and extend where appropriate,

within their territory and where applicable in their territorial waters, the conservation areas existing at the time of entry into force of the present Convention" This article seeks, in effect, to preserve the pre-existing conservation status (under the 1933 London Convention) at the time the African Convention was adopted. Article 3 of the London Convention states: "The Contracting Governments will explore forthwith the possibility of establishing in their territories national parks and strict nature reserves" An important element in both conventions is, thus, the conservation of biological diversity.

Article VII of the 1968 African Convention requires parties to conserve faunal resources and use them wisely, manage populations and habitats, control hunting, capture and fishing, and prohibit the use of poisons, explosives and automatic weapons in hunting. This incorporates the content of Art.10 of the 1933 London Convention which seeks to prohibit such methods of hunting as: use of poison, explosives, dazzling lights, nets, pits and snares.

In a similar manner, the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994), which provides stricter enforcement measures, closely reflects the protective scheme of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973).

The objective of CITES is to protect certain endangered species from over-exploitation through a system of export/import permits, and that of the Lusaka Agreement is to establish close co-operation between contracting African States, with a view to reducing and eliminating illegal trade in wild fauna and flora. The goal of the two treaties is the same. All that the Lusaka Agreement does is to put in place a regional machinery for the practical enforcement of conservation principles which have their origin in CITES. What is different is the *modus operandi* of the two treaties.

In a similar way, the various conventions associated with UNEP's Regional Seas initiatives, such as the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985), the Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985), etc. may be associated with global treaties which deal with the subject of biodiversity conservation. Particularly relevant in this regard is the United Nations Convention on the

Law of the Sea (1982). Relevant also in this respect is the Convention on Fishing and Conservation of the Living Resources of the High Seas (1958), the vital conservation provisions of which have been incorporated into the Law of the Sea Convention.

Therefore, when the issue of domestication of conventions related to biodiversity in Africa is considered, it should be recognised that the relevant principles are, for the most part, those emanating from the more general conventions.

4.2.2 Conservation principles for domestication

The more general conventions, it may be noted, provide the basic origins of those biodiversity conservation principles that require domestication. Especially relevant in this regard are the following conventions:

- (i) Convention on Fishing and Conservation of the Living Resources of the High Seas (1958);
- (ii) African Convention on the Conservation of Nature and Natural Resources (1968);
- (iii) Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971);
- (iv) Convention for the Protection of the World Cultural and Natural Heritage (1972);
- (v) Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973);
- (vi) Convention on the Conservation of Migratory Species of Wild Animals (1979);
- (vii) United Nations Convention on the Law of the Sea (1982);
- (viii) Convention on Biological Diversity (1992);
- (ix) United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994).

An examination of such conventions will disclose the specific principles or elements in the treaty law that require incorporation into domestic law — to the intent that a more effective framework be availed for the task of implementation.

The critical elements in these conventions may be considered under the following environmentally-related sub-headings: (a) *conservation of ecosystems/habitat*; (b) *conservation of species*; (c) *trade-related issues, wise use and sustainable management*; (d) *issues of science and technology for conservation functions*; (e) *capacity-building for conservation functions*; and (f) *public awareness and education*.

(a) Conservation of ecosystems/habitat

The Convention on Biological Diversity (Art.2) defines ecosystem as: "a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit". The ecosystem is *the functionally related interactions of natural entities, which bring about particular orientations in soil character; water character and water systems and endowments; the characteristics of the biotic communities; and the mode of interplay of these among themselves and with atmospheric conditions. Such interplays produce the environmental conditions which favour and promote, in particular areas, the emergence and flourishing of particular types of biota. The prevalence of such biota, therefore, is dependent on the stability of the ecosystem. In the conservation of biological diversity, consequently, one of the main strategies is the conservation of the natural elements and the activity patterns of the ecosystem.*

A vital aspect of this conservation strategy is the regulation of the activities of the most ambitious, most purposive and most disruptive member of the biotic community — *the human being*. Human civilization is built around social, economic and political arrangements that constantly sap the vitality of the soil and its productive capacity; the forests and vegetation; the water resources and the water-catchment areas; and the biota that survive on these elements of the ecological set-up. In the conservation of the ecosystem, therefore, priority attention must be accorded such issues as: *land-use planning; the conservation of forests and vegetation; and the protection of water catchment areas.*

It is evident from the content of the foregoing paragraph, that conservation of biodiversity habitats is integrally linked to that of ecosystems. Such habitats, for instance, forests, wetlands, etc. are in virtually all cases a major component of the wider ecosystem.

Thus, those conventions that deal with ecosystems will generally address also the issue of habitat. This is clear from the following discussion of relevant conventions.

(i) Convention on Fishing and the Conservation of the Living Resources of the High Seas (1958)

This convention implies the obligation of habitat protection and improvement, on the part of coastal states. Article 6 stipulates: "A coastal State has a special interest in the maintenance of the productivity of the living resources in any area of the high seas adjacent to its territorial sea". Such a state is, therefore, "entitled to take part on an equal footing in any system of research and regulation for purposes of conservation of the living resources of the high seas in that area, even though its nationals do not carry on fishing there" (Art. 6.2).

(ii) African Convention on the Conservation of Nature and Natural Resources (1968)

Under Article II, Parties are required to ensure the conservation, utilisation and development of the soil, water, floral and faunal resources. Parties are required under Article IV to take effective measures to conserve and improve the soil, and to control erosion and land use. Parties are called upon (Art.V) to establish policies to conserve, utilise and develop water resources, prevent pollution and control water use; they are required to control land clearance and overgrazing (Art. VI); to manage habitats (Art.VII) and establish conservation areas (Art.X).

The African Convention, it should be noted, seeks to protect the ecosystem by reference to *land-use planning, forests and water-catchment areas*. Parties are required to "establish land-use plans based on scientific investigations (ecological, pedological, economic and sociological) and, in particular, classification and land-use capability" (Art. IV). The Parties are required to undertake "the study of water cycles and the investigation of each catchment area"; to effect the "co-ordination and planning of water resources development projects"; to undertake the "administration and control of all water utilisation" (Art. V).

(iii) Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)

This convention primarily deals with habitat, but in a significant measure, also with ecosystem protection. The Contracting Parties, when they adopted this convention, were guided by "the fundamental ecological functions of wetlands as regulators of water regimes". Article 2 requires each Contracting Party to designate suitable wetlands within its territory for inclusion in a

List of Wetlands of International Importance. The selection of such wetlands is to be based on their international significance in terms of *ecology*, botany, zoology, limnology or hydrology. Contracting Parties have an obligation to "formulate and implement their planning so as to promote the conservation of wetlands included in the List, and as far as possible the wise use of wetlands in their territory" (Art. 3.1).

When adopting the convention, the Contracting Parties had been moved by the desire "to stem the progressive encroachment on and loss of wetlands now and in the future"; and by the perception that "the conservation of wetlands and their flora and fauna can be ensured by combining far-sighted national policies with co-ordinated international action". The convention states that waterfowl are birds ecologically dependent on wetlands (Art. 1.2); and wetlands are defined as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres" (Art. 1.1). Each Contracting Party is required to designate at least one woodland (Art.2.1). The boundaries of a woodland may incorporate riparian and coastal zones adjacent to wetlands, and islands or bodies of marine water deeper than six metres at low tide. Contracting Parties are required to promote the conservation of wetlands and waterfowl, by establishing nature reserves in wetlands (Art.4 1).

(iv) Convention for the Protection of the World Cultural and Natural Heritage (1972)

This convention defines "natural heritage" as: "natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; geological and physiological formations..." (Art.2). States Parties are required (Art.5) to: "adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes". These principles may be considered to incorporate the concept of ecosystem protection, as well as that of habitat protection. Article 2, which defines "natural heritage", makes express reference to those "geological and physiographic formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants".

(v) Convention on the Conservation of Migratory

Species of Wild Animals (1979)

This convention, in its scheme of protection which is primarily aimed at species, is guided by the principle that these species do have, in many cases, an intricate and delicate interplay with the ecosystem. It defines habitat as: "any area in the range of a migratory species which contains suitable living conditions for that species" (Art.I). The convention requires Parties the territories of which are in the range of migratory species listed in Appendix I, "to conserve and, where feasible and appropriate, restore those habitats of the species which are of importance in removing the species from the danger of extinction" (Art. III.4).

(vi) United Nations Convention on the Law of the Sea (1982)

Apart from establishing a comprehensive regime for the law of the sea, the 1982 Law of the Sea Convention embodies the principles of earlier conventions which address the conservation of the marine environment and its resources. It makes provisions for the conservation and sustainable use of marine living resources in territorial waters, archipelagic waters, on the continental shelf, in the exclusive economic zone, and on the high seas. The convention thus squarely addresses the subject of marine ecosystems/habitat. Part XII of the convention is devoted to the protection and preservation of the marine environment; and Article 192 places an obligation upon the Contracting Parties to protect and preserve the marine environment.

(vii) Convention on Biological Diversity (1992)

The CBD, in its broad sweep, clearly incorporates the principle of ecosystem/habitat protection — and this indeed may be seen as one of its most important characteristics. The convention is guided, as stated in the preamble, by the ecological value of biodiversity; the importance of biodiversity as part of the broader system of the biosphere; and the requirement of *in-situ* conservation of ecosystems.

The convention carries important provisions on ecosystem/habitat conservation. Contracting Parties are required (Art.8) to establish "a system of protected areas or areas where special measures need to be taken to conserve biological diversity; and to develop guidelines for the selection, establishment and management of protected areas". Annex I to the convention gives an indicative list of the conservation categories contemplated. The list sets out, under the heading "eco-

systems and habitats", the following: [areas] containing high density, large numbers of endemic or threatened species, or wilderness; required by migratory species; of social, economic, cultural or scientific importance; or, which are representative, unique or associated with key evolutionary or other biological processes (Art.7). "Protected area" is defined (Art.2) as: "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives". States Parties are required to promote the protection of ecosystems and natural habitats; to promote environmentally sound and sustainable development in areas adjacent to protected areas; rehabilitate and restore degraded ecosystems; and prevent the introduction of alien species which threaten ecosystems.

(viii) United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994)

This convention seeks to regulate those human social and economic activities that have a disruptive impact on the environment — towards the end of restoring ecological systems. The objective is that these ecological systems should continue to nourish the habitat of biodiversity, which in turn continues to play its part in a functioning ecosystem. Thus, the convention requires the Contracting Parties to pursue long-term, integrated strategies for improved productivity of land, and for the rehabilitation and conservation of land, water resources and vegetative cover.

(ix) Other relevant instruments

Within the general principles derived from the more broad-based biodiversity-related conventions, certain sub-regional instruments have been adopted. Mention may be made, in this regard, of the *Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region* (1981). This provides for measures to prevent, reduce, combat and control pollution of the marine area (Art.4); to prevent, reduce, combat and control coastal erosion (Art.10); to protect and preserve rare or fragile ecosystems, as well as the habitat of depleted, threatened or endangered species and other marine life (Art.11).

A further example is the *Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region* (1985) and

the *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region* (1985). The convention cites as its inspiration the States Parties' recognition of "the special hydrographic and ecological characteristics of the region which require special care and responsible management"; and their further recognition of "the threat to the marine and coastal environment, its ecological equilibrium, resources and legitimate uses posed by pollution". The Protocol states (Art.2) thus: "The Contracting Parties shall take all appropriate measures to maintain essential ecological processes and life support systems, to preserve genetic diversity and to ensure the sustainable utilisation of harvested natural resources under their jurisdiction. In particular the Contracting Parties shall endeavour to protect and preserve rare or fragile ecosystems as well as rare, depleted, threatened or endangered species of wild fauna and flora and their habitats in the East African region".

Ecosystem/habitat conservation is also exemplified by the several sub-regional conventions incorporating certain African "range states". The *Convention for the Protection of the Mediterranean Sea Against Pollution* (1976) provides for measures to prevent and abate pollution of the sea caused by dumping from ships and aircraft, or by discharges from ships, or from rivers, coastal establishments and other land-based sources (Arts.5-8). These may be seen as measures for the preservation of the marine habitat. Similarly the *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean* (1995) provides for the protection, preservation and sustainable management of particular natural objects (Arts.3,5); for listings of "Specially Protected Areas of Mediterranean Importance" (Art.8); etc. In the same category is the *Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment* (1982); *Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area* (1996); and the *Agreement on the Conservation of African - Eurasian Migratory Waterbirds* (1995) – the last two adopted under the aegis of the Convention on the Conservation of Migratory Species of Wild Animals (1979).

(b) Conservation of species

Species conservation is, perhaps, the direct and, therefore, the most common element in the biodiversity related conventions. The basic scheme of species conservation emerges from the conventions as depicted below. However, the shifting focus of conservation strategies towards the ecosystem framework has had the

effect of according to species-oriented conservation initiatives only a rather low priority. The assumption of the funding agencies seems to be that species will inevitably benefit from protection under ecosystem-oriented programmes; and thus, conservation initiatives appearing to be focussed on species as such, have rarely received the necessary financial support.

(i) Convention on Fishing and the Conservation of the Living Resources of the High Seas (1958)

The convention recognises the principle of conservation of marine resources and empowers any coastal state to adopt unilateral measures, with a view to the maintenance of the productivity of the living resources of the sea (Art. 7).

(ii) African Convention on the Conservation of Nature and Natural Resources (1968)

This convention is guided by the principle that flora and fauna are of vital importance to the welfare of humankind. It places an obligation on the Contracting States to "take all necessary measures for the protection of flora and to ensure its best utilisation and development" (Art.VI.1); and to "ensure conservation, wise use and development of faunal resources" (Art. VII.1).

(iii) Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971)

This convention is concerned with both habitat and species. Each Contracting Party is required (Art.2.6) to ensure "wise use of migratory stocks of waterfowl". Protection of species is required to be ensured (Art.4) through the establishment of nature reserves in wetlands.

(iv) Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973)

While earlier treaties (e.g., the 1933 *London Convention Relative to the Preservation of Fauna and Flora in Their Natural State*) had dealt with trade in fauna and flora, the main international agreement on this subject is CITES. In adopting this convention, the Contracting States were guided by the principle that "wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth"; and that there was an "ever-growing value of wild fauna and flora, from aesthetic, scientific, cultural, recreational and economic points of view". The convention's scheme of biodiversity protection is based

on three appendices : Appendix I includes all species threatened with extinction that are or may be affected by international trade. Appendix II includes those species that are internationally traded which may in the future be threatened with extinction. Appendix III includes other species that any Party identifies as being subject to regulation within its jurisdiction and needing the co-operation of other Parties in the control of trade.

(v) Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994)

This treaty reflects the basic principle contained in CITES (1973). The Lusaka Agreement sets up a stricter enforcement scheme of co-operation between contracting African states, with a view to reducing and ultimately eliminating illegal trade in wild fauna and flora.

(vi) Convention on the Conservation of Migratory Species of Wild Animals (1979)

This convention is designed to place obligations on States Parties for the conservation of migratory species. The Parties are required to pay special attention to those migratory species whose conservation status is unfavourable, and to ensure that such species do not become endangered (Art.I), with the aim that the species should be restored to a favourable conservation status which would allow them to be exploited in a managed and co-ordinated way. States Parties are required to take action to provide immediate protection for the migratory species listed in Appendix I; and to conclude co-operation agreements with other Parties, in relation to the conservation and management of those migratory species that are listed in Appendix II (Art.II).

(vii) United Nations Convention on the Law of the Sea (1982)

Article 61 of this convention requires coastal states to “ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone are not endangered by over-exploitation”. Article 64 requires co-operation between coastal states in “ensuring and promoting the objective of optimum utilisation of [highly migratory] species”. The convention sets out rules regarding common stocks, for highly migratory species, for marine mammals, and for anadromous and catadromous species.

(viii) Convention on Biological Diversity (1992)

The CBD is the primary international instrument on the conservation of species. It lays clear emphasis on *in situ* conservation of species, and requires Contracting Parties to undertake *in situ* conservation of biodiversity (Art.8) — to complement similar initiatives with regard to *ex situ* conservation (Art.9).

(ix) Other relevant instruments

The principles of species conservation set out above provide a broad framework, in the context of which sub-regional and other more limited conventions have made relevant provisions. For example, the Nairobi *Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region* (1985) provides for the protection of endangered species of flora and fauna against capture, killing, possession and sale (Arts 3, 4); and for the co-ordination of efforts to protect migratory species (Art.6). The *Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean* (1995), for instance, provides for the regulation of the introduction of non-indigenous or genetically-modified species (Art.13). The *Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)*(1996) requires Parties to take co-ordinated measures to achieve and maintain a favourable conservation status for cetaceans (Art.II). And the *Agreement on the Conservation of African-Eurasian Migratory Waterbirds(AEWA)*(1995) requires Parties to take measures to conserve migratory waterbirds, with special attention to endangered species.

(c) Trade-related issues, wise use and sustainable management

The concern of the biodiversity-related conventions with *ecosystem/habitat* and *species*, in the conservation scheme, owes to the fact that these are the most direct elements in biodiversity protection. Some of these (notably CITES), and even other conventions (e.g. the Successor Agreement to the *International Tropical Timber Agreement* (Geneva, 1994)), however, address a specific mode of utilisation of biodiversity which leads to its depletion and loss — namely, *international trade*.

Considerations of trade and trading relations, as a vital element in current international economic relations, are critical factors in the success or failure of biodiversity conservation initiatives. The two lines of

pursuit, indeed — as will be illustrated further on by the discussion of issues relating to technology — sometimes entail contradictory objects. *The very targets of conservation are also the same items that the ideology of free trade treats as being so vital to the success of the world economy. Besides, the political forces behind the thrust of the free market, tend to be more focussed and more strident than the more diffuse basis of commitment to the conservation ethic.* The forces favouring the free market, moreover, are generally supported by a much more developed technological base than those which emanate from countries for which biodiversity is the primary capital resource, namely the developing countries. In this respect there is a fundamental conflict between the ideology of free trade and the ethic of conservation, considering in particular the fact that free trade most conspicuously benefits the more technologically advanced countries, whereas the biodiversity resources are of such cardinal importance for the economies of the developing countries.

The *African Convention on the Conservation of Nature and Natural Resources* (1968) has provisions on “traffic in specimens and trophies”, as part of its scheme for the protection of biological resources. States Parties are required, subject to the provisions of the convention, to “regulate trade in and transport of specimens and trophies”; and “prevent trade in specimens and trophies which have been illegally captured or killed” (Art.IX). Such a regulation includes the requirement of compliance with certain conditions imposed under national legal systems.

The *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) was adopted as a basis for the protection of endangered species in the context of international trade. The most recent addition to this body of protective instruments against trade in species, is the *Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* (1994). The objective of this treaty is “to reduce and ultimately eliminate illegal trade in wild fauna and flora and to establish a permanent Task Force for this purpose” (Art.2).

Although the text of the *Convention on Biological Diversity* (1992) does not expressly refer to trade measures, the success of many of its provisions presupposes a series of policy decisions and arrangements some of which will relate to the issue of trade. For instance, Article 6(b) calls on Parties to “[i]ntegrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral

or cross-sectoral plans, programmes and policies”. Article 7(c) calls upon Parties to “[i]dentify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity....” Article 10(b) requires Parties to “[a]dopt measures relating to the use of biological resources to avoid or minimise adverse impacts on biological diversity”. Article 11 calls upon Parties to “adopt economically and socially sound measures that act as incentives for conservation and sustainable use of components of biological diversity.” Article 15 establishes a basis for access to genetic resources and the equitable sharing of the benefits arising from their use. Articles 16 and 19 require Parties to take measures to promote the transfer of relevant technologies.

Such required courses of action, in some instances, touch on bilateral or multilateral relations that are already shaped by trade practices. An attempt to restructure such relations, for the furtherance of biodiversity conservation goals, will require careful attention to trade regimes.

The original *International Tropical Timber Agreement* (Geneva, 1983) had been adopted as a basis for establishing “a framework of international co-operation between producing and consuming members in finding solutions to the problems facing the tropical timber economy”. Although the treaty recognized “the importance of, and the need for, proper and effective conservation and development of tropical timber forests with a view to ensuring their optimum utilization while maintaining the ecological balance of the regions concerned and of the biosphere”, its main objectives remained in the domain of trade (Art.1). The *Successor Agreement* (Geneva, 1994) was a logical follow-up to the *Rio Earth Summit*, with its major environmental conservation documents — such as the *Convention on Biological Diversity* (1992); the *United Nations Framework Convention on Climate Change* (1992); *Agenda 21* (the detailed programme document of the *Earth Summit*); and the *Forest Principles*.

The *Successor Agreement to the International Tropical Timber Agreement* incorporates the more recent conservation principles, especially those established at the *Earth Summit*. The effect is that the treaty now seeks to promote trade alongside biodiversity conservation strategies. One of the objects of the *Successor Agreement* is “To encourage members to support and develop industrial timber reforestation and forest management activities as well as rehabilitation of degraded

forest, with due regard for the interests of local communities dependent on forest resources" (Art.1(i)). Another objective is: "To encourage members to develop national policies aimed at sustainable utilization and conservation of timber-producing forests and their genetic resources and at maintaining the ecological balance in the regions concerned, in the context of tropical timber trade" (Art.1(l)). (The participation of African countries in the Successor Agreement is indicated in Appendix 12).

Although one thus sees an attempt to subject trade issues to environmental imperatives, trade remains a potentially disruptive force for biodiversity conservation initiatives – and this is particularly true for Africa. The Uruguay Round Agreement on Trade-related Aspects of Intellectual Property Rights, sets up a controlled trade platform as the basis for the protection of intellectual property rights. The free-trade orientation of this agreement creates a major uncertainty as regards the extent to which African countries can provide effective safeguards for their traditional biodiversity conservation technologies.

(d) Issues of science and technology for conservation functions

African countries must play the primary role in the conservation of their remarkable abundance of biodiversity. As these countries have overwhelmingly agricultural economies, or economies that are largely dependent on primary products, their biological resources are essential for their well-being. *The very political integrity of these countries rests on their sovereign control of these resources (as is well recognised in international environmental law), which accord them their present welfare status, and empower them in international commodity and technology exchanges.*

African countries have conserved their biological resources partly on the basis of *accumulated knowledge and experience within the indigenous and local communities*. Such a notion is well represented by V.S. Rivera and P. M. Cordero (in their paper "Costa Rica's Biodiversity Law: Sharing the Process (1999)) who define the term "biodiveristy" in broad terms: "... the term biodiversity is understood to include those intangible components...: individual or collective knowledge, innovation and traditional practice, of real or potential value associated with biochemical and genetic resources, protected or not by intellectual property systems or *sui generis* [registration] systems."

The Convention on Biological Diversity (1992) (Art.8(j)), for instance, requires each Contracting Party, "subject to its national legislation, [to] respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices".

It is, however, clear from the various biodiversity conventions that more than traditional knowledge is required, for the effective conservation of Africa's dwindling biodiversity resources. Conservation has become a highly scientific process which requires the application of sophisticated technologies, as is recognised under various conventions. The CMS and its Agreements, for instance, provide a framework for making a scientific input in biodiversity conservation and management programmes. And in this respect, African countries are at a distinct disadvantage. The competing claims of international trade and of the technological oligopolies of the developed countries, on the one hand, and those of the biodiversity-owning countries of Africa on the other hand, are unlikely to be resolved, in spite of the provisions for technological and financial assistance contained in the CBD and in other conservation treaties.

The CBD recognizes the importance of transfer of technology among Contracting Parties, and records these Parties' undertaking to "provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity" (Art.16(1)). In respect of the developing countries, Article 16 states that access to and transfer of technology "shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms *where mutually agreed*, and, where necessary, in accordance with the prescribed financial mechanism" (Art.16(2)). This provision continues: "In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on *terms which recognize and are consistent with the adequate and effective protection of intellectual property rights*".

There is uncertainty as to the benefits that African States Parties to the CBD can derive from Article 16

(the technology transfer provision). The provision that such technology shall be granted on "fair and most favourable terms" is qualified by the rider: "where mutually agreed". This suggests that African countries are *not assured* of the technology transfer.

The more significant qualification to the technology transfer provision, however, is the one embodied in the words: "*In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights*".

Intellectual property rights (IPRs) are the standard mode of technology protection in the industrialized countries. They are *private* rights and are protected against violation through public decision-making. If the protection of IPRs is a condition for technology transfer to Africa, then it greatly limits the scope for such transfer. This will be so even in those cases where African countries have allowed access to their biodiversity by the developed countries, as all biotechnology innovations made using such biodiversity resources will in all probability be patented and made part of the IPRs of the developed countries.

Of special relevance to the foregoing argument, is the recent development in world trade arrangements. Several months after the entry into force of the CBD, the World Trade Organization was established; and in its Uruguay Round negotiations, the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement was adopted. TRIPS seeks to achieve high standards of intellectual property rights protection, as part of the strategy to "reduce distortions and impediments to international trade". This strategy is part of a high-powered mission pursued by certain leading industrial countries. Developing-country signatories to the World Trade Agreement are required to put in place, by the year 2000, strict IPR protection measures in conformity with the TRIPS Agreement.

For Africa, it appears that the TRIPS Agreement will severely limit the transfer of technology from the industrialized countries, as African countries are likely to have great difficulties in achieving the standard of IPR protection required of them. As a result, it will prove difficult for African countries to benefit from the technology transfer arrangement provided for in the CBD.

It has to be noted also that, the high IPR protection standards required by TRIPS are unlikely to provide

for African communities' interests in biodiversity conservation — built as these interests are around indigenous knowledge accumulated over the ages. Thus, *African communities may easily lose their genetic resources to the industrialized countries which could take out patents on these, and limit any participation in the resultant benefits by African countries. At the same time, Africa's traditional conservation technologies would have no protection under the patent law regimes contemplated by TRIPS.*

The general intent of the CBD is that African countries, along with other developing countries should be empowered to make a substantial contribution to the conservation of biological diversity. The rather limited capability of the developing countries in this regard is recognised in Article 20.4, which states: "The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties."

However, at the operational level African countries will not be able to assume the likelihood of a ready in-flow of biotechnologies from the developed countries. There still exists a conflict between the technology transfer principle carried by the CBD, and the requirements of the TRIPS Agreement. At the third Conference of the Parties to the CBD, held at Buenos Aires in 1996, hope was expressed that there would be "a continuing process of consultation and co-operation, aimed at promoting the harmonious implementation of the two agreements." The matter was considered at an open-ended meeting of the Parties held from June 28-30, 1999; and the following recommendation was made:

- (i) The Inter-Sessional Meeting considered decisions IV/8 and IV/15 of the Conference of Parties on the need for further work to help develop a common appreciation of the relationship between intellectual property rights and the relevant provisions of the Agreement on Trade Related Aspects of Intellectual Property Rights and the Convention on Biological Diversity.
- (ii) The Meeting recognised the linkages, the need to ensure mutual supportiveness between the TRIPS Agreement and the Convention on Bio-

logical Diversity and the need to promote synergy between the two agreements.

- (iii) It further recognised that intellectual property rights have implications for the conservation and sustainable use of biological diversity and the fair and equitable sharing of benefits arising from the utilisation of genetic resources, and that these implications need to be further explored by the Convention on Biological Diversity to create a better knowledge base for decision-making in relevant forums.
- (iv) It also took note of on-going inter-governmental processes addressing these issues (in forums such as the World Trade Organisation, the World Intellectual Property Organisation, the Food and Agricultural Organisation of the United Nations, the Union for the Protection of New Varieties of Plants) and underlined the need for co-operation in order to avoid duplication of efforts.
- (v) The Meeting recognised the importance and urgency for the Convention on Biological Diversity to achieve observer status in the TRIPS Council of the World Trade Organisation.
- (vi) It recommended that the Conference of the Parties to the CBD should develop ways and options to closely follow work done by the World Intellectual Property Organisation and the World Trade Organisation, and make its own contributions to such work. A further recommendation was that the COP to the CBD should recognise the importance of *sui generis* and other IPR systems for the protection of traditional knowledge of indigenous and local communities, as well as the equitable sharing of benefits arising from its use; and to submit its findings to the World Trade Organisation and the World Intellectual Property Organisation.

African countries, in their contribution to the growth of international law, should make a strong case for the resolution of conflicts such as that emerging between the CBD and the TRIPS Agreement. The effect of the TRIPS Agreement, which is supported by powerful private-interest centered market forces, would be to greatly limit Africa's scope for an effective implementation of recently adopted biodiversity conservation laws. African countries should seek to protect their interests in proposed further negotiations on the relations between the CBD and the TRIPS Agreement.

It is to be noted that the difficulties facing African countries with regard to the transfer of technology are compounded by issues pertaining to biotechnology in particular. Article 8(g) of the CBD requires the Contracting Parties to "Establish or maintain means to regulate, manage and control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking into account the risks to human health". Biosafety is concerned with regulatory measures which may take the form of policy, law or administrative procedures, for ensuring that the application of biotechnology does not have harmful environmental impacts.

African countries, while they are in the course of building their capacities in biotechnology, have expressed the fear that their currently inadequate biosafety arrangements could provide an opportunity for the entry of foreign technology with harmful effects on the environment.

Africa's inadequacy of the biosafety infrastructure, in itself constitutes an obstacle to the transfer of technology such as is contemplated under the CBD. The CBD in Article 19.3, envisages the development and adoption by States Parties of a biosafety protocol, to provide guidance on the subject. Such a protocol is still under negotiation and is likely to be completed in the course of the year 2000; and this means that African countries have to rely on their own policy directions as a basis of any domestic biosafety law that they may at present put in place. Whether or not these countries will be able to implement the provisions of a biosafety protocol, will be a relevant factor in the transfer of biotechnology. An inability to implement such provisions will operate as a limitation to the transfer of biotechnology (which is also linked to intellectual property rights) from the developed countries. African countries, therefore, must take a clear position at all international negotiations that will protect their interests.

Still, African countries need to conceive and establish adequate biosafety measures, to facilitate technology transfer initiatives for their use in biodiversity conservation.

(e) Capacity-building for conservation functions

The Convention on Biological Diversity establishes a link between the supply of genetic resources, and access to and transfer of relevant technology. Beneficial uses of this link will require collaborative initiatives

founded on mutual donations, contributions and exchanges.

African countries need, at management levels, to develop a capacity to conduct the necessary benefit sharing assessments, and to facilitate the technical arrangements that will lead to the establishment of such a partnership.

In national policy-making, African governments will need to integrate the development of biotechnology into their national development strategies. *It will be necessary to treat biotechnology as a strategic sector in enabling African countries to derive significant economic benefits from the conservation of biological resources.*

Africa's capacity building for conservation should specifically seek to enhance existing competence in biotechnology — mainly at the universities and research and development institutes. *The capacity of existing institutes should be enlarged and strengthened in quality; and their scope for absorbing and assimilating foreign technology should be increased. At the same time, a careful assessment of indigenous technology should be conducted; and the use of such technology should be supported through suitable institutional arrangements.*

African countries should enhance the basis for technology transfer through the establishment of regulatory mechanisms for biosafety. This initiative should bring together the work of the legal, scientific and policy institutions and departments.

As much of the required foreign technology is already in the public domain — as its patent protection will have expired — what African countries must do is to establish an absorptive capacity for technology. These countries should enhance training and information exchange, especially at the research and development institutes.

(f) Public awareness and education

The conservation of biodiversity, insofar as its success depends not only on centrally-directed policy and programming, but also on the spontaneous acts of individual members of the public, requires a supportive social condition in the form of broad-based education from the primary to the tertiary level, and an extensive public awareness. Education gives the people the essential environmental and ethical awareness, values and attitudes, skills and behaviour that provide the best conditions for conservation initiatives. Such education should explain not only the physical and bio-

logical environment but also the socio-economic and human environment.

Thus the Convention on Biological Diversity commits the Contracting Parties (Art.13) to: "Promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through the media, and the inclusion of these topics in educational programmes". The Article further calls for co-operation with other states and international organizations "in developing educational and public awareness programmes, with respect to conservation and sustainable use of biological diversity".

4.3 A Summary of the Principles Emerging from the Biodiversity-related Conventions

The biodiversity-related treaties carry important principles, as well as various kinds of facilitative schemes for the task of implementation. These principles have a relevance to conservation initiatives whether one considers ecosystem/habitat or species. The main such principles, which on that account ought to influence the scheme of national policy-making and legislation, may be extracted and set out as follows:

- (a) The *Convention on Fishing and Conservation of the Living Resources of the High Seas* (1958) contains the following principles:
 - (i) high seas as *global commons* in respect of which all states have the right to have their nationals partake;
 - (ii) coastal states have rights connected with their proximity to the sea, *vis-à-vis* use of the sea's resources;
 - (iii) all states have a duty to conserve or to co-operate in conserving the living resources of the high seas.
- (b) The *African Convention on the Conservation of Nature and Natural Resources* (1968) carries the following principles:
 - (i) the necessity to harness the African continent's natural resources for the purpose of advancing the *welfare of the people*;
 - (ii) the continent's natural resources have a

- fundamental significance in relation to economic, nutritional, scientific, educational, cultural and aesthetic matters;
- (iii) the satisfaction of human needs from natural resources must take into account the *carrying capacity of the environment*;
 - (iv) the natural resources must be utilized rationally, taking into account the *present and future requirements of the welfare of humankind*;
 - (v) the conservation of biological diversity entails the *conservation, utilization and development of soil, water, flora and faunal resources*;
 - (vi) the task of conservation of biological diversity requires the application of *scientific principles*;
 - (vii) it is necessary to establish *special conservation areas*, in the form of "strict nature reserves", "national parks", "game reserves", etc.;
 - (viii) *customary rights* should be taken into account in the implementation of conventions on biodiversity conservation;
 - (ix) *research* should be promoted as an aid to conservation, utilization and management of natural resources;
 - (x) importance of *education for the people on the vital role of biodiversity* in the promotion of human well-being;
 - (xi) the need to *integrate the conservation and management of natural resources into national and regional development planning*;
 - (xii) the need for *development plans to incorporate ecological, as well as economic and social factors*;
 - (xiii) the need for *consultation between neighbouring states* on conservation matters which often affect more than one country at the same time;
 - (xiv) the need for a *centralized institutional framework for the implementation of biodiversity law and policy*;
 - (xv) the need for *co-operation among the Contracting States*, in the implementation of the biodiversity treaty law.
- (c) The *Convention on Wetlands of International Importance Especially as Waterfowl Habitat* (1971) contains the following principles:
- (i) a commitment on the part of the Contracting Parties to establish *nature reserves* in wetlands, for conservation purposes;
 - (ii) the need to encourage *research and the exchange of data and publications*, regarding wetlands and their flora and fauna;
 - (iii) promotion of the *training of personnel* competent in the fields of wetland research, management and wardening;
 - (iv) the need for *consultation and co-operation* among the Contracting Parties, especially where there are transboundary wetlands;
 - (v) the desirability of *consultative conferences*, of an advisory kind, among the Contracting Parties;
 - (vi) there is an important role in the conservation lesson to be played by *experts on wetlands or waterfowl*; such experts should have *scientific and administrative backgrounds*.
- (d) The *Convention for the Protection of the World Cultural and Natural Heritage* (1972) contains the following principles:
- (i) States Parties should develop *scientific and technical studies and research* in aid of the safe-keeping of the cultural and natural heritage;
 - (ii) States Parties to apply *legal, scientific, technical, administrative and financial measures* in the protection of the cultural and natural heritage;

- (iii) States Parties should establish *regional centres for training* in the protection and conservation of the cultural and natural heritage;
 - (iv) *need for co-operation among States Parties* in the conservation of cultural and natural heritage which is a *world heritage*;
 - (v) Need for *international co-operation and assistance* in the protection of the cultural and natural heritage.
- (e) The *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (1973) carries the following principles:
- (i) wild fauna and flora are an irreplaceable part of the natural systems of the earth and must be protected for the *present and future generations*;
 - (ii) *co-operation between Contracting Parties* in the protection of endangered species is essential;
 - (iii) the maintenance of the population of a species at a *level consistent with its role in the ecosystem in which it occurs*.
- (f) The *Convention on the Conservation of Migratory Species of Wild Animals* (1979) contains the affirmation that “each generation of [humankind] holds the resources of the earth for *future generations*”. It also carries the following principles:
- (i) the listing of endangered migratory species;
 - (ii) the use of scientific methods in the conservation of endangered migratory species.
- (g) The *United Nations Convention on the Law of the Sea* (1982) bears the following principles:
- (i) the area of the sea-bed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction — together with its resources — are the *common heritage of humankind*;
 - (ii) exchange of information and data on the conservation of marine biodiversity;
- (iii) the *best scientific evidence* should be applied to achieve proper conservation of the coastal and marine resources;
 - (iv) *co-operation between coastal states* and other states or organizations is essential in the protection of highly migratory species;
 - (v) capacity building for conservation functions.
- (h) The *Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region* (1985) contains the following principles:
- (i) the natural heritage is to be preserved “for the benefit and enjoyment of *future generations*”;
 - (ii) the need to *integrate an environmental dimension into the development process*;
 - (iii) the need for *co-operation among States Parties, and with competent international and regional organizations*, for co-ordinated and comprehensive development of the natural resources of the region;
 - (iv) Contracting Parties to develop *technical guidelines, including environmental impact assessment procedures*, to minimize harmful impacts on the environment;
 - (v) the importance of *scientific research, monitoring, and the exchange of data and other scientific information*.
- (i) The *Convention on Biological Diversity* (1992) carries the following principles:
- (i) importance of biological diversity for evolution and for *maintaining the life-sustaining systems of the biosphere*;
 - (ii) national sovereignty over natural resources;
 - (iii) the conservation of biological diversity as a *common concern of humankind*;

- (iv) recognition of the interests of present and future generations in the conservation of biological diversity;
 - (v) the responsibility of States to *use their biological diversity in a sustainable manner*;
 - (vi) common but differentiated responsibilities of States Parties;
 - (vii) the urgent need to develop *scientific, technical and institutional capacities* to provide the basic understanding necessary for the conservation of biological diversity;
 - (viii) the need to adopt a *preventive approach* to the problem of biodiversity loss; and to apply the *precautionary principle* in biodiversity conservation—which means that lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize a likely danger;
 - (ix) the fundamental importance of *in-situ conservation* of biological diversity;
 - (x) the need to incorporate *indigenous contributions of knowledge* into the modern initiatives of biodiversity conservation, and to return *equitable compensations to the custodians of such traditional knowledge*;
 - (xi) the need to recognize the special *contributions made by women* to the biodiversity conservation efforts;
 - (xii) the need for *co-operation among States Parties and various organizations* in biodiversity conservation;
 - (xiii) The need to *integrate the conservation of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies*;
 - (xiv) The need to establish and maintain *programmes of scientific and technical education and training*, for the identification, conservation and sustainable use of biodiversity and its components;
 - (xv) The need to develop measures for *ex situ* conservation of biodiversity;
 - (xvi) The need to promote *public education and awareness* in relation to the conservation of biological diversity;
 - (xvii) States Parties to create conditions to facilitate *access to genetic resources* for environmentally-sound uses by other Contracting Parties;
 - (xviii) access to genetic resources to be subject to the *prior informed consent* of the State Party providing the resources;
 - (xix) *transfer of technology*, including biotechnology, is essential to the effective implementation of the convention;
 - (xx) mutually agreed terms for access to genetic resources;
 - (xxi) Contracting Parties to facilitate *exchange of information* from all publicly available sources, on the conservation of biodiversity;
 - (xxii) Contracting Parties to promote international *technical and scientific co-operation* in the field of biodiversity conservation;
 - (xxiii) recognition of the influence of patents and other intellectual property rights in the implementation of the convention;
 - (xxiv) Environmental impact assessment as a procedure preliminary to the undertaking of projects, programmes and activities likely to have major environmental impacts.
- (j) The *United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa* (1994) bears the following principles:
- (i) need for *co-operation* in endeavours to combat desertification and to mitigate the effects of drought, at the sub-regional, regional and international levels, with a focus on financial, human, organizational and technical assistance where needed most;

- (ii) need for *synergies in decision-making involving partnership of government, communities, non-governmental organizations and landholders*;
- (iii) necessity to adopt an *integrated approach that addresses the physical, biological and socio-economic aspects* of the problems of drought and desertification;
- (iv) formation of *national action programmes integrated into national policies for sustainable development*;
- (v) need to integrate strategies for *poverty eradication* into efforts to combat desertification and mitigate the effects of drought;
- (vi) importance of the *participation of populations and local communities* in managing drought conditions and combating desertification;
- (vii) promotion of *public awareness*, to facilitate the participation of local populations — especially women and youth;
- (viii) need to make arrangements for the *collection, analysis and exchange of information* pertaining to drought conditions and to desertification;
- (ix) need to promote *technical and scientific co-operation* in the fields of combating desertification and mitigating the effects of drought;
- (x) importance of *capacity-building* — that entails *institution-building, training and the development of relevant local capacities*.

(k) *The Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora* (1994) carries the following principles:

- (i) requirement for *inter-state co-operation* in combating illegal trade in wild fauna and flora;
- (ii) need to *exchange information and scientific data* on illegal trade;

- (iii) *establishment and maintenance of databases* on activities relating to illegal trade in wild fauna and flora;
- (iv) need to mount *public awareness campaigns* for the purpose of enlisting public support for measures directed at illegal trade in wild fauna and flora.
- (v) need to investigate and prosecute cases of illegal trade;
- (vi) need to adopt enforcement legislation and administrative measures;
- (vii) the co-ordination of investigations;
- (viii) provision of technical assistance.

4.4 Analytical Comments

4.4.1 General observations

Although the main principles carried by the various conventions are not identical in all cases, there is much common ground — with the explicit or implicit common denominator being the object of working towards sustainable development. All of these conventions seek to institutionalise arrangements to facilitate the protection and conservation of biological diversity. Most of them, however, are devoted to some particular aspect of biological diversity conservation. But they are informed by common environmental principles, and often apply certain common terminologies. *It is the most recurrent aspects of these conventions that form the essential principles; and hence, it is these principles that call for adoption in national legal and policy frameworks.* Thus applied, these principles, by their centrality in the state machinery of individual countries, will serve to ensure the best mode of biodiversity conservation at the national level.

The most recurrent or the most remarkable principles to be derived from the biodiversity conventions are set out under Sub-section 4.4.2 of this *Handbook*.

4.4.2 Common conservation principles

(a) General elements

- (i) *Sustainable development*. This is the one general element in the configuration of the vari-

ous biodiversity conventions. Indeed, all the other principles and strategies contained in these conventions, ultimately resolve into the broad concern with sustainable development — human development activities so regulated as not to waste away the regenerative capital of the ecological cycles.

The pursuit of sustainable development takes the form, also incorporated in the various biodiversity conventions, of: (ii) *commitment to the maintenance of the life-support systems of the biosphere*; (iii) *protection of the interests of future generations*; (iv) *the preventive approach to containing biodiversity loss*—this requires actions based on foresight and precaution, so that there is no waiting until major environmental damage has occurred before attempting to redress it. The precautionary principle, which is explicitly or implicitly expressed in several of the conventions, thus falls under the broader preventive approach.

(b) Commitment to the use of scientific research methods

(i) *Scientific knowledge*. In the various conventions, reliance is placed on scientific knowledge as the primary basis for biodiversity conservation measures. Linked to this principle are the provisions of these conventions regarding (ii) promotion of and collaboration in research; (iii) promotion of scientific and technical education and training; and (iv) capacity-building in national institutions for use of appropriate technologies in conservation initiatives.

(c) Access to genetic resources and to conservation technology

(i) *Equitable sharing of the benefits from biodiversity conservation*. The conservation task involves nations and local communities, as well as donors of the relevant technology. Effective conservation requires the availability of appropriate technologies — in respect of which the developed countries are better endowed than the biodiversity-rich developing countries. But the interplay between trade-oriented intellectual property rights laws, and the conservation technology requirements of the developing countries, tend to favour the trade-related interests. Thus the various conventions call for *equitable sharing of benefits*;

(ii) *prior informed consent must be secured before genetic resources are accessed*; and

(iii) technological co-operation for biodiversity conservation.

(d) Indigenous knowledge

(i) *Respect for indigenous conservation practices and experiences*. Present generations owe a lot to the traditional conservation knowledge, and this should be preserved and used to generate appropriate lessons; and (ii) there should be *fair compensation* to those who have in the past effected such conservation, in return for genetic resources emanating from them.

(e) Protective public management

(i) *Maintenance of ecological balances*. In the entire strategy of biodiversity conservation, it is important to keep the ecological cycles as stable as possible; populations of species should be kept matched to the characteristics and the requirements of the ecosystem. This requires: (ii) that conservation measures be *built into national development planning* and should *address the physical, biological and socio-economic aspects of life*; (iii) a major contributing factor to bio-resource depletion, namely *poverty*, should be combated and kept under control; (iv) effective initiatives should be put in place for the *conservation, utilisation and development of soil, water, fauna and flora*; (v) it is important to establish *special conservation areas*; (vi) it is important to undertake both *in-situ* and *ex-situ* conservation of biodiversity; (vii) it is vital that the *public be involved* in the conservation of biodiversity; (viii) both *criminal and civil sanctions* should be made part of the regulatory framework for biodiversity conservation; (ix) there should be put in place a *centralised legal and institutional framework* for the co-ordination of biodiversity management; (x) the *overall scheme of biodiversity conservation should be synergistic* and should be based on a partnership involving government, communities, non-governmental organisations, and individuals.

(f) Education and awareness

(i) *Education*. Basic education is essential to enable populations to have a basic understanding of the importance of functional ecological systems, and of the role of biodiversity in these systems. Apart from education for basic enlight-

enment, there should be (ii) *basic-awareness creation*, to enable ordinary people to play their part in the conservation initiatives.

4.4.3 *Concluding remark*

In this chapter an attempt has been made to identify the main principles embedded in the relevant biodiversity conventions. In the next chapter these principles will be considered in terms of their scope for domestication, through incorporation in national legal and management regimes.

Chapter Five: Approaches to the Domestication of Biodiversity Conventions in Africa

5.1 Preliminary Remarks

In the earlier chapters an analytical picture has been given of the current status of international biodiversity law. The picture emerging takes the form of concentric circles—with the outer circle occupied by the more broad-based conventions; the first inner circle occupied by African regional or sub-regional conventions; and the second inner circle occupied by sub-regional conventions involving countries in other continents, but with African “range states” (see Fig.0.1). The three sets of conventions are fundamentally similar in their objectives, design and terminology: those in the outer circle carry the vital conservation principles pertaining to ecosystems/habitat, species, and facilitative arrangements, as well as the relevant terminology. Those in the inner circles essentially reflect those elements at the regional and sub-regional levels. In a way, the regional and sub-regional conventions are a first step in the domestication process — even though they too require conversion into the sovereign policy, legal and administrative machinery of the individual States Parties.

The purpose of the present chapter is to take a second look at the primary elements of the treaty law, in relation to the implementation options available to State Parties in Africa. In what ways can African states give fulfilment to the elements of biodiversity law identified in chapter 4? What is attempted in this chapter cannot, of course, claim to supply the complete answer to the question of treaty implementation; but it will provide indications bearing on the range of possibilities.

5.2 Design of Machinery Favourable to the Domestic Implementation of International Biodiversity Law

5.2.1 A co-ordinated scheme of biodiversity management

While the policy and legislative aspect of biodiversity management must rest with the state, the task is intrinsically so expansive, so diffuse and thus so depend-

ent on the entire population of a country, that, as the various conventions do recognize, its success is dependent on both governmental and private initiatives. *The co-ordinating role in biodiversity management logically falls to state legislation and the establishment of suitable machinery. Legislation should establish such apparatus, as well as spell out the role and procedure of private initiatives in biodiversity conservation. Legislation should set out the role of government, indicate government's facilitative functions, set out the powers of government, set out any applicable sanctions, and prescribe such mandatory conservation procedures as may be necessary. Legislation should also indicate areas of collaboration between the public and the private sector.*

The desirability of centralized co-ordination by the state is asserted in a number of biodiversity conventions; but, of special note in this regard, is *the African Convention on the Conservation of Nature and Natural Resources* (1968). Article XV of this convention thus stipulates:

“Each Contracting State shall establish, if it has not already done so, a *single agency* empowered to deal with all matters covered by this Convention, but, where this is not possible a co-ordinating machinery shall be established for this purpose”

5.2.2 Framework statutes

The concept of a “framework environmental statute” is now generally accepted in Africa, as the vehicle for establishing a co-ordinating body entrusted with the broad management of the entire environmental sector. Typically such a statute incorporates broad principles of environmental conservation, and establishes a centralized co-ordination machinery for the environment. It provides for the operation of such machinery, specifying its functions and powers. Such a statute would generally make provisions regarding the primary themes of *environmental planning; special protective measures for the environment; the critical procedures of environmental*

management (such as environmental impact assessment, environmental audit and environmental monitoring); environmental quality standards; environmental dispute settlements; etc.

A framework environmental statute, as the "mother legislation" on environmental matters, would set the scene and provide the framework for other municipal laws, policies and administrative measures that may be more sectoral in their mode of addressing environmental issues. It is in such a statute that the broad national policy goals (including that of giving implementation to the relevant treaty law) would be stated. In some cases such goals may be derived directly from the state constitution—in which event they will have a place of advantage among the national norms which compete for implementation through the governance machinery. A framework statute sets the stage for effective environmental management, through its provision for standard-setting, co-ordination and monitoring under the state's authority. Under such authority many other regulatory measures may be taken, for instance through the enactment of sectoral statutes dealing with specific matters; the conception of policies and programmes concerned with particular sectoral issues; the formulation of administrative rules, orders, etc. dealing with specific biodiversity-related matters; etc.

5.2.3 Constitutional provisions

As the state constitution is in every country the fundamental law of the land, it is necessary to consider options in its use in the establishment of governing biodiversity conservation principles. In all well-governed countries, the origin of the most vital public functions, public obligations, public powers, private rights and duties, is the *Constitution*; and on this account all such matters are guaranteed fulfilment through accountable political decision-making, dutiful facilitative law-making, responsible administrative procedure prescription, and regular adjudication through the judicial process. Although the logic of this scenario is not in all cases fulfilled, it is desirable to attribute it to the pattern of environmental conservation that African countries need to adopt. Where these countries incorporate the imperatives of biodiversity conservation in their constitutions, they should be expected consistently to enact implementing statutory laws; put in place supportive policies and programmes; promulgate relevant administrative regulations; and secure judicial enforcement of these laws and regulations.

Various African countries already have constitutional provisions that carry the principle of environmental conservation. The mode of incorporation of the environment in these constitutions varies from one country to another. The more recent constitutions have far more comprehensive provisions on the environment than the older ones; and, assuming the existence of responsible governance, the former category of constitutions would be more favourable to biodiversity conservation than the latter type.

In the category of older constitutions, for instance, is the Constitution of Kenya which was first enacted in 1963, and, though it has been the subject of several dozen amendments, such changes have been concerned with the mechanics of public power rather than with the institutionalization of new rights such a right to environment. Section 75 of the Constitution of Kenya which protects ownership of private property, is the only provision with a mention of the environment; and this comes as a proviso to the broad guarantee. By ordinary statute, it is permissible to make provision for the taking of private property "for so long only as may be necessary..., in the case of land, for the purpose of the carrying out thereon of work of soil conservation or the conservation of other natural resources...." [s.75 (6) (viii)]. Such a provision merely gives an empowerment to government, where there exists a statute concerned with the protection of natural resources; but it creates no clear legal framework for positive action for the conservation of natural resources.

The more recent constitutions have included certain programmatic elements which anticipate future developments and prescribe certain programmes for governmental implementation through ordinary law-making and administrative measures. In this category of constitutions (as opposed to the older and more "institutional" ones that tend to be pre-occupied with structures of government and with traditional management schemes), binding directions have been given in respect of important new concerns such as environmental management, biodiversity conservation, etc.

The Constitution of Lesotho (1993) states in Section 36 that: "Lesotho shall adopt policies designed to protect and enhance the natural and cultural environment of Lesotho for the benefit of present and future generations and shall endeavour to assure all citizens a sound and safe environment adequate for their health and well-being. Although such a provision is only de-

claratory and does not confer any justiciable rights on anyone nor impose any judicially enforceable duties upon government, it clearly commits the state politically to put in place a mechanism for ensuring the people's environmental well-being. The constitutional provision creates a framework for legislation and institution-building to provide a mechanism for justiciable rights and duties.

The Constitution of Eritrea (1999) has similar declaratory provisions. Article 8.2 provides: "The State shall work to bring about a balanced and sustainable development throughout the country, and shall use all available means to enable all citizens to improve their livelihood in a sustainable manner, through their participation". In more specific terms Article 8.3 stipulates: "In the interest of present and future generations, the State shall be responsible for managing all land, water, air and natural resources and for ensuring their management in a balanced and sustainable manner; and for creating the right conditions to secure the participation of the people in safeguarding the environment". Although these provisions vest no legal rights or duties in anyone in respect of the environment in general or biodiversity in particular, they positively indicate the state's mandate regarding these matters, and thus establish a foundation for more focussed legal and administrative measures for the fulfilment of the people's expectations in respect of them.

The Constitution of Burkina Faso is more specific in its provisions regarding rights and duties pertaining to the environment in general. Article 29 stipulates: "The right to a healthy environment is recognized; it is the duty of all persons to protect, safeguard and enhance the environment". Article 30 confers a specific right on citizens to initiate petitions, or to join in collective petitions to halt any damage being caused to the environment or the cultural heritage. What is not entirely clear is the nature of the petition contemplated: whether it entails claims for legal or only political redress. It is noteworthy, however, that there is a clear recognition of the citizen's right to environment; and the citizen is empowered to seek redress where the environment is being subjected to damage.

The Constitution of the Republic of Ghana (1992), under its "Directive Principles of State Policy", sets out one of the duties of the citizen as "to protect and safeguard the environment" (Art. 41 (k)). No specific legal commitment is, however, created to give fulfilment to this state policy; nor is a similar duty expressly im-

posed on the state. Thus the significance of this provision is limited to the recognition of the environment as a subject of public interest.

The Constitution of the Republic of Namibia (1990) contains a general policy statement on environmental issues. It states in Article 95(1) that the state shall promote the welfare of the people through "maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future..." This is a positive basis in the fundamental law, for appropriate law-making and institutional arrangements to be made, broadly for environmental protection, and specifically for biodiversity conservation. It is to be noted, besides, that the provision of the constitution recites an important principle of the biodiversity conventions—the interests of present and future generations.

The Constitution of the Republic of Uganda (1995) deals with the environment firstly at the level of general declarations on state policy; and secondly, in more specific provisions forming part of the body of the constitution. It is declared: "The State shall promote sustainable development and public awareness of the need to manage land, air, water resources in a balanced and sustainable manner for the present and future generations". It is further declared: "The utilization of the natural resources of Uganda shall be managed in such a way as to meet the development and environmental needs of present and future generations of Ugandans; and in particular, the State shall take all possible measures to prevent or minimize damage and destruction to land, air and water resources resulting from pollution or other causes". It is stated too that "The State shall promote and implement energy policies that will ensure that people's basic needs and those of environmental preservation are met". The constitution commits the state and the local authorities to "create and develop parks, reserves and recreation areas and ensure the conservation of natural resources"; and to "promote the rational use of natural resources so as to safeguard and protect the biodiversity of Uganda". The constitution commits the state to "protect important natural resources, including land, water, wetlands, minerals, oil, fauna and flora on behalf of the people of Uganda". In the substantive provisions, Article 245 requires the legislature to enact laws providing for measures for: (a) protection and preservation of the environment against abuse, pollution and degradation;

(b) management of the environment for sustainable development; (c) promotion of environmental awareness. The constitution places upon the state the duty to ensure that "Every Ugandan has a right to a clean and healthy environment" (Art. 39).

The Constitution of the Republic of South Africa (1996) confers upon every person the right: "to an environment that is not harmful to ...health or well-being"; "to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development" (Art.24).

In all the countries considered above, the constitution, which is the cardinal national legal instrument, has been expressly recognized as the basis of the primary obligations for the conservation of environmental resources. Although these countries have provisions of varying degrees of comprehensiveness and potential utility, each one of them has laid due significance on the substantial public interest in the environment, and has opened the doors to the many operational arrangements — some national and others local—that must be put in place to ensure the best way of managing environmental resources.

These examples have pointed the direction for other African countries, in their endeavours to conserve the continent's biodiversity. Their treaty commitments should be translated to the constitutional machinery, and thereafter made the subject of ordinary law-making and rule-making by the regular public agencies. *The fact that the several African constitutions discussed have incorporated the principles and terminologies of the biodiversity conventions has the effect that these find their way directly into the routine motions of governmental work.*

The importance of constitutional commitment to biodiversity conservation cannot be overstated. The mandate of government, which it is the constitution's object to prescribe and functionalize, revolves around providing the society's essential needs. Although such needs are in the first place economic and social, their fulfilment depends on the stability of the endowments of the ecological cycles, which in their turn depend on land-use patterns, reliability of water resources, and the interplay between these resources and the biotic communities. *Maintaining the essential balances of the ecosystem is a primary object of governance which, therefore, ought*

to be made part of the constitutional set-up. Under the constitution, government must be committed to the protection and wise use of biodiversity resources.

If the constitutions are to serve as an effective basis for national mechanisms of biodiversity conservation, it is desirable that they should not merely make broad declarations of state policy with commitments to conservation; they should go further and establish *rights and duties*, as well as *modalities for the enforcement of these*. Judicial, or other binding procedures are necessary to give real meaning to any rights and duties such as may be specified. The constitution should also define issues of *locus standi* for the enforcement of such rights and duties. In particular it is desirable that *locus standi* for bringing to a halt environmentally destructive acts should be vested in citizens generally. Where constitutions limit themselves to only the most basic statements on environmental obligations, they should set the stage for the enactment of more detailed legislation establishing rights and duties in relation to the environment in general and to biodiversity in particular.

Under the terms of the constitution, the legislature should enact the required laws for the detailed measures of biodiversity conservation and under such laws, the executive organ should establish the requisite supporting regulations, and put in place appropriate programmes of implementation. In the scheme of law-making under the constitution, the very first law should be the *framework statute*. In most countries of Africa, the existing institutions of environmental management tend to be numerous, with none of them carrying clear authority over others. The effect is often a stalemate in the environmental management initiatives of the several agencies. *A framework environmental statute establishes a hierarchy under which the central co-ordinating body has a clear opportunity to influence or determine the directions of state policy and management of public affairs.* The co-ordinating body, thus, creates a condition for the responsible and effective operations of the sectoral agencies entrusted with particular aspects of environmental management.

It is desirable that African countries, once they have become Parties to relevant biodiversity conventions, should regard it as their duty to give fulfilment to such conventions. Beyond such commitment, African states should use the constitution as the primary basis for incorporating the relevant treaty obligations into the regular governmental process. Thereafter, it will be necessary to enact framework environmental laws to

provide a co-ordinated management and standard-setting structure for the overall process of environmental management. This statute would provide the basis for sectoral laws, dealing with the more limited sectors of the environment— including particular aspects of biodiversity conservation. Administrative regulations and procedures would then be put in place for specific management tasks.

5.3. *Domesticating the General Conservation Principles*

The general principles of biodiversity conservation embodied in the conventions do not, in most respects, lend themselves to specific enactment in the substantive sections of a statute. These principles, in their concept and character, are essentially ambient and lack the specificity of organized actions that can be effected through express legal prescriptions. Such principles can only be incorporated in the broad spirit of legislation, and in the political and administrative approaches to the conservation of biological diversity. Although such a mode of incorporation is rather loose, it is highly important in assuring the general policy environment in which national law operates. It provides the spirit, influence and commitment for the realization of the specific conservation objects that may be provided for in the body of the statute law.

The primary general conservation principles that may be derived from the conventions, as already indicated in chapter 4, are as follows: (i) sustainable development; (ii) maintenance of the life-support systems of the biosphere; (iii) the preventive approach to biodiversity conservation, alongside the precautionary principle; (iv) the need to conserve those natural resources forming the common heritage of humankind; (v) intergenerational equity; and (vi) international co-operation.

How should these general principles be incorporated into national schemes of policy, legislation and administration?

The Constitution of the Republic of Uganda declares as one of its foreign policy objectives, “respect for international law and treaty obligations”. This kind of state policy commitment is to be recommended for African states, with regard in particular to the implementation of international biodiversity law.

In view of the importance of biodiversity in the main-

tenance of ecological balances that support national social and economic development, it is recommended that *African countries should use their best judgment to determine which biodiversity conventions will provide the best framework for conserving their biological resources. To such conventions they should be signatories and should subsequently ratify, accept or approve in order to become States Parties. They should accede to such treaties where they had not been signatories. They should thereafter make all appropriate arrangements to give fulfilment to such conventions.* In this regard, excellent results have been achieved in ratifications for the Convention to Combat Desertification (1994) and the Convention on Biological Diversity (1992). However, more accessions/ratifications are desirable in the case of conventions such as the African Convention on the Conservation of Nature and Natural Resources (1968); the Ramsar Wetlands Convention (1971); the Convention on World Cultural and Natural Heritage (1972); CITES (1973); the Convention on Migratory Species (1979); and the Lusaka Agreement on Co-operation Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (1994). There are also considerable numbers of regional/sub-regional biodiversity agreements to which the relevant African countries should accede.

With a suitable state policy commitment, the assumption of obligations under treaty law, in such a way, would provide the desirable political context in which to endeavour to give fulfilment to the biodiversity conventions.

The recent programmatic constitutions have set a commendable example in environmental protection through the creation of constitutional obligations. It is recommended that African countries should, in the course of reforming their constitutions, make specific provision pertaining to environmental protection in general, and biodiversity conservation in particular. *These constitutions should start off with declarations of commitment to environmental conservation, and should then create a basis for further legislation and institution-building, for this task. The constitutions should, besides, establish entry points for public participation in the enforcement of conservation laws. This can be done by the creation of justiciable rights and duties, which members of the public can enforce through judicial and other tribunal processes.*

Ordinary legislation and administrative rule-making should be used to give effect to the biodiversity conservation policy. Legislation of such a kind is sometimes entirely specific, in its focus on particular courses of conservation. In other cases, such legislation has

both a general part, and a more specific part set in imperative, action-oriented terms. The general part usually takes the form of a preamble that sets out the conditions inspiring the legislation, and commits the state to some policy direction in the best interests of the citizens, in the performance of the relevant implementation tasks. While it is not certain that such preambular statements always govern the mode of implementation of statute law, there can be no doubt that they do state the policy stand of government, and call upon the relevant public institutions to be guided by a certain philosophy or perception. Moreover, if the courts of law are to interpret the more specific provisions of such statutes, and it was necessary for them to establish the legislature's intent, then such preambular statements would be taken into account.

Thus, an alternative in the domestication of the general biodiversity conservation principles is to set them out in preambles to biodiversity-related statutes. The following is an example of such a preamble—

["WHEREAS [Country X] is committed to the pursuance of social and economic development but without undermining the ecosystem's renewal and re-supply process which enables such development to take place;

"WHEREAS it is in the best interests of humankind to maintain the life-support systems of the biosphere;

"WHEREAS [Country X] is committed to the goal of sustainable social and economic development;

"WHEREAS biological diversity is a vital component of the processes that stabilize ecosystems;

"WHEREAS biological diversity directly serves humankind's economic, social and aesthetic needs in fundamental respects;

"WHEREAS certain biological resources form part of the common concern of humankind and should not be decimated or lost;

"WHEREAS the ideal approach to biodiversity conservation is the prevention of loss or destruction;

"WHEREAS it is recognized that desirable or urgent measures of biodiversity conservation should be taken without delay, in a proper case, and without waiting for prolonged investigations

that may entail time-lapses leading to permanent damage;

"WHEREAS it is acknowledged that the country's biological diversity is a gift of nature for the welfare of both present and future generations;

"WHEREAS sustainable or wise use and appropriate management of biodiversity, including its components and ecosystems means that species and habitats should be maintained at or re-established to a favourable conservation status and that only surplus biological resources should be used;

"WHEREAS species which have become extinct and irreversibly degraded ecosystems can contribute nothing to the fight against poverty;

"WHEREAS international co-operation is essential in attaining global conservation of biodiversity for the present and the future generations;

"NOW THEREFORE BE IT ENACTED BY THE PARLIAMENT OF [COUNTRY X] AS FOLLOWS..."]

Such a preamble should be considered for each African country's primary environmental legislation. In this way, the co-ordinating institutions will have sent a clear conservation message to the various sectoral agencies that may have been established under more limited conservation statutes.

In the alternative, such principles may be provided in a special part of the substantive provisions of the national statute—the part to bear the heading "general principles", or "objects". This may be done in accordance with the example given below—

["THE BIOLOGICAL DIVERSITY CONSERVATION BILL

Arrangement of Clauses

PART I - PRELIMINARY

PART II - GENERAL PRINCIPLES OF BIODIVERSITY CONSERVATION

PART III - INSTITUTIONAL ARRANGEMENTS

- PART IV - PROTECTIVE MANAGEMENT OF BIOLOGICAL DIVERSITY
- PART V - ENVIRONMENTAL IMPACT ASSESSMENT
- PART VI - ENVIRONMENTAL AUDIT AND MONITORING
- PART VII - ENVIRONMENTAL QUALITY CONTROL
- PART VIII - IMPLEMENTATION OF BIOLOGICAL DIVERSITY CONVENTIONS
- PART IX - DISPUTE SETTLEMENT
- PART X - OFFENCES"]

[Part II – General Principles of Biodiversity Conservation]

[Section X: This Act, in its administration, shall be guided by the following principles of biodiversity conservation—

- a) There shall be development plans for economic programmes and projects, and for the delivery of social services; and such plans shall include as an integral aspect the balancing of development initiatives and outputs with the requirement for the maintenance of a stable and functioning ecosystem.
- b) Appropriate measures shall be taken to ensure the conservation of biological diversity, and any likely threats to biological species at their habitats or elsewhere shall be dealt with promptly without having to await the submission of definitive evidence of impending danger.
- c) In administering this Act, the designated public authorities shall be guided by the principle that present generations must bequeath to future generations a natural resource patrimony that is in as good a condition as it has been in at earlier times.
- d) The biodiversity conservation principles declared by treaty law to which [Country X] is Party shall be faithfully implemented through the institutional arrangements established under this Act.
- e) This Act shall, so far as practicable, provide a framework for [Country X's] co-operation with

other countries, as well as relevant international organizations, in the conservation of biological diversity]

The advantage of stating the biodiversity conservation principles in the body of the statute is that, they thereby become a direct part of the law; and legal and administrative bodies have a duty to interpret them and to find a place for them in the administration of the Act. This is a clear merit, and it may thus be recommended that *African countries should provide for the general principles of biodiversity conservation within the body of framework legislation.*

5.4. Domesticating the Principles of Recourse to Scientific Methods

Modes of biodiversity conservation are, in most cases, objectively ascertainable. On this account, virtually every convention requires recourse to scientific findings, to scientific data, to co-operation in research, and to scientific information and exchange thereof— as a central aspect of the conservation initiatives. It is considered that scientific principles should, as much as possible, guide the task of conservation. However, where scientific investigations may be rather too protracted and so might allow room for long-term damage to biodiversity, States Parties are required to apply the *precautionary principle*, which calls for action in such circumstances even without any research findings. The various conventions require States Parties to strengthen their capacities for scientific research and technical training, as a basis for promoting conservation.

In what ways can this role of science be promoted through national legislation?

It is proposed that, under the institutional arrangements provided by the framework statute, *there ought to be a national co-ordinating agency that cuts across the various biodiversity-related sectors.* While the individual sectors could have staff complements of their own, such an agency could take the form of a standing or *ad hoc* committee of relevant experts. Such an agency would aid the administrative establishment in taking informed decisions; prescribe and monitor standards; and deal with specialized procedures such as: environmental impact assessment, environmental audit, environmental monitoring, etc.

The statute should provide, under institutional arrangements, for rule-making for the purpose of enhancing scientific education and technical training in biodiversity management.

5.5. *Domesticating the Principle Concerning Indigenous and Local Conservation Experience*

Indigenous and local communities, on account of long experience with biological diversity, do have specialized knowledge about species and about conservation. Such knowledge, where it exists, should be duly acknowledged and accorded clear roles in conservation. It has been recognized, in particular since the adoption of the Convention on Biological Diversity (1992), that modalities should be conceived for giving equitable compensation to traditional and local communities for their contribution to conservation—through their special knowledge.

As a basis for legislation to protect traditional knowledge, States Parties will need to determine the available conservation methods among traditional communities. It may then be considered how much of this knowledge should form part of the official conservation strategy. Once this is determined, appropriate legislation may then set out the relevant mode of conservation—giving its modalities of operation, and protecting it whether through the criminal or the civil legal process.

Alternatively, the law could simply recognize the rights of these communities to the biological diversity, facilitate their continued conservation initiatives, and avail to them suitable compensation for their contribution.

However, such compensation presents two kinds of questions which the law should resolve. Firstly, who—within the indigenous communities—are the legitimate persons to be compensated? And second, what is to be the nature of the compensation? How is the level of compensation to be arrived at? What form is the compensation to take? These are open questions, and each State Party should resolve them in accordance with its own prevailing social conditions.

In resolving such questions, it will be necessary to enact legislation which defines the nature of community rights. Such a law should also deal with the biodiversity conventions' principle that requires equity towards traditional and local communities. It is required that genetic resources be obtained from them on the basis of *prior informed consent*. This concept needs to be defined in law, with a clear procedure prescribed for achieving it.

Indigenous conservation experience is, indeed, a technology; and in principle there is no reason why it should be left unprotected, while the advanced, industry-based

technologies of the developed countries (which use biological resources as their raw material) are given protection under world trade arrangements. Such trade arrangements render commercial injustice to African countries, as they, in effect, allow the business units of the industrialized countries to make windfall profits out of resources that have been conserved using traditional technologies, but without making acceptable returns to the inventors and custodians of these technologies. This is a trade relationship that is destined to further enrich the rich, and impoverish the poor—with its sole "justification" being that the rich have been blessed by a lop-sided international legal arrangement that is capable of protecting only advanced technologies and not traditional technologies.

African countries should strongly negotiate for more trade equity in relation to biotechnology, and especially in relation to traditional conservation technologies. They should at the same time conceive effective national intellectual property regimes for the protection of their traditional technologies. Such regimes should be carefully legislated, and should be anchored on the principle of national sovereignty over biological resources. The effectiveness of such laws requires close control of the process of grant of access to biological resources for foreigners. Laws protecting indigenous and local conservation knowledge should incorporate, or run in parallel with, those regulating access to genetic resources. It should not be possible to bypass such established legal arrangements through political or administrative corruption; and the effectiveness of the law will vitally depend on political responsibility, as well as administrative integrity—and technical efficiency—on the part of African countries.

5.6. *Domesticating the Principles Relating to Technology Transfer and Equitable Access to Genetic Resources*

The emphasis which the more recent biodiversity conventions in particular have placed on *scientific knowledge*, as a basis for conservation initiatives, presents a serious challenge to the developing countries. As these countries have a severe shortage of the specialized human-power required, and of the modern scientific and technological equipment for the development and organized utilization of species and genetic resources, they need to draw on the scientific and technological capacities of the industrialized countries. Although the developing countries may have a considerable amount of traditional experience on biodiversity conservation,

they generally lack the capacity to utilize modern scientific knowledge such as that related to biotechnology. These countries thus run the risk of passing over the benefits of their conservation experience to recipients elsewhere, while they get in return no opportunities to utilize optimally the genetic resources with which they are richly endowed.

On access to genetic resources, Article 15 of the Convention on Biological Diversity (1992) emphasizes the "sovereign rights of states over their natural resources", and provides that States Parties may regulate access to these resources through *national legislation*. State sovereignty over natural resources is a deeply-rooted doctrine, with its foundations in the U.N. General Assembly Resolution 1803 of 1962. Subject to this principle, the convention requires that "Each Contracting Party shall endeavour to create conditions to facilitate access to the genetic resources for environmentally sound uses by other Contracting Parties and not impose restrictions that run counter to the objectives of this Convention" (Art.15.2).

The obvious basis of anxiety to the developing countries as they endeavour to comply with Article 15.2 of the convention, is their limitation with regard to scientific and technological capability. Article 16, which relates to transfer of technology, may thus be seen as a logical counterpart to the provision on access to genetic resources. Article 16.1 thus states:

"Each Contracting Party, recognizing that technology includes biotechnology, and that both access to and transfer of technology among Contracting Parties are essential elements for the attainment of the objectives of this Convention, undertakes subject to the provisions of this Article to provide and/or facilitate access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment".

Article 16.2 provides that such access to and transfer of technology to *developing countries* "shall be provided and/or facilitated under fair and most favourable terms".

Articles 15 and 16 of the CBD appear to be designed to provide a framework for equitable exchange between the developed and the developing countries, in relation technology on the one hand and genetic resources on the other. Thus Article 15.5 requires that "Access to genetic resources shall be subject to *prior informed*

consent of the Contracting Party providing such resources, unless otherwise determined by the Party".

African countries need to enact legislation for the protection of their genetic resources. Such legislation should define the terms (e.g. regarding royalty payment; resale to resource donor; procedures regarding access, etc.) on which genetic resources may be passed on to other countries, and should prescribe the conditions for the expression of prior informed consent attending such transfers of biological resources.

Such legislation could take one of two forms: (a) it could be *subsidiary legislation* made by virtue of a framework environmental or biodiversity statute; or (b) it could take the form of a sectoral environmental statute, or a set of sectoral statutes. Sectoral statutes in this category can be any number, depending on the requirements of a particular country. They might be focussed on such matters as: genetic resources; plant genetic resources; animal genetic resources; microbial genetic resources; mammalian genetic resources; marine animal genetic resources; terrestrial mammal genetic resources; amphibian genetic resources; fish genetic resources; etc.

Any sectoral genetic resource protection statute passed should be accompanied by other legislation on *biosafety*. The processes of biotechnology, which are essential in the extraction and utilization of genetic resources, need to be regulated to ensure their environmental safety; hence the need for African countries to enact biosafety laws.

Such legislation should ideally set out with a preamble stating the guiding principle (except where such principles have been set out in a separate part in the body of the statute). Thereafter the legislation should set out and define the applicable terminology— e.g. "biological diversity"; "biological resources"; "biosafety"; "biotechnology"; "ecosystem"; "*ex-situ* conservation"; "genetic material"; "genetic resources"; "habitat"; "*in-situ* conservation"; etc. The mode of definition should reflect, as far as possible, the concept in the various biodiversity conventions.

Under the guiding principles, the statutes should restate the need for co-operation between government and people in the conservation task. They should state the principle of the state's sovereignty in relation to the country's natural resources. They should recall the principle of the CBD on access to genetic resources, and underline the requirement for prior informed consent of the donors of genetic resources.

Such legislation should then establish the institutions of implementation. Such institutions may be entirely new, or may already have been established under existing law. The latter case is best exemplified by framework environmental statutes, which generally have wide-ranging institutions for environmental management. A sectoral biodiversity protection statute can lodge its management responsibilities within the institutions set up under such a statute. The biodiversity statute should set out the functions and powers of the relevant agencies. The statute should provide for prohibitions and penalties, and should have sections on civil dispute settlement. It should also have a miscellaneous section which provides for regulation-making powers, as well as for transitional arrangements.

5.7 Domesticating Environmental Conservation Technologies: Environmental Impact Assessment

One of the most important conservation principles coming along with the growth of international environmental law since the 1972 United Nations Conference on the Human Environment is *environmental impact assessment*. This concept describes a process that yields a statement to be used in guiding decision-making in relation to planned human activities. Environmental impact assessment should provide decision-makers with information on the environmental consequences of proposed programmes and policies. It requires decisions to be influenced by that information. It provides a mechanism for ensuring the participation of potentially affected persons in the decision-making process. Authorized forms to guide the conduct of environmental impact assessment would typically require a determination of matters such as the likely effect of a project on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets, cultural heritage, etc. Through this device government would be able, through the legal process, to balance the interests of social and economic activities against those of the environment and its resources and to promote the principle of sustainability in the use of the environmental endowment. This is a practical and most beneficial approach to the conservation of biodiversity in the several component elements of this subject – species, genetic resources, ecosystem/habitat.

The requirement of EIA is to be found in several international legal instruments, and is no doubt one of the vital elements in the biodiversity conventions that African countries should integrate into their national le-

gal arrangements and policy-making frameworks. Principle 17 of the Rio Declaration (1992) provides: "environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority". Although this mechanism is usually treated as a *national* instrument, it is desirable that African countries should establish sub-regional frameworks for its implementation, especially in relation to shared biological and other environmental resources. Such a broad base to environmental impact assessment would be facilitated in conditions in which neighbouring African states also undertake the harmonization of laws across boundaries.

Since environmental impact assessment is closely linked to the maintenance of general environmental standards, and is applicable to all kinds of social and economic development, it is desirable that the legal framework for it should start with a general statement of principle in the national constitution, and then be more fully elaborated in a framework environmental or biodiversity statute. The generality of environmental impact assessment as regards application to human activity requires that *its mechanisms be linked to an over-arching agency entrusted with the co-ordination of environmental conservation*. It is therefore recommended that *the environmental impact assessment law should be firmly lodged within the relevant framework statute*. By virtue of the framework statute, detailed management regulations should be made which prescribe accurately targeted forms, to be strictly complied with by all persons or organizations (public or private) undertaking projects or programmes with significant environmental impacts and especially those with impacts on biodiversity.

5.8 Domesticating the Principle of Intellectual Property Rights Protection

As already noted in chapter 4 [4.2.2.(d)], one of the most problematic issues in the domestication of the biodiversity conventions in Africa, is the differing notions of *intellectual property rights*. The industrialized countries, which are endowed with substantial technological capabilities, have chosen the path of institutionalized and internationalized protection for their intellectual property rights. The GATT Uruguay Round Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS) (1994) provides the institutional basis for upholding certain particular standards

as the qualifying mark for patent rights. Patents will be granted for a new process, machine or composition of nature that is *novel, involves an inventive step, and is capable of industrial application*. The TRIPS Agreement requires all States Parties to apply those standards of intellectual property protection. This raises two problems for African countries, as regards biodiversity conservation technology.

Firstly, the bulk of Africa's environmental conservation technology that is lodged with the traditional and local communities, is of the "soft" kind that does not fit within the TRIPS criteria. The effect would be that African countries must provide a high standard of protection for foreign technology while providing none (or none being accorded to them by foreign countries) for their own "soft" biodiversity conservation technology. This would undermine Africa's biodiversity protection capability—quite apart from facilitating an inequitable relation in which their genetic resources flow out easily into the hands of foreigners who then process these and thereafter protect the product through IPRs which will exclude the original donors of the resources!

Secondly, the full application of the TRIPS Agreement's requirement on intellectual property rights protection would undermine the technology transfer provisions for biodiversity conservation under the Convention on Biological Diversity (1992).

It is recommended that *African countries should use international negotiating fora to assert the imperativeness of the conservation principles contained in the CBD; and in this regard they should insist on the full application of the technology transfer provisions of this convention.*

In the statutes to domesticate the biodiversity conventions, African countries should legislate to strengthen intellectual property rights based on the knowledge of their indigenous and local communities. Much of this technology is found among traditional medical practitioners, farmers and animal breeders. *African countries should develop endogenous systems of intellectual property rights, by redefining the scope of patentable subject-matter.* This is the only way these countries can give full meaning to Article 8 (j) of the CBD which enjoins the Contracting Parties, within their jurisdiction, to respect, preserve and maintain the conservation knowledge, innovations and practices found among indigenous and local communities.

5.9 Domesticating the Principle Regarding Enhancement of Public Education and Awareness

The various biological diversity conventions recognize the vital role of members of the public in initiatives of biodiversity conservation. As biodiversity is not housed at the seat of government, and in fact abides much closer to the ordinary people everywhere in the land, the people's non-cooperation would ensure failure of all endeavours by the state. Therefore, common sense dictates that government should solicit the people's goodwill and co-operation, for the conservation task. Such co-operation will only be forthcoming if the people are educated on, and aware of the real significance of biodiversity for the general welfare of all. Alternatively, the government should formulate national policy emphasizing biodiversity conservation education, or environmental education, and integrate this into the education curriculum, so as to provide the requisite knowledge and expertise for management and conservation of biological diversity.

National statutes for the conservation of biological diversity should provide for regulation-making powers to specify the modalities of biodiversity education and awareness that should be provided by government, or by others in collaboration with government.

5.10 Domesticating the Principles Relating to Protective Public Management

The theme "protective public management" summarizes a variety of biodiversity-related tasks which should be performed by the authorized public institutions. Such institutions, as already noted, may be established either under a framework environmental statute, or under sectoral statutes. The success of the whole exercise of conserving biodiversity will rest upon the effectiveness of such institutions; and hence they should be guided in certain recognized directions of work, even though they will need, over and above this, to have a sense of inspiration and commitment.

Such guidance to the biodiversity management institutions stretches from the area of policy to that of legal requirements and to that of administrative measures. At the policy level, African governments should incorporate the principle of biodiversity protection in

their development planning. Secondly, these governments should establish special conservation areas, and enact laws to give sanctity to such policy decisions. Thirdly, these governments should promote both *in-situ* and *ex-situ* conservation of biological diversity. Fourthly, government should constantly involve members of the public in the conservation of biological diversity.

As regards legal initiatives, African governments should establish the scheme of biodiversity conservation through constitutional commitments and declarations of principle. This scheme should then be advanced through framework environmental statutes which provide for co-ordinated work, and establish the vital machinery for this task. In the context of such an organizing structure, sectoral laws, and more limited administrative procedures may be put in place to deal with specific matters— e.g., soil, water, flora and fauna; microbial resources; fisheries and marine resources; freshwater resources; etc.

The requirements for the various environmental and biodiversity laws may then be secured through both penal sanctions and civil process rules.

5.11 Domesticating the Terminology of the Biodiversity-related Conventions

It is necessary that statutes domesticating conventions related to biological diversity should, as much as possible, adopt the terminology of the conventions. In this way the enforcement procedures of the statutes will relate more closely to the essential problems that had been perceived by the participants in the conventions; and thus better implementation of the conventions will be achieved.

5.12 Complementary Non-Legal Mechanisms

The successful domestication of the biodiversity conventions requires more than just the enactment of national legislation carrying the main elements of those conventions. Although such legislation – which ideally should begin with the constitution and then extend to framework laws and thereafter to sectoral laws – is vital, as it establishes the regular conservation machinery, it cannot achieve its objectives if it is not facilitated through certain discretionary acts and practices. It is most important that the legal machinery should be accompanied with and facilitated by clear

and effective policy, programme and administrative arrangements for biodiversity conservation. Consideration is given in this section to the broader basis of facilitation that is required.

Although the enactment of national law is the obvious sign, it in the first place requires the *political will*, firstly to commit the nation to the particular convention; and secondly to move towards implementation through the introduction in parliament of the required Bill.

Political will is required, too— especially in the case of the developing countries— to deal with one major socio-economic condition that generally leads to the decimation of biological resources. This is large-scale *poverty*. Where this exists, human survival is directly dependent on harvests from endowments of nature; and biodiversity gets depleted out of keeping with the ecosystem's requirements, when it is used as food or fodder, energy, construction material or articles of trade. The relationship between poverty and biological resources presents a vicious circle that cannot be broken unless there is sufficient political will. As the United Nations Environment Programme (UNEP) Executive Director, Klaus Toepfer observed at an international conference recently (Recife, Brazil, November 22, 1999), "No long-term strategy of poverty eradication can succeed in the face of environmental forces that promote persistent erosion of the physical resources upon which poor people depend"; and "At the same time, no programme of protecting the environment can succeed without alleviating the day-to-day pressure of poverty". African governments must have the political will to eradicate conditions of abject poverty, and bring their people to more sustainable modes of living. These governments should conceive and execute poverty alleviation programmes, to enhance the lives of their peoples.

Effective biodiversity conservation requires the active participation of the people. The political will to pursue biodiversity conservation, and to eradicate widespread poverty, should extend to the establishment of programmes to ensure *basic education* and to provide *public awareness* in matters of environment and especially of biodiversity.

African governments should encourage unlimited *public participation* in the performance of important public undertakings. Thus, in grass-root oriented functions such as biodiversity conservation, the people's involvement in critical decision-making will greatly facilitate the discharge of the national obligations created by the conventions. As an aspect of public participation,

government should work in partnership with local communities who provide important focal points of biodiversity conservation. Over and above participation in conservation programmes, it is desirable to involve public opinion, alongside public awareness-creation, in the making of the vital laws that provide the framework for biodiversity management. Thus, where the national constitution contains provisions whether for environmental protection in general or biodiversity management in particular, the input of the people should be one of the factors taken into account at the preparatory stage. This should also be the case where framework laws on the environment in general or on biodiversity in particular are being formulated and enacted.

Yet another aspect of political will, is the *maintenance of police and other enforcement systems*, to ensure the due functioning of the law. Through such an enforcement mechanism, it will be possible to give fulfilment to the biodiversity protection laws.

African states should formulate appropriate science and technology policies that enable growing numbers of people to acquire conservation and other *management skills in the field of the environment*. More *training opportunities* should be created, so as to enhance national competence in biodiversity management.

African governments should include environmental protection in general, and biodiversity conservation in particular, in their lists of priority governance issues, and should regularly have monies voted for biodiversity management programmes. They may also, in the course of implementing the biodiversity conventions, make requests for assistance under the financial mechanisms provided, for instance, under the Biological Diversity Convention(1992), or the Convention to Combat Desertification (1994).

In those situations where the extent of biodiversity resources is transboundary, African countries should undertake joint conservation measures where possible. They should co-operate in research undertakings and share data and information pertaining to conservation. They will need, in many cases, to harmonize their conservation legal regimes, so as to achieve the best results.

It is hardly possible to exhaust the list of facilitative matters that can be addressed at the domestic level to ensure more effective biodiversity conservation. The following, however, are worthy of note.

In order for the private citizen, or private bodies to play a meaningful role in biodiversity conservation, they will require pertinent information in respect of each relevant case. Most such information will be within the control or reach of public agencies. There should be a regular practice, among public authorities, of freely supplying conservation-related information to members of the public who need it. As bureaucratic practice generally upholds confidentiality and secrecy, it is highly desirable that the various African countries should *provide by law for disclosure of environmental information*.

Conservation of environmental resources is a complex matter that requires the inputs of members of the public, and of professionals with differing backgrounds. It should in all cases be appreciated that conservation requires more than just the lawyer's role; and the task of implementation should bring together multi-disciplinary teams of scientists, doctors, engineers, lawyers and social scientists. Such professionals should have an opportunity to familiarize themselves with the primary decisions and policy issues affecting the conservation task. African governments should be willing to support attendance by such professionals at Conferences of the Parties to the various biodiversity conventions.

Additional facilitation of the biodiversity conservation efforts could come from the international level, through support for better national understanding of new strategies. Since the strategies of the main biodiversity conventions come into concurrence at times, it would be helpful to Africa's implementation programmes if some of these conventions could hold joint Conferences of the Parties, thus enabling more harmonized deliberations to take place, with more cost-effective national attendance. Similarly, a merger of some of the secretariats of these conventions, or their very close co-ordination, would prove helpful to African countries in their relations with relevant international decision-making fora.

5.13 Concluding Remark

In this chapter the subject of domestication of important biodiversity conservation principles has been considered. It is hoped that the suggestions made on possible approaches to domestication will serve as a guide for national initiatives to strengthen the framework for biodiversity conservation. The next chapter concludes this *Handbook*, and also presents a summarized set of criteria on national implementation of the conservation principles contained in the biodiversity conventions.

Chapter Six: Conclusion and Recommendations

6.1 General Concluding Remarks

Biological diversity, in its various forms, is the primary capital resource for most African countries. Its conservation, therefore, is essential for the continuity of Africa's socio-economic systems. A general recognition of this fact is evidenced by the active participation of African states in a varied body of biodiversity treaty law, some of it global and some regional or sub-regional.

Beginning with an account of the state of biological diversity in Africa, this *Handbook* has undertaken a systematic analysis of the existing treaty law, of its essential characteristics, and of the scope for its domestication in the individual countries. A detailed illustration of the participation of African countries in the biodiversity conventions has been given. The level of such participation varies from one treaty to another, but has been quite remarkable in recent times – especially with the Convention on Biological Diversity (1992) and the Convention to Combat Desertification (1994). This may partly be explained by the fact that greater awareness on biodiversity issues has been achieved more recently; partly by the background of activity leading to the adoption/opening for signature of the conventions in question; and partly by the new, attractive elements that have marked the major environmental conventions of the recent past – specifically the prospects for technological and financial assistance for the implementation process. However, far more important as an explanation for Africa's active participation in these treaties is the fact that its precious natural resources are being rapidly depleted but not being substituted by any new basis for socio-economic development.

As the various biodiversity conventions represent constructive new conservation ideas, they should in principle guide Africa's conservation efforts. On this account, the *domestication* of the relevant principles in national law is seen as a first step in biodiversity management. The purpose of this *Handbook* is to facilitate this process of domestication, as an aid to conservation programmes.

It is clear from the *Handbook* that certain specific things have to be done to set the stage for domestication, namely: (i) identification of the most relevant biodiversity-related conventions; (ii) identification of the critical elements in the treaty law; (iii) determination of the specific conservation theme that each convention addresses; (iv) identification of any factors that favour or limit the progress of the conservation task; (v) indication of possible solutions to any obstacles to the conservation initiatives; (vi) proposition of appropriate institutional arrangements for the domestication process; (vii) consideration of legal issues pertaining to the domestication process; (viii) consideration of the non-legal mechanisms that provide the facilitative context for the domestication process.

On the foregoing matters, suggestions have been made to guide State-Party action in the implementation of the biodiversity conventions. On the basis of such suggestions, the emerging recommendations are concisely set out below.

6.2 Recommendations

6.2.1 Participation in biodiversity conventions

- (a) Although African countries are Parties to the main biodiversity conventions, there are cases in which some have not followed up their signature stage with assumption of Party status through ratification; or they have not acceded to membership as would have been expected. As these conventions offer a useful legal condition for addressing the problem of biodiversity loss, *it is desirable that African countries should adhere to them and undertake to implement their provisions.*
- (b) In some cases, important biodiversity conventions have not carried much effect, due to lack of appropriate administrative arrangements, or lack of a financial mechanism. An example in this regard is the African Convention on the Conservation of Nature and Natural Resources (Algiers, 1968). *It*

is desirable, in the case of regional or sub-regional conventions, that African countries should take collective action to make such conventions operational.

- (c) In all cases in which African countries have become Parties to biodiversity treaties, they should take conscientious action to give fulfilment to such treaties. The first step in such implementation is the domestication of the conventions in the national legal systems.
- (d) Where such conventions have provision for aid to support implementation, on certain conditions, African countries should endeavour to fulfil such conditions, so as to be able to take advantage of the relevant facility in aid of conservation programmes.
- (e) The adoption of sub-regional conventions for the conservation and sustainable utilization of shared biological resources is to be encouraged as a practical approach to the implementation of principles carried by the more broad-based, global conventions.

6.2.2 Domestication of biodiversity conventions

- (a) At a very basic level in the domestication process, African countries should adopt regional and sub-regional conventions reflecting such global conventions as they may have participated in. This will enable them to deal at a more limited geographical level with the biodiversity conservation problem in question. It is at this level that the problem has its greatest impact.
- (b) Domestication of treaty law essentially means integrating it into the domestic legal system, so that the regular functioning of day-to-day machinery of governance may assure for it the required implementation. It is recommended that *the best way to initiate this process is through constitutional provisions that commit the state to conserve biological diversity, in the interests of present and future generations. The constitution should state the point as a general principle – to guide the general conduct of government; and it should commit the legislature to enact statutes giving fulfilment to the principle.*
- (c) As biodiversity is a broad theme that does not lend itself to effective regulation in just one statute, or through one apparatus, *it is desirable that African states should, below the constitutional level, enact a framework statute. This should establish a co-*

ordinating structure for biodiversity management, and should provide for standard-setting for environmental issues touching on biodiversity. The statute should leave room for detailed sectoral biodiversity legislation, as well as detailed ministerial rule-making for the fulfilment of conservation functions.

- (d) The framework statute should carry the general environmental standards to be applied by the environmental agencies. *In particular it must provide for environmental impact assessment as a standard procedure to be complied with before projects or policies likely to affect biodiversity are put in place.*
- (e) Below the framework environmental statute, African states should enact any number of sectoral statutes dealing with different subject-matter, ranging from species and genetic resources to habitat/ecosystems and indigenous conservation practices. *The sectoral legislation should deal in particular with the issue of land tenure and land management, as these are highly relevant to the conservation of biodiversity habitat. Such statutes should also allow for detailed ministerial rule-making.*
- (f) Biodiversity protection laws should *establish management institutions and prescribe their functions and powers. These laws should define any special procedures of biodiversity conservation, and provide for civil dispute settlement, and for penal sanctions.*

6.2.3 Facilitation of the domestication process

As legal machinery by itself cannot provide the required degree of protection for biological diversity, *it is desirable that African states should have in place certain non-legal, facilitative conditions.* These include:

- (a) political will to accord biodiversity the priority it deserves in matters of policy and governance, and to ensure its protection through policy-making, law-making and the conception of appropriate programmes.
- (b) preparedness to secure the enactment of any number of laws to facilitate the biodiversity conservation initiative;
- (c) preparedness to effectively enforce the laws relating to biodiversity management;
- (d) commitment to work towards eradicating widespread poverty which invariably undermines the

people's ability to be partners with government and other bodies in the biodiversity conservation tasks;

- (e) *commitment to educate and sensitize the wider public on essential issues relating to the environment and to biodiversity;*
- (f) giving of public awareness on basic environmental and biodiversity issues;
- (g) willingness to allow public participation in biodiversity conservation efforts;
- (h) commitment to provide capacity building, through specialized training, on technical aspects of biodiversity conservation;
- (i) willingness to commit public monies on a priority basis, to biodiversity conservation programmes.

6.3 Indicators of Due Implementation of Biodiversity Treaty Law

Where an African state has committed itself to the obligations of a treaty through ratification or some other mode of attaining Party status (acceptance, accession, adhesion, approval, succession, etc.), answers to the following questions may indicate the extent to which it is ensuring implementation of the treaty:

- (a) Has the state become a Party to any pertinent regional or sub-regional biodiversity conventions, and what actions has it undertaken in implementation of the provisions of such conventions?
- (b) Has the state enacted a new constitution or amended its existing constitution to establish principles of biodiversity conservation?
- (c) Does the state constitution expressly recognize the environment and biological resources as vital aspects of the governance mandate and does it make a clear commitment in favour of conservation of environmental resources?

- (d) Does the state constitution create rights and duties pertaining to the protection of the environment in general and of biodiversity in particular? If so, are such environmental or biodiversity issues amenable to the jurisdiction of the court? Does the private citizen have *locus standi* to bring judicial proceedings in the cause of the environment or of biodiversity?
- (e) Has the state enacted a framework environmental or biodiversity statute? If so, does the statute establish a co-ordinating body for biodiversity management? Does the statute provide scope for the enactment of sectoral legislation? Does it also provide room for executive rule-making for biodiversity conservation?
- (f) Has the state enacted sectoral statutes dealing with particular biodiversity sectors? If so, do the statutes establish management institutions; and further, if so, do such institutions fit into the scheme of co-ordination established under the framework statute? Has a sectoral statute been adopted on land tenure and land-use? Do such statutes have provisions for ministerial rule-making?
- (g) Have any ministerial rules been made under the framework statute or under the sectoral statutes, for the purpose of biodiversity conservation?

If all these questions, or most of them can be answered in the affirmative, this will be a definite indication that the state in question has put in place a legal and institutional structure conducive to the implementation of the biodiversity conventions. However, this inference would still be subject to the realization of a whole range of non-legal, facilitative conditions.

Where the various questions are answered in the affirmative, and the facilitative conditions are fulfilled, it is still necessary to obtain a factual report on the state's biodiversity conservation activities, as a basis for ascertaining the degree of compliance with the relevant treaty obligations.

Appendix 1: Status of Ratification in Respect of the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1981), as at June 30, 1999

Country	Date of Ratification/Accession
1. Cameroon	01.03.1983
2. Congo, Republic of	19.12.1987
3. Cote d'Ivoire	15.01.1982
4. Gabon	13.12.1988
5. Gambia	06.12.1984
6. Ghana	20.07.1989
7. Guinea	04.03.1982
8. Nigeria	06.06.1984
9. Senegal	10.05.1983
10. Togo	16.11.1983
Entry into force: 5.8.1984	

Source: *Register of International Treaties and other Agreements in the Field of Environment (1996)*, and UNEP files as at 30 June 1999.

Appendix 2: Status of Ratification in Respect of the Convention for the Protection, Management and Development of the Marine and coastal Environment of the Eastern African Region (1985), as at May 31, 1999

Country/Organization	Date of Signature	Date of Ratification/Accession
1. Comoros	-	26.09.1994
2. France (for Reunion)	21.06.1985	18.08.1989
3. Kenya	-	11.09.1990
4. Madagascar	21.06.1985	-
5. Seychelles	21.06.1985	29.05.1990
6. Somalia	21.06.1985	01.03.1988
7. United Republic of Tanzania	-	01.03.1996
8. European Union	19.06.1986	-
Entry into force: 30.5.1996		

Source: *Register of International Treaties and Other Agreements in the Field of the Environment (1996)*.

Appendix 3: Status of Ratification in Respect of the Protocol Concerning Protected Areas in Wild Fauna and Flora in the Eastern African Region (1985), as at May 31, 1999.

Country/Organization	Date of Signature	Date of Ratification/Accession
1. Comoros	-	26.09.1994
2. France (for Reunion)	21.06.1985	18.08.1989
3. Kenya	-	11.09.1990
4. Madagascar	21.06.1985	-
5. Seychelles	21.06.1985	29.05.1990
6. Somalia	21.06.1985	01.03.1988
7. United Republic of Tanzania	19.06.1986	-
8. European Union	19.06.1986	-
Entry into force: 30.5.1996		

Source: *UNEP, Register of International Treaties and Other Agreements in the Field of the Environment (1996)*, and UNEP files as at June 1999.

Appendix 4: Status of Ratification in Respect of the Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River system (1987), as at Dec. 31, 1996		
Country	Date of Entry into Force of Party Status	
1. Botswana	28.05.1987	
2. Mozambique	28.05.1987	
3. United Republic of Tanzania	28.05.1987	
4. Zambia	28.05.1987	
5. Zimbabwe	28.05.1987	
Date of entry into force: 28.5.1987		

Source: *UNEP Register of International Treaties and Other Agreements in the Field of Environment (1996)*.

Appendix 5: Status of Ratification in Respect of the Convention for the Establishment of the Lake Victoria Fisheries Organization (1994), as at Dec. 31, 1996		
Country	Date of Signature	Date of Ratification/ Accession
1. Kenya	30.06.1994	Ratified
2. Uganda	30.06.1994	Ratified
3. United Republic of Tanzania	-	23.05.1995(accession)
Date of entry into force:		

Source: *UNEP, Register of International Treaties and Other Agreements in the Field of the Environment (1996)*.

Appendix 6: Status of Ratification in Respect of the Convention for the Protection of the Mediterranean Sea Against Pollution (1976), as at Dec. 31, 1996		
Country	Date of Signature	Date of Ratification/Approval/ Accession/Notice of Succession
1. Algeria	-	16.02.1981
2. Egypt	16.02.1976	24.08.1978
3. Libyan Arab Jamahiriya	31.01.1977	31.01.1979
4. Morocco	16.02.1976	15.01.1980
5. Tunisia	25.05.1976	30.07.1977
Date of entry into force: 12.02.1978. Other Parties: Albania, Bosnia & Herzegovina, Croatia, Cyprus, France, Greece, Israel, Italy, Lebanon, Malta, Monaco, Slovenia, Spain, Syrian Arab Republic, Turkey and the European Union.		

Source: *UNEP, Register of International Treaties and Other Agreements in the Field of the Environment (1996)*, and UNEP files as at June 1999.

Appendix 7: Status of Ratification in Respect of the Protocol Concerning Mediterranean Specially Protected Areas (1982), as at March 31, 1991

Country	Date of Signature	Date of Ratification/Approval/ Accession/Succession
1. Algeria	-	16.05.1985
2. Egypt	16.02.1983	08.07.1983
3. Libyan Arab Jamahiriya	-	06.06.1989
4. Morocco	02.04.1983	22.06.1990
5. Tunisia	03.04.1982	26.05.1983

Date of entry into force: 23.3.1986. Other Parties to the Protocol: Albania, Bosnia & Herzegovina, Croatia, Cyprus, France, Greece, Israel, Italy, Lebanon, Malta, Monaco, Slovenia, Spain, Syrian Arab Republic, Turkey, and the European Union.

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of Environment (1996)*, and UNEP files as at June 1999.

Appendix 8: Status of Ratification in Respect of the Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995), as at March 31, 1999

Country	Date of Signature
1. Algeria	10.06.1995
2. Egypt	10.06.1995
3. Libyan Arab Jamahiriya	10.06.1995
4. Morocco	10.06.1995
5. Tunisia	10.06.1995

This Protocol is not yet in force, but will replace the 1982 Protocol (Appendix 7). The other signatories are: Albania, Croatia, Cyprus, European Union, France, Greece, Israel, Italy, Malta, Monaco, Spain and Turkey.

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment (1996)*, and UNEP files as at June 1999.

Appendix 9: Status of Ratification for the Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982), as at May 31, 1999

Country	Date of Entry into Force of Party Status
1. Egypt	20.08.1990
2. Somalia	30.05.1988
3. Sudan	20.08.1985

Date of entry into force: 20.8.1985. Other Parties: Jordan, Palestine, Saudi Arabia, Yemen.

Source: UNEP, *Register of International Treaties and Other Agreements in the Field of the Environment (1996)*, and the Convention Secretariat (June 1999).

Appendix 10: Status of Ratification in Respect of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) (1996) as at July 1, 1999

Country	Signature	Ratification
1. Morocco	Signed	-
2. Tunisia	Signed	-
Agreement not yet in force		

Source: UNEP files as at June, 1999.

Appendix 11: Status of Ratification in Respect of the Agreement on the Conservation of African - Eurasian Migratory Waterbirds (AEWA) (1995), as at July 1, 1999

Country	Signature	Ratification/Deposit/ Acceptance/Approval
1. Congo, Republic of	-	30.8.1999
2. Egypt	20.08.1997	4.3.1999
3. Equatorial Guinea	14.12.1997	14.12.1999
4. Gambia	-	12.3.1999
5. Guinea	15.08.1996	15.08.1996
6. Mali	25.09.1997	-
7. Morocco	19.11.1997	-
8. Niger	-	31.8.1999
9. Senegal	-	27.4.1999
10. Sudan	31.12.1996	31.12.1996
11. Togo	02.02.1998	22.3.1999
12. United Republic of Tanzania	-	31.8.1999
Date of entry into force: 1.11.1999		

Source: UNEP files as at July 1999.

Appendix 12: African States Parties to the Successor Agreement to the International Tropical Timber Agreement (1994), as at Dec. 31, 1996

Country	Date of Signature	Date of Ratification/Accession/Acceptance/ Approval/Definitive signature
1. Cameroon	12.12.1994	-
2. Congo	22.06.1994	-
3. Democratic Republic of Congo	17.12.1996	-
4. Cote d'Ivoire	09.09.1996	-
5. Egypt	08.11.1994	-
6. Gabon	27.05.1994	28.08.1995
7. Ghana	12.07.1995	09.12.1994
8. Liberia	-	04.10.1995
9. Togo	12.07.1994	-
Date of entry into force: 1.1.1997		

Source: *Register of International Treaties and Other Agreements in the Field of the Environment* (1996).

Glossary

- “Compliance”: an act in accordance with, and in fulfilment of, measures that have been adopted. It has two dimensions – at the international level and at the national level. The International level refers to measures taken by the Parties to comply with the obligations of the convention. The national level refers to actions taken by individuals or other bodies or legal persons (e.g., government bodies, corporate bodies, non-governmental organizations) to comply with domestic legislation.
- “Domestication”: used in relation to international conventions or provisions thereof. It means incorporation of the provisions of the convention, or the main ones, into the national legal system – to facilitate its regular application through the ordinary motions of the established constitutional machinery. As these provisions then form part of the ordinary law of the land, there will be a constitutional duty to apply it through the executive organ, and it will be subject to enforcement through the regular judicial process, in a proper case.
- “Enforcement”: means the formal response of a state’s procedures and institutions to a finding of non-compliance or to encourage compliance.
- “Hard law”: law duly created through the recognized procedure of law-making in international law, such as a treaty adopted by a meeting of plenipotentiaries, ratified and has entered into force. Such law carries binding obligations for the Parties and is recognized as such before international tribunals.
- “Implementation”: generic term covering all the measures taken by governments to fulfil their obligations under a relevant treaty. This includes enacting national legislation, adopting particular policies, formulating particular programmes, etc.
- “Range states”: states affected by the natural movements of biological species that are the subject of protection or conservation under treaty law. Such movement is likely to be through shared medium, such as an expansive stretch of water, a continuous dense forest, or air. The affected states have an interest in the relevant treaties and are thus likely to be signatories and ultimately Parties. The success of such treaties depends on countries that are directly affected bearing obligations to do certain things in the cause of conservation, etc.
- “Soft law”: used as a counterpart to “hard law” in international relations. It refers to the more informal stages in the conception of rules of international law, when these have not yet crystallized; or to emerging bilateral or multilateral understanding or common positions between or among states, that have not yet become mandatory even though they point towards more or less accepted usages. Typically soft law takes the form of declarations, resolutions, guidelines, action plans, etc., and, where it fills an important gap in international practice, it later crystallizes into a treaty, i.e., hard law. Compliance with soft law generally indicates acceptance of certain practices, and thus sets the stage for consolidation in hard law to regulate the matter on a more assured basis.

Index

- Access to genetic resources, 20,39, 40, 47,54, 56, 65, 66
- Addis Ababa, 6
- Ad hoc* Legal and Technical Working Group, 36
- Administrative rules, 50, 59, 61, 62, 68, 71, 72, 73
- Africa, ii, 1, 2, 4, 5, 6, 8, 9, 10, 20, 22, 25, 39, 41, 42, 48, 49, 54, 58, 61, 71
- African Convention for the Conservation of Nature and Natural Resources (1968), ii, 2, 8, 9, 24, 26, 33, 41, 42, 43, 45, 47, 51, 58, 62, 71
- African elephant, 17
- African governments, 1
- African Ministerial Conference on the Environment, 6
- African Plant Genetic Resource Centre, 6
- Agenda 21 (1992), 18, 22, 32, 41
- Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (1995), 18
- Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System (1987), 33, 36
- Agreement on the Conservation of African-Eurasian Migratory Waterbirds (1995), 1, 2, 17, 37, 45, 46
- Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (1996), 2, 17, 37, 45, 46
- Agriculture, 4, 5
- Air, 60, 67
- Alien species, 6, 36, 44
- Amphibians, 4
- Appropriate technologies, 56
- ASEAN Agreement on the Conservation of Nature and Natural Resources (1985), ii
- Australia, 6
- Biodiversity law, 9, 52, 58
- Biodiversity management, 24, 56, 58, 63, 64, 70, 71, 72, 73
- Biodiversity programme, 70, 73
- Biological diversity, ii, 1, 5, 6, 7, 8, 9, 13, 14, 18, 20, 22, 24, 25, 33, 36, 37, 39, 40, 41, 42, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 59, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72
- Biological diversity conventions, 1, 2, 7, 8, 9, 20, 22, 24, 25, 26, 32, 39, 40, 45, 46, 48, 51, 56, 57, 58, 61, 62, 65, 67, 69, 70, 73
- Biomass, 4
- Biosafety, 50, 51, 66,
- Biosafety Protocol, 50
- Biosphere, 44, 47, 53, 56, 62, 63
- Biotechnology, 6, 20, 49, 50, 51, 54, 65, 66
- Birds, 4, 24, 43
- Botany, 43
- Botswana, 17
- Bratislava, 20
- Brazil, 69
- Brisbane, 12
- Buenos Aires, 49
- Burkina Faso, ii, iii, 60
- Cameroon, iii, 4, 5
- Capacity building, 17, 32, 39, 42, 50, 51, 53, 54, 55, 56, 70, 73
- Cape Floral Kingdom, 4
- Cape Region, 4
- Carbon sink, 5
- Central Africa, 4, 36
- Climate, 67
- Colonial empire, 9, 10
- Committee on Science and Technology, 1
- Common but differentiated responsibilities, 54
- Common concern of humankind, 20, 24, 53, 63
- Common heritage of mankind, 18, 53, 62
- Comoros, iii
- Conference of the Parties, ii, 2, 7, 12, 14, 17, 20, 25, 36, 49, 50, 70
- Congo, iii
- Congo, Democratic Republic of, 4, 10
- Constitutions, 1, 59, 60, 61, 62, 67, 69, 70, 72, 73
- Continental shelf, 44
- Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (1981), 33, 36

- Convention for the Establishment of the Lake Victoria Fisheries Organisation (1994), 33, 35
- Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (1985), 33, 36, 41, 44, 53
- Convention for the Protection of the Mediterranean Sea Against Pollution (1976), 37, 45
- Convention for the Protection of the World Cultural and Natural Heritage (1972), 2, 8, 14, 24, 26, 32, 42, 43, 52, 62
- Convention on Biological Diversity (1992), ii, 1, 2, 4, 7, 8, 14, 18, 20, 22, 24, 25, 32, 36, 39, 42, 44, 46, 47, 48, 49, 50, 51, 53, 62, 65, 66, 68, 70, 71
- Convention on Fishing and the Conservation of the Living Resources of the High Seas (1958), 2, 8, 9, 26, 42, 43, 45, 51
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973), ii,iii, 2, 8, 9, 14, 17, 20, 24, 32, 41, 42, 45, 46, 47, 53, 62
- Convention on the Conservation of Migratory Species of Wild Animals (1979), iii, 1, 2, 8, 17, 25, 32, 37, 42, 43, 44, 45, 46, 48, 53
- Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1976), 3
- Convention on the Protection of African Wild Fauna (1900), 10
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1971), ii, iii, 2, 8, 12, 14, 24, 26, 42, 43, 45, 52, 62
- Convention Relative to the Preservation of Fauna and Flora in Their Natural State (1933), 9, 10, 41, 45
- Coral reefs, 4
- Corruption, 65
- Côte d'Ivoire, 4
- Courts, 63, 73
- Cultural heritage, 8, 14, 24, 26, 32, 43, 52, 53, 60, 67
- Culture, 5, 12
- Customary international law, 32
- Deserts, 17
- Developed countries, 1, 32, 48, 49, 50, 56, 65, 66
- Developing countries, 1, 17, 32, 47, 48, 49, 56, 66, 69
- Development planning, 12, 40, 52, 53, 54, 64, 65, 69
- Directive principles of state policy, 60
- Dispute settlement, 67, 72
- Djibouti, iii, 7
- Domestication of biodiversity conventions, 1, 39, 40, 42, 58, 67, 68, 72
- Domestication of treaty law, 40, 72
- Dualist tradition, 40
- Dutch Government, ii
- Duties, 59, 60, 62, 73
- Earth Summit (1992), 18, 20, 22, 47
- East Africa, ii, 4, 7, 45
- Eastern Africa, 4, 36
- Eastern Arc Mountains, 4
- Ecology, 12, 43, 44, 48, 56, 60, 61, 62
- Economic Community of West African States, 6
- Ecosystem approach, 7, 9, 12, 24, 25, 45
- Ecosystems, 4, 6, 9, 12, 14, 22, 24, 25, 26, 32, 33, 36, 37, 39, 41, 42, 43, 44, 45, 46, 51, 56, 58, 60, 61, 63, 64, 67, 72
- Education and awareness, 14, 20, 39, 52, 56, 68, 69,
- Egypt, iii, 4, 10
- Endangered species, 9, 13, 14, 17, 32, 36, 41, 46, 47, 53
- Endemic species, 4
- Energy, 4, 5, 60, 69
- Environmental audit, 59, 64
- Environmental conservation, 58, 59, 62, 67
- Environmental conventions, ii, 2, 6, 12
- Environmental degradation, 5, 60, 61
- Environmental dispute settlement, 59
- Environmental impact assessment, 20, 40, 53, 54, 59, 64, 67, 72
- Environmental information, 54, 70
- Environmental law, ii, 40, 48, 67, 69
- Environmental legislation, ii, 63
- Environmental litigation, ii
- Environmental management, 18, 58, 59, 61, 62, 67
- Environmental monitoring, 40, 59, 64
- Environmental planning, 58
- Environmental protection, 1, 60, 62, 70, 73
- Environmental standards, ii, 61, 62, 64, 67, 72
- Environmental treaties, ii
- Equatorial Guinea, iii
- Equitable sharing of benefits, 18, 24, 40, 47, 48, 50, 56
- Eritrea, iii, 7, 60
- Ethiopia, iii, 6, 7
- Eurasian states, 37
- Europe, ii
- Exclusive economic zone, 18, 32, 44, 46
- Expert Workshop, iii

Export revenues, 4

Ex situ conservation, 9, 20, 32, 46, 54, 56, 66, 69

Fauna, 4, 10, 12, 14, 20, 32, 36, 39, 41, 43, 45, 46, 47, 52, 53, 55, 56, 60, 67, 69

Financial assistance, 1, 32, 39, 45, 48, 54, 70, 71

Fisheries, 4, 5, 17, 32, 36, 69

Flora, 4, 10, 12, 14, 20, 32, 36, 39, 41, 43, 45, 46, 47, 52, 53, 55, 56, 60, 67, 69

Food and Agricultural Organisation of the United Nations, ii, 50

Food security, 4, 5

Foreign exchange earnings, 4

Forests, 4, 5, 10, 12, 24, 42, 48

Framework convention, ii

Framework environmental law, ii, 58, 61, 70, 72

Framework statute, 58, 59, 61, 64, 66, 67, 68, 69, 72, 73

Free market, 47

Future generations, 14, 24, 40, 53, 54, 56, 59, 60, 61, 63, 64, 72

Gambia, iii

Game reserves, 52

Garamba Park, 10

Genetic resources, 6, 18, 20, 25, 26, 32, 33, 39, 40, 47, 48, 49, 50, 54, 56, 65, 66, 67, 68, 72

Germany, 17

Ghana, iii, 4, 60

Global commons, 51

Global conventions, 2, 6, 7, 12, 39, 41, 71, 72

Global Environment Facility, 1, 3

Gorongosa Park, 10

Great Britain, 40

Guinea, iii

Habitat, 4, 5, 6, 8, 10, 12, 17, 22, 24, 25, 26, 32, 33, 36, 37, 39, 41, 42, 43, 44, 45, 46, 51, 58, 63, 64, 67, 72

Hard law, 8

Harmonisation of laws, ii, 17, 36, 67, 70

High seas, 9, 18, 26, 43, 44, 51

Hydrology, 43

Implementation of conventions, 22, 40, 42

Indicators of due implementation, 73

Indigenous and local communities, 20, 55, 56, 65, 68

Indigenous conservation experience, 48, 49, 51, 54, 56, 65, 72

Industrialised countries, 6, 20, 49, 65, 67

In situ conservation, 8, 9, 10, 20, 25, 32, 44, 46, 54, 66, 69

Intellectual property rights, 6, 20, 48, 49, 50, 54, 56, 65, 67

Intergenerational equity, 12, 24, 62

Inter-Governmental Authority on Development, 6, 7

International biodiversity law, 1, 58

International co-operation, 1, 12, 17, 22, 24, 32, 36, 39, 41, 46, 47, 52, 53, 54, 55, 62, 63

International trade, 9, 15, 17, 25, 32, 46, 47, 48, 49

International Tropical Timber Agreement (1994), 46, 47

International Waterfowl Research Bureau, 12

Intragenerational equity, 40

IUCN, ii, 14

Joint Work Plan, 14

Judicial proceedings, 73

Judicial process, 40, 59, 61, 62

Kagera Park, 10

Kenya, ii, 4, 6, 10, 59

Land management, 9, 32, 72

Land tenure, 72, 73

Land use, 6, 12, 42, 43, 61, 73

Laws, ii, 40, 50, 56, 59, 60, 61, 62, 64, 65, 67, 68, 69, 70, 71, 72

Legislation, 51, 55, 58, 61, 62, 63, 64, 65, 66, 67, 69

Legislature, 60, 61, 63, 72

Lesotho, 6, 59

Limnology, 43

List of Wetlands of International Importance, 13, 43

Livestock, 4

Local authorities, 60

Locus standi, 61, 73

London, 45

Lusaka Agreement on Co-operative Enforcement Directed at Illegal Trade in Wild Fauna and Flora (1994), ii, 2, 8, 20, 32, 33, 44, 46, 47, 55, 62

- Madagascar, iii, 4, 6
- Malawi, ii, iii
- Mali, iii
- Mammals, 4
- Maputo, ii
- Marine environment, 18, 44, 45
- Marine pollution, 6, 32, 36
- Mauritius, 4
- Mediterranean, 37
- Memorandum of Co-operation, 14
- Micro-organisms, 4, 22, 39, 42
- Migratory species, 17, 18, 24, 36, 44, 46, 53
- Monist tradition, 40
- Morocco, 4
- Mozambique, ii, 10
- Municipal laws, 44, 59
- Namibia, 17, 60
- National environment action plans, 12, 55
- National parks, 10, 41, 52
- National planning, 12, 40, 52, 56
- National sovereignty, 2, 18, 20, 41, 53, 65
- Natural heritage, 8, 14, 24, 26, 32, 43, 43, 52, 53
- Nature reserves, 10, 41, 43, 52
- Nigeria, iii, 4
- Non-governmental organisations, 12, 55, 56
- Non-legal mechanisms, 69, 71, 72, 73
- Non-self-executing treaties, 40
- North Africa, 37
- Organisation of African Unity, ii, iii, 10, 12, 26
- Paris, 14
- Penal sanctions, 67, 69, 72
- Political will, 65, 69, 72
- Poverty, 49, 55, 56, 63, 69, 72
- Precautionary principle, 20, 24, 40,
- Present generations, 40, 53, 54, 56, 59, 60, 61, 63, 64, 72
- Preventive principle, 20, 24, 54, 56, 62
- Prior informed consent, 20, 24, 54, 56, 62
- Property, 5, 59
- Protected areas, 25, 32, 36, 37, 44
- Protocol Concerning Mediterranean Specially Protected Areas (1982), 37
- Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region (1985), 2, 33, 36, 41, 44, 46
- Protocol Concerning Specially Protected Areas and Biological Diversity of the Mediterranean (1995), 2, 37, 45, 46
- Protocol to Amend the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (1982), 14
- Public education and awareness, 20, 51, 54, 55, 60, 70, 73
- Publication interest, 60, 61, 68
- Public participation, 56, 60, 62, 69, 73
- Rainfall, 5
- Range states, 2, 17, 36, 37, 39, 44, 45, 58
- Ratification, 2, 33, 37, 40, 62, 71, 73
- Regional conventions, 6, 33, 36, 39, 41, 58, 71, 72, 73
- Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (1982), 37, 45
- Regional integration organisations, 37
- Regional international law, ii
- Regional Seas Programme, 36, 41
- Reptiles, 4
- Rights, 52, 59, 60, 61, 62, 64, 65, 73
- Right to environment, 59, 60, 61
- Rio Declaration (1992), 41, 67
- Rio de Janeiro, 18, 22
- Rwanda, 10
- Sahel, 6
- Sao Tome and Principe, ii, iii
- Savannahs, 4
- Scientific Council, 1, 32
- Scientific methods, 14, 15, 24, 32, 36, 39, 43, 52, 53, 54, 56, 64, 65, 66
- Sectoral statutes, 11, 59, 62, 66, 67, 68, 69, 72, 73
- Self-executing treaties, 40
- Senegal, iii
- Serengeti National Park, 10
- Seychelles, 4
- Shared resources, 36, 52, 67, 70, 72
- Soft law, 8, 41
- Somalia, 7
- South Africa, 4, 6, 10, 61
- Southern Africa, 6
- Sovereignty, 1, 18, 24, 48, 58, 66
- Species, 4, 6, 7, 10, 12, 15, 17, 18, 22, 24, 25, 26, 32, 33, 36, 39, 41, 42, 44, 45, 46, 51, 53, 56, 58, 63, 64, 65, 67, 72

- Statute law, 59, 62, 63, 67, 69, 72
- Steering Committee, ii
- Stockholm Action Plan (1972), 17
- Stockholm Declaration (1972), 44
- Subsidiary agreements, 17
- Subsidiary Body on Scientific Technical and Technological Advice, 1
- Subsidiary legislation, 66
- Successor Agreement, 46, 47, 48,
- Sudan, iii, 7, 10
- Sukuma, 5
- Sustainable development, 9, 12, 18, 25, 32, 40, 44, 55, 56, 60, 61, 62, 63
- Swaziland, iii
- Tanzania, iii, 4, 5, 10
- Technical and scientific co-operation, 20, 32, 42, 55, 56
- Technological assistance, 1, 48, 54, 55, 71
- Technology transfer, 6, 20, 47, 48, 49, 50, 51, 54, 65, 66, 68
- Territorial sea, 41, 43, 44
- Threatened species, 43, 46
- Togo, iii
- Tourism, 4
- Trade, 6, 15, 17, 20, 32, 37, 41, 42, 46, 47, 48, 49, 55, 56, 65
- Trade-related Aspects of Intellectual Property Rights, 48, 49, 67, 68
- Traditional conservation techniques, 6, 15, 17, 20, 32, 37, 41, 42, 46, 47, 48, 48
- Treaties, 48, 51, 61, 71, 72, 73
- Treaty law, 1, 2, 9, 39, 40, 41, 42, 52, 58, 59, 62, 64, 71, 72, 73
- TRIPS Council, 50
- Tsavo National Park, 10
- Tunisia, 4
- Turkana, 5
- Uganda, ii, iii, 60, 62
- Union for the Protection of New Varieties of Plants, 50
- United Nations Conference on Environment and Development (1992), 32
- United Nations Conference on the Law of the Sea (1958), 9
- United Nations Convention on the Law of the Sea (1982), 2, 8, 9, 17, 26, 32, 41, 42, 44, 46, 53, 54
- United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (1994), 1, 2, 8, 9, 22, 32, 42, 44, 62, 70, 71
- United Nations Development Programme, ii
- United Nations Educational, Scientific and Cultural Organisation, 14
- United Nations Environment Programme, ii, iii, 12, 20, 26, 36, 69
- United Nations Framework Convention on Climate Change (1992), 2, 18, 22, 32
- United Nations General Assembly, 66
- Uruguay Round, 48, 49, 67
- Victoria, Lake, 36
- Washington, DC., 15
- Waterfowl, 13, 43, 46, 52
- Water resources, 12, 22, 32, 36, 42, 43, 44, 52, 56, 60, 61, 67, 69
- West Africa, 4, 6, 36
- Wetlands, 4, 8, 12, 13, 14, 17, 24, 42, 43, 52, 60
- Wildlife, 4, 5, 6
- Woodland, 43
- World Bank, ii,
- World Charter for Nature, 41
- World Conservation Strategy (1980), 41
- World Intellectual Property Organisation, 50
- World Trade Agreement, 49
- World Trade Organisation, 49, 50
- Zambia, 4, 5
- Zimbabwe, 4, 6, 17
- Zoology, 43

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