

**DEVELOPMENT OF
ENVIRONMENTAL PROTECTION LEGISLATION
IN THE ECA REGION**

**Joint ECA/UNEP Project No. FP/1002-79-01(2000)
End of Project Report prepared by the
Environment Co-ordination Office**

October 1980



**UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA**

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PREFACE

This end-of-project report, E/CN.14/ECU/5 to the joint ECA/UNEP project No.FP/1002-79-01 (2000) on Development of Environmental Protection Legislation in the ECA region, has been prepared as an information input into the meeting of the Intergovernmental Regional Committee on Human Settlements and Environment scheduled for March 1982 in Addis Ababa.

One of the objectives of this report is to disseminate the recommendations and guidelines drawn up at the Seminar for Lawyers on the Development of Environmental Protection Legislation in the ECA region, and adopted by resolution 412(XVI) at the ECA Conference of Ministers in April 1981, to the national environmental machineries within the individual member States of ECA, through their technical experts and Ministers responsible for environmental matters. Since this project report is an in-depth study of environmental protection legislation covering over twelve major sectors of development in only fifteen selected African countries, it is essential that this statistical sample be tested within as many other African countries as possible, if the report must have a regional credibility. Hence, to obtain the feedback on the recommendations and guidelines so necessary for follow-up action and technical assistance, the report is being produced as a joint ECA/UNEP publication for as wide distribution as possible.

At this juncture, it is essential to note that this publication is not just a compilation of the documents discussed at the Seminar for Lawyers including the seminar report itself. As indicated in annex C, there are twelve country reports which had to be harmonized with the mission reports to the selected African countries, through deletions, additions and revisions as pointed out during the discussions and debates of the Seminar for Lawyers and at the Technical Preparatory Committee of the Whole (TEPCOW) for the ECA Conference of Ministers. The synthesis of the various activities forming the input to the project have resulted in this final output, the end-of-project report as the basis for follow-up action on the Development of Environmental Protection Legislation in the ECA region.

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Addis Ababa

October 1981

ACKNOWLEDGEMENTS

The Economic Commission for Africa is extending its gratitude and profound thanks to all those individuals, United Nations bodies and specialized agencies, intergovernmental and non-governmental organizations which have contributed towards this ECA-executed project on the Development of Environmental Protection Legislation in the ECA region. This end-of-project report for the joint ECA/UNEP project FP/1002-79-01(2000) would not have been in the form of a publication without their contribution and assistance in the realization of General Assembly resolution 32/197 concerning the restructuring of the economic and social sectors of the United Nations as an executing body.

Special mention must be made of the team of consultants comprising four legal experts with varied experience and responsibilities at the national and international levels who were able to sacrifice a part of their time in order to carry out this assignment. Also, the co-operation of the technical experts in the selected African countries surveyed is very much appreciated, in that they facilitated the work of the consultants and they were able to find time within their busy schedules to prepare their country papers to the Seminar for Lawyers.

Finally, special thanks are extended to the Legal Office of the Food and

Agriculture Organization in Rome for their legal and technical advice in the execution of the project; to the discussion leaders from the faculty of law of various African universities, who were involved in piloting the debate in the Seminar for Lawyers, towards the development of guidelines for future action; for the contributions of the Organization of African Unity (OAU), the International Union for the Conservation of Nature and Natural Resources (IUCN), the International Institute for Education and Development (IIED), to the African Regional Standards Organizations (ARSO) and to the United States Agency for International Development (USAID) (which was unable to attend), in the deliberations of the Seminar for Lawyers. The Environment Co-ordination Office staff and the supporting Conference Services staff within the ECA secretariat deserves as much credit for this work.

CHAPTER I
INTRODUCTION

Objectives of the Project

1. Environmental law and legislation are important management tools for environmental planning and control of development. To assist member States in the ECA region to develop their national environmental legislation a project /FP/1002-79-01(2000) was initiated in September 1979 between the United Nations Economic Commission for Africa (ECA) as the implementing agency and the United Nations Environment Programme (UNEP) in compliance to Decision 35(III) of the third session of the Governing Council of UNEP in 1975.

2. The main objectives of the project on the development of environmental protection legislation in the ECA region, can be summarized as follows:

(a) To survey and analyse existing environmental legislation in the region with a view to the protection and improvement of the environment;

(b) To prepare guidelines for the development of environmental protection legislation adapted to the specific environmental conditions in the region;

(c) To provide orientation towards environmental thinking for legal draughtsmen and experts for promoting environmentally-sound implementation of

existing legislation and for the development of new instruments of legislation;

(d) To improve upon national environmental machineries to facilitate the formulation and enforcement of national environmental legislation and regulations.

Inputs for the implementation of the project

3. The strategies for achieving the above objectives for the development of environmental law and legislation involved technical assistance for a survey mission to 15 selected African countries, followed by a Legal Expert Meeting and a Seminar. These meetings exposed lawyers to environmental problems and facilitated the exchange of ideas and relevant information which enabled them to make recommendations where action was needed on any sector of the environment, and to prepare guidelines for environmental legislation.

4. In this survey of environmental protection legislation in the ECA region, a modified version of a questionnaire used for a similar project in the ESCAP (Asia and the Pacific) region in 1977 was used. Modifications were concentrated mainly on the questions dealing

with legislation for particular environmental sectors to reflect their importance in the African situation. The questionnaires were sent to the countries for completion in advance of the consultants' missions.

5. Four legal experts, as consultants in the project, each made a six-week survey of one of the following four groups of African countries, between December 1979 and February 1980;

(a) The Gambia, Ghana, Uganda and Ethiopia;

(b) Senegal, Ivory Coast, Burundi and Zaire;

(c) Zambia, Swaziland, Botswana and Mozambique;

(d) Morocco, Tunisia and Egypt.

The project consultant spent 10-14 days for in-depth study in each of the two countries underlined in a group and then made a brief stop of three to five days in the remaining country(ies) in the group, to collect the completed questionnaires.

6. It should be noted that even though the selected African countries were put into four ad hoc groups for the survey missions, there exists a great diversity in political systems, cultural heritage, economic conditions and geographical situation between the countries of Africa. It is within such a diverse framework that an attempt is being made to analyse the environmental situation in the sample taken from the continent. For instance, the majority of African countries gained political independence from the English and the French colonial powers about two decades ago, whilst Mozambique was only freed from the Portuguese in June 1975. Also, the basic pattern of environmental legislation found in the countries seems to be a reflection of the past political systems. Furthermore, the kinds of industry dominant in the

country, the socio-cultural heritage in relation to land tenure and the geographical situation (coastal/land-locked), would also determine priorities for environmental legislation in a particular country. Finally, it must be stressed that the statistical size of the sample (number of countries studied: twelve out of 50) may be inadequate for a meaningful study analysis of the status quo, even though the sample is representative of the region. And so, the evaluation of the results and the recommendations drawn has been done with some caution.

Outputs of the project

7. After the consultants' missions, an Expert Working Group meeting was held at ECA between the consultants and United Nations organizations (FAO, WHO, apologies from UNEP and UNESCO) from 3 to 7 March 1980. The draft mission reports of the consultants were discussed and the group recommended that a comprehensive mission report be submitted by each consultant in two parts; Part I as a survey report based on responses to the questionnaires for all the countries in the group, and part II as an in-depth report on the two countries studied by each consultant. ^{1/} At the meeting, plans were also made for the Seminar on Environment Protection Legislation. Discussion leaders were selected for the following sectoral topics on environmental legislation for the seminar: marine and coastal zone; wildlife; natural biological resources; mineral exploitation; pollution; environmental educa-

^{1/} The consultants' mission reports and completed questionnaires are available at the ECA secretariat. Completed questionnaires were received from Botswana, the Gambia, Ivory Coast, Ghana, Ethiopia, Uganda, Senegal, Zambia, Swaziland, Mozambique, Morocco and Tunisia.

tion; human settlements, cultural heritage and land use.

8. The Seminar for Lawyers on the Development of Environmental Protection Legislation in the ECA region was held at the ECA headquarters, Addis Ababa, from 29 September to 3 October 1980. The seminar was attended by government nominated legal experts from Botswana, Egypt, Ethiopia, Ghana, Ivory Coast, Morocco, Swaziland and Tunisia. The ECA secretariat was assisted at the Seminar by consultants from the University of Sierra Leone, University of Cotonou (Benin), University of Ghana (Legon), University of Nairobi (Kenya), University of Dar-es-Salaam (Tanzania), the Institute of International Relations and University of Yaounde (Cameroon). The following United Nations organizations - UNDP, UNEP, WHO and FAO, two intergovernmental organizations OAU and ARSO and two nongovernmental organizations - IIED and IUCN were also present at the seminar.

9. The seminar was opened by the Executive Secretary of ECA, Mr. Adebayo Adedeji who recalled the over-all purpose of the seminar, namely, to make use of environmental law machineries as management tools for environmental planning and control of development in the continent. Special emphasis was placed on the development of sectoral environmental legislation dealing with priority areas approved by the Heads of State and Governments of the Organization of African Unity at the first ECA/OAU Economic Summit meeting in Lagos in April 1980. The Lagos Plan of Action ^{2/} has identified the following areas of environmental concern: environmental health, sanitation and the provision of safe drinking water supply; deforestation and soil degradation; desertification and drought; marine pollution and conservation of marine resources; environmental aspects of human settlements planning; mining develop-

ment; air and water pollution control; environmental education and training; environmental legislation and information dissemination. It was also pointed out that the guidelines prepared by the seminar, should be understood as a set of principles to be taken into account in the formulation of environmental legislation. It was inadvisable to use the guidelines as a universal model owing to the socio-cultural diversity of the peoples and the need to respect government priorities.

10. The representative of the Executive Director of UNEP focused attention on environmental law in the context of environmental management. Environmental law was described as a new dimension to national and international law. It was noted that this seminar may well be the nucleus for a long-term environmental law programme in Africa.

11. The agenda for the seminar concentrated on the following four areas with supporting documents prepared by the secretariat or participants as indicated below:

(a) Discussion on the consultants' mission reports summarized by the secretariat as document E/CN.14/ECU/2 'Survey and Analysis of Environmental Protection Legislation in selected African Countries ;

(b) Debate on selected sectoral topics of environmental legislation based on the Discussion Leaders Annotated Papers on Specific Topics in document E/CN.14/ECU/3 (a-g);

(c) Guidelines for developing environmental protection legislation based on document E/CN.14/ECU/1 Environmental Protection Legislation Needs in Africa

^{2/} E/CN.14/781/Add.1.

(d) Input from the participants country papers 3/ submitted during the seminar in the discussions, debates and for the formulation of the guidelines.

This end-of-project report is compiled from the above three secretariat documents, the ten country reports submitted as well as from the "Report of the Seminar" (E/CN.14/ECU/4/Rev.1).

12. The report of the Seminar for Lawyers (document E/CN.14/784) with its recommendations were endorsed by the ECA Conference of Ministers at its seventh meeting held in Freetown in April 1981. The ECA Conference also adopted a resolution 412(XVI) - strengthening of national capabilities for environmental legislation, assessment and management as a development strategy, which urged member States of the Commission (if they have not already done so):

- (i) To review critically their environmental protection legislation on the various sectors of development in the region, and to take the necessary steps to enact legislation, supported by regulations and administrative measures, to fill up the gaps identified in the review;
- (ii) To incorporate environmental provisions, policies and principles into their development plans and to create the institutional framework for developing environmental protection legislation;
- (iii) To promote the development of environmental consciousness

3/ Participants country reports were received from Botswana, Burundi, Ethiopia, Ghana, Ivory Coast, Morocco, Swaziland, Tunisia, Uganda and the Gambia.

in the public through intensive and sustained effort at disseminating environmental information for use in the formal and non-formal educational system in the country;

- (iv) To continue legislating for the preservation, restoration, reconstruction and registration of items of historical sites, ancient monuments and relics, antiquities and artifacts from archeological excavations, for the preservation of their cultural heritage, for scientific study and for the development of tourism.

CHAPTER II

THE NEED FOR ENVIRONMENTAL PROTECTION LEGISLATION

A. Natural resources and wildlife conservation

13. The environmental problems associated with the conservation of natural resources which includes wildlife, are identified as:

- (i) Deforestation through the exploitation of timber for export as round logs, sawn boards, veneer and particle board and through clearing of forested areas and woodlands for modern agricultural plantations, shifting cultivation, firewood gathering and charcoal preparation;
- (ii) Soil deterioration through erosion, leaching or compaction to form lateritic hard pans after removal of the vegetation cover;
- (iii) Desertification which is a terminal process of deforestation and soil deterioration resulting in land degradation and total loss of the capability of the soil to support plant life;

- (iv) Depletion of non-renewable mineral resources such as precious metals, commercial metal ores (bauxite, rutile, iron and so on), non-metallic deposits used as fertilizers, diamond, graphite, coal and mineral oil;
- (v) Wastage of energy especially when derived from non-renewable resources such as fossil fuel;
- (vi) Mismanagement of exploitation of renewable resources (forests, water, crops, livestock, fishes) so that the ecological balance is upset with a loss of the capacity of the ecosystem to regenerate the resources being harnessed;
- (vii) Threatening of wildlife species to the point at which big game mammals, rare birds, reptiles and fishes, as well as rare and endemic plants become endangered in their respective natural habitats.

14. The critical activities in the exploitation of terrestrial natural resources are identified above as requiring urgent environmental protection legislation. For deforestation, soil deterioration, desertification and land degradation, emphasis must be placed on preventive measures rather than the more costly, curative rehabilitation programmes to correct long-standing malpractices in development practices. Conservation policies must be clearly spelt out at the national level for better environmental management strategies for saving energy and various non-renewable resources that form the basis for economic development.

15. In law enforcement for the conservation of natural resources, emphasis should be placed on the provision of alternatives to assist the local population to maintain conservation laws. For example, to prevent deforestation whereby forest trees are cut down for firewood and charcoal making, woodlots of fast-growing trees should be provided around towns and villages and the practice of agrisilviculture should be encouraged during the fallow period in shifting cultivation. This means that the law-makers should co-ordinate with the planners, policy-makers and managers of natural resources such as agriculturists, foresters, miners and so on, to make their law enforcement more effective. In this way, the control of deforestation around African towns can halt the resulting soil erosion and help to contain the spread of the desertification process.

16. Other areas of ineffective law enforcement for the conservation of natural resources are in the execution of contracts drawn up for timber exploitation, commercial fishing and mining concessions. In most cases, the environmental protection component is written into the contract but the enforcement is lacking or extremely inefficiently executed by the department concerned. For example, in timber

exploitation the depleted areas should be re-afforested with useful species and managed for several years afterwards. The forest industries company is not even interested in replanting after timber harvesting, how much less in a long-term environmental management exercise. Similarly, mining companies fail to rehabilitate mined-out areas by removing the unsightly and toxic land tippings, levelling the land and filling up ponds especially where open-cast mining is practiced. They should also restore the top soil to the exposed sub-soil for replanting of grass cover or for agricultural cultivation. The question of fishing practices will be discussed under marine resources.

17. There is no doubt that the majority of African States have laws to protect wildlife as a result of a colonial legacy. What may be lacking is the scope of the legislation to cover the modern concept of wildlife conservation to include the whole range of threatened and endangered species of plants and animals, including the protection of their natural habitats for their continued and undisturbed survival. Environmental legislation should regulate hunting and concentrate on wildlife poaching for sale of exotic species to zoos and for trade in animal products such as skins, trunks, tusks, stuffed curios, trophies, ivory and horn carvings. Within the framework of the law, the wildlife articles should make provision for rules to regulate the taxidermist trade in wildlife and its numerous products. Other areas of concentration for a balanced legislation on wildlife should be the effect of predators and vermins on crops and cattle life, the traditional rights of indigenous peoples in a protected area to crop the wildlife and the effective control of hunting licenses especially to cultural societies supported by the local community.

18. Because of the gravity of the destruction of natural resources, the World Conservation Strategy ^{4/} has been launched on 5 March 1980 by IUCN, UNEP and WWF in collaboration with FAO and UNESCO. Three main objectives of the strategy are:

(a) To maintain essential ecological processes and life-support systems (e.g. regeneration, life cycles, recycling of nutrients and wastes, carbon assimilation, etc.);

(b) To preserve genetic diversity (for breeding programmes) to improve crops, domesticated animals and micro-organisms used in industrial systems; and

(c) To ensure the sustainable utilization of species and ecosystems as resources (forests, wildlife, fisheries and pastures).

It was pointed out also that since development must take place to improve economic and social welfare, conservation must be insisted on to sustain the development processes and to support the productive life systems for our survival. The strategy identifies priority conservation issues and recommends effective ways for dealing with them, through the integration of conservation practices into the development process. One of the constraints to effective conservation is inadequate legislation and lack of law enforcement, hence the strategy recommends reviews of legislation for the protection of living resources especially.

19. In the conservation of natural resources, environmental legislation should cater for new kinds of resources and future needs. This is well exemplified in the use and conservation of energy. At present, most developing

^{4/} World Conservation Strategy by IUCN, UNEP and WWF, 5 March 1980.

countries have arisen to the need to protect the environment as more and more natural gas and oil are exploited, especially in off-shore areas where problems of effective law enforcement still exist. However, it should be realized that the fossil fuels (coal, gas and oil) are non-renewable sources of energy. Environmental legislation should start catering for the development and exploitation of the more lasting, renewable energy sources such as bio-gas from animal dung and refuse, solar energy, wind force and the new gasohol fuel for cars produced by fermentation of molasses residue in the sugar cane industry. These sources of energy are environmentally clean and so the lawyers should join forces with the environmentalists in promoting the development of the new sources of energy within the framework of the national economic development plans of a country.

B. Marine resources and coastal zone development

20. The critical areas in the development of marine resources and its coastal zones are concerned with fisheries exploitation in its widest sense, with exploration and exploitation of mineral oil and manganese nodules in the sea bed, with pollution of the sea and coastal areas and with the conservation of living marine fauna and flora. In the exploitation of fisheries, many developing countries lack the financial resources for commercial fishing using trawlers and a refrigerated mother ship for storage and processing, including canning and labelling, of fish products such as tuna, shrimps, oysters, lobsters and herring for export. Most coastal African countries enter into contract with many foreign trans-national fishing companies for the exploitation of

their fisheries resources within their territorial waters. ^{5/} A critical examination of existing fishing contracts would reveal that there are many loopholes and legislative gaps enabling the foreign country to salt away marine resources for next to nothing.

21. African governments must review their contracts with foreign fishing companies to ensure that the mother ship is based permanently at port. This will facilitate the monitoring of its activities for the various kinds of taxes that are due for the raw material, the processing and export of the finished products as frozen shrimps in labelled boxes or as tinned tuna. The most recent survey estimates that African countries are losing up to 50 per cent of their living marine resources through practices that are not controlled by legislation. Even now, certain areas in the West African coast have been depleted of certain species of fishes that were once abundant. Coupled with the effects of oil pollution, it would not be long before overfishing would lead to marine desertification and sterility of certain parts of the sea with absence of any living marine resources.

22. There is no dispute about the alienable right of a sovereign State to own and deploy all its natural resources - terrestrial, marine and human - for the benefit of the people. But what percentage of the cost of the finished product does a developing country receive for the exploitation of its raw materials? Over-exploitation of natural resources generally cause environmental damage whether it is done

^{5/} Co-operation and trade in fish and fish products in the ECOWAS sub-region. Joint ECA/FAO Agriculture Division study, 1979.

by the State by virtue of its permanent sovereignty over its natural resources, or by a foreign power for the purpose of immediate profit. Hence, developing countries must ensure a rational management and conservation of marine resources through proper legislation and adequate law enforcement.

23. Environmental legislation for the protection of the marine environment against oil pollution by ships should emphasize the establishment of oil records for the transportation of oil by the ship to indicate when and where oil tanks were washed and the quantity of oil in water during deballasting. There should also be the provision of special port facilities for the loading, discharging and bunkering of oil by ships at port. Law enforcement for marine oil pollution control should emphasize institutional arrangements and contingency plans to clear the mess since oil spills are accidental. African governments must spell out responsibility for the environmental damage caused by marine pollution by foreign ships and develop effective mechanism for the enforcement of the legislation. ^{6/} The Conference on the Law of the Sea should assist governments in designing the conventions, protocols and practices on marine oil pollution in order to combat any trans-boundary affects.

24. It was pointed out in a report on Coastal Area Management and Development ^{7/} that the growing use of coastal areas

^{6/}Legal aspects of marine environment protection in the gulf of Guinea and adjacent coastal areas. FAO/UNEP report 1979.

^{7/} E/5648, 1974. Report of the United Nations Secretary-General on Coastal Area Management and Development. Ocean Economics and Technology Office, Department of Economic and Social Affairs, United Nations Headquarters.

for settlement, agriculture, industry and amenity, also creates problems which are typical of the management of a development economy. What is unique to the coastal area development in African countries are evident in the construction of new quays or the improvement of old ports, the building of jetties at wharfs, ferry landings, oil rigs for offshore drilling, oil storage and other facilities. The most common environmental problem arising from coastal zone development is sea coast erosion. This results in undermining of the shore line when it is a cliff or the formation of sand-bars across shipping lanes in harbours, due to the movements of sandy beaches as the original wave and tidal patterns are altered by the development scheme. Hence, if the law-makers cannot provide effective legislation for the protection of coastal zones, they should support the environmentalist in convincing development planners that environmental considerations have to be taken into account to prevent and minimize environmental damage.

C. Human settlements, population migration and land use planning

25. The environmental problems associated with human settlements in a developing country are a result of lack of development to provide the basic necessities of life. They are evident as poor sanitation and health standards, lack of drinking water and piped water, malnutrition and inadequate variety of food for a balanced diet, poor transportation and communications within urban areas and with the rural areas, terrible working conditions with negligible safety precaution against occupational hazards in industrial factories and inadequate leisure for the enjoyment and appreciation of cultural values in the society.

26. Environmental legislation per se cannot promote the economic development of a poor community but it can create a conducive atmosphere for economic development. For example, African countries have existing laws since colonial days to promote good sanitation for the prevention of indiscriminate refuse dumping, for cleaning of compounds, for the prevention of breeding of water-borne diseases (malaria and yellow fever), for the use of latrines to prevent the spread of diarrhoeal diseases (dysentery and cholera) and schistosomiasis, and for the existence of good working conditions in industry. But what are the economic, political or socio-cultural constraints preventing post-independence effectiveness of sanitation law enforcement in Africa today? Environmental health laws assist in the improvement of a healthy body so that increased manpower resources are available for economic development, which otherwise would have been lost as man-days through debility and sick leave. What is lacking is the effective enforcement of the existing laws; and so, environmental legislative activities should focus on clarifying policy options for effective law enforcement.

27. Besides the sanitation and health aspects of human settlements in developing countries there is the problem of population migration from rural to urban areas. Population migration is mainly responsible for the development of urban slums and shanty towns with their associated environmental health problems. Also, the rural labour force for agricultural development is lost to the urban areas where loafing, loitering and petty thieving become more prevalent. Environmental legislation can focus on the eradication of urban population problems and also help to promote the development of integrated rural programmes to create work for the rural labour force.

28. The exodus of young and energetic people from rural to urban areas has accelerated the growth of cities at the expense of rural settlements and fertile agricultural lands. Under the stress and strain of urbanization, the contemporary African city has been growing in a most disorderly manner with all the disadvantages of deficiencies in utilities and basic services in education and health. As a result, a great many African cities are now characterized by urban decay, suburban sprawl into slums and shantytowns with squatters, social disorders and cultural erosion, traffic congestion, economic distress and inefficient administration. To restore order into the growth of African cities, it is necessary to undertake a comprehensive land-use planning, develop a national lands policy and formulate and enforce land-use legislation with supporting regulations.

29. To summarize this section, effective land-use planning is the key to the solution of environmental problems of human settlements including population migration. Land-use planning involves the allocation of the land resources to its best possible use and usage, and it involves the protection of certain areas for its natural vegetation and the conservation of its wildlife species. Proper zoning involves the allocation of land for urban settlement, for an industrial zone, for agriculture, for transport and communications systems and, for leisure and the aesthetic quality of the landscape. Although most African countries still have a high land/man ratio, yet unchecked population migration and an increasing tempo of urbanization, have increased the pressure on land values, demands and uses. This is a serious threat to a rational and orderly development of land for optimum use. And so, environmentalists and lawyers should contribute their expertise as members of land-use planning boards to ensure a proper environmental management of the land.

D. Industrial and technological development and pollution problems

30. The development of industries and large-scale agricultural plantations have become of immediate priority to most African Governments and so the legislation in these areas for the protection of the environment should be critically examined. As the need and urgency for economic development increases, governments are apt to gloss over environmental consequences of such development actions. Yet it should be better understood that the extra cost caused by the Environmental Impact Assessment (EIA) of a project, and by any modification which the EIA may suggest in the planning, design and execution of the proposed project, will generally be far below the cost of rehabilitation, reclamation or other corrective measures.

31. The major environmental problems arising from the main industries (petrochemical, engineering, building, mining, agro-based and forest) are (i) air pollution with noxious gases, dust and sprays of volatile chemicals and (ii) disposal of liquid and solid industrial waste products such as heavy metals and organic compounds into rivers. In the development of commercial agricultural plantation for cash crops (coconuts, oil palm, coffee, etc.), excess fertilizers, pesticides and herbicides are washed into the soil, streams and rivers from where they enter the food chain. The pollution of the air, water and soils through industrial and technological development is becoming acute in capital cities of some developing countries and so the relevant environmental legislation must be reviewed to improve the quality of the environment.

32. For an effective environmental legislation in the African countries, environmental standards and quality controls policy have to be established, coupled with scientific monitoring of pollutants in the environment for an

effective law enforcement. Environmental laws must regulate the level of pollutants permissible in the air, water and soil as well as the level of liquid and solid wastes, in chemical parts per million, which various industries can discharge into the environment. In order to enforce pollution laws, African governments must set up national standards laboratories for the monitoring of pollutants and contaminants in food, drugs and animal feed. This also involves the training of competent technicians to perform the complicated though routine chemical analysis of river water, the air around factories, agricultural soils, processed food and feeds, and drugs. The standards laboratories would carry out routine monitoring tests and alert the government for appropriate law enforcement measures to be taken against the defaulters.

33. In no circumstances should African Governments allow industrial concerns, even government-owned, to monitor their own defaulting. However, poor a government may be, it should never allow an industrialized country to dump its toxic wastes on any part of its domain on the guise of setting up an industry to recycle wastes. This can happen to any government in a developing country, for in their eagerness to industrialize, they inadvertently import polluting industries and machineries that would never pass the environmental standards of the country of origin, just because most developing countries have not given a high enough priority to the establishment of a quality control policy for setting up of a standards laboratory.

34. It is the role of the environmentalist to create a public awareness and consciousness about the long-term effects of current environmental neglect and the geometric accumulative effects of environmental damage resulting in increased disease and health hazards in the population. Effective

pollution control demands the laws of the legal draughtsman, the setting up of institutional mechanism for monitoring, a training component, as well as a well spelt-out quality control policy for all development planning activities in the country.

E. Environmental education, training and the legislative process

35. Laws are designed to control the behaviour of people and law enforcement becomes effective when the community is willing to co-operate with the administrative machinery. For environmental legislation, co-operation with the administration would be difficult unless the people have a clear understanding of the need to protect the environment through programmes in environmental education.

36. Environmental education programmes are designed to create an awareness of the functioning of nature by examining first-hand the local environment itself for an understanding of scientific principles at work. In the formal education system, the study of the local environment can begin at the primary level by encouraging children to make observations in the school compound on growth and germination of bean seeds, on the life cycle of mosquitoes or chickens, on chemical changes with flower colours and common kitchen items (vinegar, salt, sugar, ashes) and so on.

37. Environmental education in the primary school as practiced by the Science Education Programme for Africa, changes the traditional teaching method of science, rural education or gardening from the traditional chalk-and-talk to a child-centred, activity-orientated learning process. The teacher's role in the class changes to that of a guide to stimulate activities for the children to find out answers for themselves to the numerous and spontaneous questions

that they ask about the specimen being studied. Although this learning process is time consuming and may disorientate the normal school timetable, and may be the discipline, the children enjoy the exercise and continue this kind of investigation during out-of-school hours. By the time the children enter secondary school, their scientific observation and skills, their attitude to the protection of the environment and knowledge of the local environment have increased appreciably. Then further study on environmental topics such as conservation of natural resources, pollution problems and environmental damage can be appreciated.

38. Besides the formal education system, it is even more important to create an environmental consciousness in the population as a whole through the non-formal system. This involves adult education programmes through the mass media (radio, television and vernacular newspapers) and out-of-school youth training programmes in environmental education topics by means of film shows, talks and radio discussions. To mount a national programme in environmental education, the co-operation of teachers, educationists, environmentalists, lawyers, development planners and scientists will be needed. Then the work of the environmental legislators and the processes of law-making and enforcement will become easier in an environmentally enlightened society.

39. Another aspect of support for the environmental legislation processes is the creation of environmental machinery to co-ordinate the various environmental activities carried out by various departments (forests, agriculture, health, industry, tourism, public works and so on) within the country. The activities of the environment co-ordination office can be directed by a national environmental committee whose membership should

include high level government officials from the various ministries/departments involved in solving environmental problems. The body should also include development planning economists and environmental legislators, some concerned citizens and representatives from private industry and corporations. This body and the technical environmental-managers in the national co-ordinating office can assist the environmental legislators in designing the law and in providing advice for effective law enforcement to protect the environment.

40. Another important feature of sound environmental law may be the introduction in the national legislation of the notion of environmental impact assessment (EIA). EIA may be broadly defined as the process of evaluation of the net change, whether beneficial or detrimental, in the environment likely to be brought about directly or indirectly by a projected human action or by its alternatives. Among the very many uses which can be made of this process, one may mention that the results obtained from EIA may serve as a source of information and of data which will allow the policy-maker to formulate the policies better and the legal draughtsman to design the text better for the protection of the environment. For example, environmental impact assessment on a large dam construction project for agricultural irrigation would indicate the degree of increase in water-borne diseases (schistosomiasis and malaria) as the possible loss in labour work-days over the years. This can be taken into account in drafting environmental legislation for water resources development.

CHAPTER III

LEGISLATIVE AND INSTITUTIONAL SETTING IN SELECTED AFRICAN COUNTRIES

A. Environmental legislation and the law-making process

41. In the process of tackling environmental problems, environmental laws and legislation have become universally accepted as one of the tools used for environmental management in both developing and industrialized countries. In the majority of African countries, the present legal system as well as the majority of the laws of the countries, are a legacy of the colonial regime. It is known that the inherited legal systems, whether anglophone, francophone or otherwise, did make provision for the conservation of forests and wildlife, the protection of water and marine resources and the regulation of activities that may damage the health of the human environment in the country.

42. Even though such laws enacted in the pre-independence era of most African countries were not designated environmental legislation as such, the enforcement of such laws went a long way towards maintaining a good quality of the environment. For instance, one could always remember the cleanness of rural and urban house compounds and the care with which our parents methodically removed broken bottles and empty tins from their compounds for

fear of sanitary inspectors, who were more dreaded than the local policemen, because of the effectiveness of their fines for breaking the law against malaria control. Although these colonial laws are still in the statutes or have been superceded by improved laws, yet most African countries are still plagued with environmental health and sanitation problems as an example, almost two decades after independence. Hence one might ask, what is the role of environmental legislation in the African continent during the 1980 decade?

43. Environmentalists cannot claim competence in formulating laws and legislation to protect the environment. Nor can the lawyers and legal draughtsmen appreciate and understand the scientific terminology in use for the protection and for the improvement of the quality of the environment. The Expert Group meeting and the Seminar have provided common areas for discussion between lawyers and environmentalists for the promotion of legislation for the protection of the African environment.

44. At this point, a brief description of environmental legislation and its method of functioning is essential as background information. The manual for Environmental Legislation 8/ pointed out that environmental legislation should be management-orientated instead of rule-orientated. Whilst rule-orientated law-making lays emphasis on prohibition, penalties as compensation for law-breaking and sanctions against abuse of the law, environmental legislation in modern jurisprudence should be based on practical incentives for the rational use and protection of environmental resources, for the prevention of environmental damage and for the promotion of environmentally-sound policy and planning for development.

45. The methodology for environmental legislation is similar to the empirical approach of science and technology. For both, a problem has to be identified, the data collected and analysed for the development of hypotheses, then a scientific principle or theory is formulated before the applied technology is selected or developed to solve the particular problem. In environmental legislation formulation, the problem definition phase asks many practical questions for data collection and recommends a model for data synthesis. The hypothesis stage is shown by the development of policy options regarding the possibility of what actions can or should be taken to solve the problem. Then a decision has to be taken on the policy option to be selected for the formulating of an effective law, which involves consultations between the decision-makers, the policy-makers, planners, government officials and managers for the selection of the best policy. Gradually, a conceptual policy model emerges with recommendations, options, strategies on the form and content of the law. The final phase is actual law-making and implementation which can involve various other activities such as drawing up rules and regulations, budgeting, monitoring of

implementation practices, institutional reorganization, evaluation, all directed towards an effective law enforcement.

46. Environmental legislation demands a new orientation to law-making. It requires fresh concepts, policy options and strategies for implementation that would cater for the management of future environmental problems. However, as pointed out earlier, legislation is not the critical factor for the protection of the environment in African countries. The greatest constraints to environmental care are: (i) the inadequacy of law enforcement and (ii) the lack of standards and controls for maintaining environmental quality. The political will should be encouraged an effective system of control and enforcement of existing laws, rules and regulations to solve environmental problems.

47. In the remaining sections of this chapter dealing with the legislation and institutional setting for developing environmental protection legislation in the fifteen selected African countries surveyed by a questionnaire (see Annex A), the relevant parts of the consultants' mission reports and the participants' country reports (see annex B), are analysed. A comparative account and a tabular examination are made of the constitutional and institutional setting within the countries (see table 1). The role of the law and the concept of environmental impact assessment in the functioning of the legislative processes within the same African countries, are also examined.

B. Constitutional and institutional setting

48. In general, the constitution currently in force in most African countries do not have any provision for environmental protection except in Ghana where the new constitution for the start of the Third Republic in 1979

8/ UNEP/IALS Manual for environmental legislation.

has a declaration on a National Environmental Policy in article 9(1)(e) to ensure that the Government take adequate legislative measures to improve the environment. The situation in Zambia is in between that of Ghana with a direct provision and the rest of the African countries, in that its constitution has implied powers for Government to ensure rational utilization of environmental resources and to formulate environmental policies. Zambia also grants limited powers to local Governments to legislate on conservation or municipal plans to combat pollution within the framework of the central legislature. However, it is noted that even though many African countries have not incorporated environmental protection into their constitutions, they are making a conscious and deliberate effort to protect the environment by legislation with the necessary administrative back-up.

49. Two kinds of situation exist for the formulation and execution of national environmental policies. Morocco established a Ministry of Habitat and Physical Planning as well as a National Committee on the Environment with responsibilities for environmental matters in October 1977. This Ministry has executive powers and co-ordinates sectoral environmental activities with other ministries. In Tunisia, the Prime Minister created a National Commission on the Environment under Decree No. 78-373 with himself as Chairman. The Commission has very wide powers including inter-ministerial co-ordination of environmental activities. The Moroccan situation exists in Senegal where a central co-ordinating Ministry of Urban Affairs, Habitat and the Environment was created by Decree No. 75-724 of 30 June 1975 (abrogated and replaced by Decree No. 79-417 of 12 May 1979) as well as a National Council for Urban Affairs and the Environment with the President

as Chairman. Ivory Coast had a similar set-up as Senegal up to 1977 when the Ministry of the Environment was dissolved and its National Commission became dormant. Now, by Decree No. 78-689 of 1978, the Ministry of Water and Forests co-ordinates all environmental matters except for that on industries which is done by the Ministry of Finance and Economic Development.

50. The other situation which is more common in Africa, is for environmental matters to be dealt with sectorally by various ministries such as Health, Commerce and Industry, Agriculture, Forestry, Natural Resources, Lands, town and Country Planning and so on, without any central co-ordinating ministry. There may be an ad hoc inter-departmental co-ordinating committee, but it has only advisory powers. It is observed that in some cases, it is the Ministry of Local Government in Uganda, the Gambia or the Ministry of Town and Country Planning in Zambia, which in co-operation with the town or local district councils, have assumed the responsibility of co-ordinating environmental policy in the Government. In others, the co-ordinating organ is a government appointed council with advisory powers only, as the Ghana Environmental Protection Council established in 1974 by NRCD 239 and the Swazi National Trust Commission. In Ethiopia, the Physical Planning Department of the National Revolutionary Development Campaign (NRDC) and Central Planning Supreme Council (SPSC) established in 1977 is a national focal point for environmental matters both locally and with UNEP. In addition, Uganda is now planning a National Council for Environment with probably advisory functions. As concern for environmental problems increases, African governments have realized the need to establish national statutory bodies to advise on such matters.

TABLE 1. CONSTITUTIONAL AND INSTITUTIONAL FRAMEWORK FOR THE PROTECTION OF THE ENVIRONMENT

Legislative Instruments

Country

- | | |
|-------------|--|
| Botswana | <ul style="list-style-type: none"> - Constitution for Independence in 1966 has no environmental provisions - No central or co-ordinating body but various government departments share responsibility. - National Development Plan (No. 5 for 1979-1985) covers environment in various sectors. |
| Burundi | <ul style="list-style-type: none"> - (No record supplied on the constitution). - Decree No. 100/75 of 18 March 1980 puts all environmental matters under Ministry of Public Works Maintenance and Buildings. |
| Ethiopia | <ul style="list-style-type: none"> - The Revolution of 1974 suspended the 1955 Constitution, no environmental provisions made. - National Focal Point for UNEP is Physical Planning Dept. of NRDC and CPSC, it co-ordinates sectoral environmental policies of various ministries. - No legal cover for incorporating environmental matters into National Development Plan. |
| The Gambia | <ul style="list-style-type: none"> - 1970 Constitution has no environmental provisions. - Environment Unit in Ministry of Local Government and Lands co-ordinates environmental matters but no legal status. - National Development Plan (No. 2 for 1976-1980) has no legal basis but informal incorporation of environment. |
| Ghana | <ul style="list-style-type: none"> - Third Republic Constitution of 1979, makes provision for the environment. - NRCD Decree 239, 1974, established Environmental Protection Council, amended by SMCD Decree 58, 1976. - National Development Plan has no legal basis for incorporating environmental matters. |
| Ivory Coast | <ul style="list-style-type: none"> - 1960 Constitution has no environmental provisions. - Decret No. 78-689 of 18 August 1978 empowers Ministry of Water and Forests to co-ordinate environmental matters in various other ministries aided by Decret No. 79-221 of 22 March 1979 for Ministry of Finance and Economic Planning on industrial environment. |

- (Decret 73-31 of 27 January 1973 created National Commission on the Environment, inactive since 1977, with the defunct Ministry).
 - National Development Plan (1976-1980) has environmental sections by law.
- Morocco**
- 1972 Constitution has no environmental policy provisions.
 - Decree No. 2-74-361 of 28 May 1974 established National Committee for the Environment and Dahir created new Ministry of Habitat and Management in 1977 to co-ordinate and formulate national environment policy.
 - National Development Plan (3425 1978-1980) has provision for protection of the environment.
- Mozambique**
- Constitution suspended in 1976, no environmental provisions.
 - No co-ordinating mechanism for environmental matters.
 - 2 year Development Plan (1980-1982) will incorporate environmental matters.
- Senegal**
- 1963 Constitution established by Loi No. 63-22 and revised many times thereafter, has no legal environment provisions but implied measures in Articles 13 and 14.
 - Decree No. 79-417 of 12 May 1979 gave powers to Ministry of Urban Affairs, Habitat and the Environment to co-ordinate environmental matters and also created the National Council for Urban and Environmental matters.
 - No legal provision but National Development Plan (1977-1981) incorporates environmental provision.
- Swaziland**
- King's Proclamation of 12 April 1973 repealed 1968 Constitution but has no environment provision.
 - Ministerial Committee established in July 1980 to co-ordinate national environment policy, no central ministry but Swazi National Trust Commission is environmental protection agency.
 - Third National Development Plan (1979-1983) emphasizes environmental education.
- Tunisia**
- (No record supplied on the Constitution).
 - Association for the Protection of Nature and the Environment formed in February 1971 to prepare for Stockholm Conference.
 - Decree No. 78-373 of 12 April 1978 created National Commission on the Environment to co-ordinate inter-ministerial activities.

- Uganda**
- 1967 Republican Constitution has no environmental provision, .
 - Environmental co-ordination by Ministry of Local Government, Act No. 18 of 1967, plans afoot for establishing statutory National Council on the Environment.
- Zambia**
- 1964 Constitution has no direct provisions but environmental protection is implied in it.
 - No statutory co-ordinating body, only ad-hoc inter-ministerial consultations.
 - Third National Development Plan has no legal provisions but environment is dealt with sectorally.

51. Most African Governments are now executing their third or fourth three- to five-year national economic development plans since independence and there is evidence that these current plans incorporate environmental policies implicitly although there is no legal requirement for that in the countries. For example, the Gambia's current (1976-1980) five-year development plan stated that the country should develop in such a way as to ensure a continuance of its resources of potential welfare to the future, which will involve not only reclamation, restoration and perservation but also enhancement of the environment. Ethiopia and Mozambique also include environmental policy in their current one- or two-year development plans. A similar provision exists in the same countries for incorporation of environmental considerations in the contracts or agreements with foreign investors but there are no legal requirement for routine assessment of environmental impact of development activities in the countries. In Swaziland, due attention is given to environmental considerations in the feasibility studies of large development projects.

C. The role of law in the legislative process

52. According to the survey, the enactment of a new law to protect the environment and the enforcement of the law to implement an environmental legislation in an African country, is not likely to cause any social upheavals. Generally, Africans are law-abiding citizens, adjusted to life in a law-oriented society, whose legal system is generally a blend of statutory law, common law and customary law. Even in traditional society, customary laws and practices prevail as the average citizen was part of the legislative and enforcement machinery. In Ethiopia, Swaziland and Uganda, customary law and traditional rules of conduct still prevail in the predominantly rural setting of the popula-

tion, however, illiteracy has been seen as an obstacle in the enforcement of environmental legislation. In Zambia where the population is concentrated more in urban than rural areas, a kind of "civil liberation" from customary laws and traditional rules of conduct, may cause some difficulty in enforcing environmental legislation in urban areas, especially those relating to public health and sanitation. Hence, the need for "Keep the City Clean" campaigns, as is found in most West African towns. At the other extreme, there is the passive submissiveness and obedience engendered by decades of colonial pressure, which cannot easily be altered by political independence. Hence, the post-independence reaction to colonial rules and regulations can be total abrogation as was done in Mozambique, unless public participation in the legislative process is encouraged to revise and review the laws for the good of the newly emancipated society.

53. With regard to the role played by lawyers within a government, Botswana, Uganda and Morocco generally seek legal advice on specific problems on an ad hoc basis. Swaziland, Zambia, Ghana, Ethiopia and Senegal routinely seek legal counsel in the decision-making process. In most cases, lawyers employed by government are centrally located in the Attorney-General's Office or at the Ministry of Justice to deal with all legal matters including environmental legislation. There are no specialist environmental lawyers as such in the majority of African Governments and it is only in the case of Zambia that most other ministries have a lawyer attached to deal with legal problems. Ghana is also unique in that the Registrar-General happens to be the legal counsel, as a member, of the Environment Protection Council. The survey pointed out that young lawyers have little or no incentive to stay under government employment for long as their salaries are far

lower than remunerations in the private sector. The situation in Africa is that there are very few government lawyers and in most cases, they are general practitioners who deal with all kinds of legal problems. For environmental legislation, specialist lawyers are required to draft the laws and advise government on the legal implications of environmental problems. Hence, better incentives and training needs are identified in this area to improve the supply of legal manpower in governments.

54. In principle, litigation in courts is considered the normal way of resolving environmental disputes, but the situation in Africa is complicating when dealing with the rights of a private citizen to file suit against government agencies for environmental damage. In general, from the principle of common law, the judiciary treats environment-related prosecutions no different from any other civil suit. The judiciary should be independent and impartial but then, most governments of developing African countries have a substantial interest in the industrial and agricultural concerns that cause pollution, and citizens filing suit for redress against pollution hardly ever receive legal aid from government for court proceedings. However, the majority of African countries have a legal provision for government decisions to be reviewed at the highest level, such as the Supreme Court in Morocco. This serves as an added check on the government to preserve the rights of the individual against environmental damage. Since the chances of success of a private citizen litigating on environmental issues against government-supported industrial companies are very slight, it is incumbent on the government to promote the development of sound environmental legislation and effective law enforcement to protect the human environment.

55. The legislative process to review the law and make recommendations for improvement is markedly similar in the countries surveyed. A law review/reform commission performs this function in Zambia, Ghana and Botswana, whilst the ruling party, the Ministry of Justice, the Ministry of National Council responsible for environmental matters does the review with slight variations in Morocco, Swaziland, Senegal, Ethiopia and Uganda. In these latter countries as well as in Mozambique, the ruling party and the national assembly play a significant role in originating ideas for new legislation. The formulation of legislation on technical areas such as the environment, is initiated by various professional bodies in Zambia but generally it is the ministries or government departments concerned who prepare the policy framework for a draft to be done by the legal draftsman. The draft bill is presented to Cabinet for approval then to the national assembly for debate before enactment and eventual publication in the national gazette.

56. The formulation of environmental legislation needs the scientific and technological data base of a country to enable the government to establish appropriate pollution control standards, soil conservation rules, and requirements for forest exploitation and rehabilitation patterns. Such data are available but are not yet organized in Swaziland, Botswana, and Mozambique on the one hand, whilst at the other extreme in Zambia and Ghana, the National Scientific Research Council provides the information for the development of new environmental legislation in the country.

D. Environmental impact analysis

57. Ghana, Ethiopia and Uganda have some mechanism for carrying out environmental impact analysis of new development projects even before the

project is implemented. This is facilitated through the National Standards Board and the Environment Protection Council in Ghana. In Ethiopia, NRDC and CPSC Decree No. 156 of 1976 empowers the Executive Committee of the Supreme Council to review and undertake EIA studies on new projects. Although no mention is made of a national standards unit in Uganda, yet the details in the questionnaire submitted by the Ministry of Industry are adequate. In most cases, the Ministry of Industry reinforces the arm of the Standards Bureau by its legal powers to enforce fines and levies for infringement. Senegal and Zambia seem to have no co-ordinated mechanism although environmental impact analysis is done on an ad hoc basis for large projects such as the Senegal River Basin Development (OMVS).

industrial and agricultural development projects in developing countries, existing minimal standards would have to be re-assessed by competent environmental machineries, including the voice of the press and public concern.

58. The difficulty in establishing a mechanism for environmental impact analysis of development projects in developing countries may be due to lack of trained manpower in the field of environmental assessment. Another important consideration can be the desire of the government to establish politically visible economic development projects within the shortest possible time. Hence, industrial projects are established if the amount of pollutants as smoke from cement factories, oil refineries, etc. are considered minimal. In countries where environmental impact assessment is carried out for industrial projects by the investing firm, either with or without government co-operation, safeguards would be provided by an environmental body as the National Trust Commission in Swaziland and/or by public participation in the process. Also in Botswana, the Water Apportionment Board and the Air Pollution Inspectorate require detailed environmental impact studies to prevent pollution from development activities. As environmental damage builds up from

CHAPTER IV

ANALYSIS OF LEGISLATION FOR THE ENVIRONMENT-DEVELOPMENT SCENARIO IN SELECTED AFRICAN COUNTRIES

A. Land use planning legislation

59. Table 2 summarizes the legislation for land use planning in the African countries surveyed, based on the mission and country reports submitted at the seminar. The Town and Country Planning Act 1977 of Botswana specifies that a development plan initiated by the Minister must be a prerequisite to any particular land use. Section 6 of the Act indicates a wide range of planning elements such as roads, public and other buildings and works, airfields, parks and pleasure grounds, nature reserves which can form a comprehensive land use plan for a designated development area, while the allocation of areas for use in agriculture, forestry, mining, water resources protection, industry or as residential and commercial areas and for other purposes may apply to the whole country. A similar and much more clear-cut situation exists in Swaziland and Zambia where the British colonial land Acts with various modifications have a prevailing influence. In the rural areas, by the Land Act 45/1961 of Swaziland, the Swazi Nation Land is vested in the king (and the chiefs by delegation of power) and the Swazi National Council as custodian to

distribute land to the people for various land use purposes. In Zambia, the President has similar powers over the nation's lands and in the rural areas, the local councils are responsible for land use planning. However, for the urban areas the Ministry of Local Administration is responsible for land use planning under Swazi's Town Planning Act 1961. In Zambia, the Department of Town and Country Planning co-operating with the Ministry of Lands and Natural Resources is responsible for implementing land use development plans (see Zambia's Agricultural Act and the Town and Country Planning Act, cap. 475).

60. In the rest of the countries visited, the law requires comprehensive land use planning in varying degrees only for urban area development, not so much for the rural areas. In some cases, only one agency is responsible for urban land use development such as Uganda's Department of Town and regional Planning and the Administrative Authority in Senegal. On the other hand, Morocco has a Director for Urbanization dealing with urban development,

TABLE 2. LEGISLATION FOR LAND USE PLANNING

Legislative Instruments

<i>Country</i>	
Botswana	<ul style="list-style-type: none"> - Town and Country Planning Act, Cap. 32.09, 1977, applies to seven urban centres and mining towns under control of Land Boards. - Tribal Land Act, Cap. 32.02, regulates tribal land management. - Agricultural Resources Conservation Act, with a Board responsible for soils, water, plant and animal life conservation.
Burundi	<ul style="list-style-type: none"> - Le Decret-Loi, 30 decembre 1978, Reversion of mismanaged land to state property. - Le Decret-Loi, 26 novembre 1958 and l'Ordonnance du 25 Octobre 1979 regulates conservation and utilization of lands, control against soil erosion and desertification.
Ethiopia	<ul style="list-style-type: none"> - Proclamation 31 of 1975 abolished feudal land tenure in rural areas. - Proclamation 47 of 1975 on Government ownership of urban lands and extra houses for equitable distribution. - Proclamation 127 of 1977 on the powers and responsibilities of Ministries concerning land use in urban and rural areas. - Proclamation 156 of 1978 on public participation on development planning and land use.
The Gambia	<ul style="list-style-type: none"> - Town and Country Planning Act, Cap. 181, 1958 deals with creation of planning boards for land use planning and zoning in urban and rural areas.
Ghana	<ul style="list-style-type: none"> - Town and Country Planning Ordinance, Cap. 84, 1951 rev., on progressive development of land, towns, amenities in urban and rural areas.
Ivory Coast	<ul style="list-style-type: none"> - No particular ordinance on land use planning but refer to Loi No. 65-425 of 20 December 1965 and Loi No. 78-231 of 15 March 1978 on the management of forests and water.
Morocco	<ul style="list-style-type: none"> - Ranging from Dahir of 5 May 1914, 24 December 1951 to Dahir et Decret du 25 juillet 1969 on the protection and restoration of the land.
Mozambique	<ul style="list-style-type: none"> - Loi 6/79 on land use provisions relating to water and soils. - Loi 8/79 on land use relating to zoning for settlements, industrial and commercial use.
Senegal	<ul style="list-style-type: none"> - Loi 17 June 1964 and its Decret No. 66.585 of 7 November 1966 relating to the land for agricultural purposes and decree of Dec. 1969 on zoning for pasture land and for cropping.

- Swaziland
 - Previously sub-division of Land Act 1957 partially control land use.
 - Town Planning Act 1961 for urban planning and zoning under statutory law
 - Swazi Nation Land Act 45/1961 controls land use in rural areas under local law and custom.
- Tunisia
 - Code for Urbanisation deals with town planning and management. and management.
 - Code for Rural Areas was being drafted in 1979.
- Uganda
 - Town and Country Planning Act 1954 (as amended) controls zoning in land use planning.
 - Land Reform Decree 1975 established Land Commission to control land use planning.
- Zambia
 - Town and Country Planning Act (Cap. 475) on land use planning in urban areas.
 - Agricultural Act.

and the Ministry of Habitat and Land Management for rural areas. In Ghana several agencies are responsible for land use planning and distribution: the Lands Commission for public lands; the Inter-Ministerial Site Advisory Committee deals with the suitability of private lands for development and the approval of building plans in the urban areas; and, the Ministry of Town and Country Planning Act, cap.181 existed since colonial days (1958) but is ineffective nowadays as the Minister responsible has superseded or suspended the planning boards created by the Act.

61. The situation in Mozambique and Ethiopia show some similarity, in that the emphasis after the revolution in Ethiopia and independence in Mozambique was on liberalization and land ownership for the previously dispossessed population. In 1979, Mozambique published Loi No. 6/79 and Loi No. 8/79 in the official gazette (Boletim du Republica) to make provisions for land use relating to soils, water, habitation, industrial and commercial uses. Similarly in Ethiopia, Proclamation No. 31 of 1975 abolished the feudal land tenure, for a public ownership of all rural lands and the formation of peasant associations (Kebele) to administer the land under government directives and to conserve the soil, water, forests, etc. on the public land. Also Proclamation 47 of 1975 on the Government Ownership of Urban Lands and Extra Houses recommended inter alia, an equitable distribution of urban land so that no person or family could possess more than 500 square metres of land. These two proclamations did not directly cater for a land use management system that will erase the more common environmental problems such as slum dwellings, disposal of refuse and pollution of streams. However, Proclamation 127 of 1977 (article 18) if enforced by the Ministry of Urban Development and Housing can provide an effective land use

system in the urban areas whilst the master land use plan being prepared by the Land Use Planning Department of the Ministry of Agriculture with the assistance of UNDP, can help solve environmental problems relating to drought in the rehabilitated rural areas.

62. In Zambia, Uganda, Senegal, Burundi and Botswana, the views of other concerned government departments and agencies as well as that of the public in some cases, are sought for land use planning. After that, government approval for development is given and the implementation of the plan is carefully monitored in countries such as Ghana for breach and infringement. If the land is badly degraded through mismanagement, a decree passed in December 1978 in Burundi can revert the land to State property, ostensibly for better management. It should be pointed out that comprehensive land use planning as a prerequisite for the development of land, especially in highly congested urban land, ensures that environmental damage and deterioration in the standard of living of the inhabitants resulting from slums, overpopulation, insanitation, lack of transport and communication facilities, are taken into account. Therefore, the provisions for government review and public discussion on the land use development plans are opportunities to raise environmental questions for sound economic development. After the plan has been agreed upon, it is also necessary to ensure its proper implementation by such means as regular inspection of the development site by government officials, monitoring of activities in zoned areas for land use planning control and infliction of penalties for infringement of the plan and for any eventual breach of contract. In this way, environmental standards agreed upon for the newly created industrial or other complexes, can be maintained.

TABLE 3. LEGISLATION ON FOREST CONSERVATION*Legislative Instruments**Country*

- | | |
|-------------|--|
| Botswana | <ul style="list-style-type: none"> - Forest Act (Cap. 38.04) has powers to declare forest reserves and to protect trees, under Department of Forestry, Ministry of Agriculture. - Town and Country Planning Act (Cap. 32.09) 1977 deals with protection of trees for Floristic purposes. |
| Burundi | <ul style="list-style-type: none"> - Decree-Loi No. 100/47 of March 1980 created the Timber National Office as an industrial, commercial corporation, to regulate forest exploitation and conservation. |
| Ethiopia | <ul style="list-style-type: none"> - State Forest Proclamations of 1965 and Legal Notices 245, 343-351 of 1968 in Negarit Gazeta, on protection and exploitation of private and state forests (now requiring amendments in view of Proclamation 31 of 1975 on private ownership of lands). |
| The Gambia | <ul style="list-style-type: none"> - Forestry Act No. 8 of 1977 and Forestry Regulations 1978 empowers Ministry of Agriculture and Natural Resources to establish protected forests, control exploitation, manage forest products and resources. |
| Ghana | <ul style="list-style-type: none"> - Forest Ordinance Cap. 157A of 1951 (revised) and Act 10 of 1957; Forests Protection Decree NRCDC 243 of 1974 and the Timber Decree NRCDC 273, regulate forest protection and management. |
| Ivory Coast | <ul style="list-style-type: none"> - Loi No. 65-425 of 20 December 1965 instituted a Forestry Code to control irrational exploitation; this was supported by several other regulations as Decrees No. 66-50, 66-626, 66-122, 66-428, 66-536 and Decree No. 66-422 which created the Society for the Development of Forest Plantations to recommend appropriate measures to government to implement a forest development plan. |
| Morocco | <ul style="list-style-type: none"> - Forestry legislation began in 1912 followed by several others later, up to the more recent decree in 1949; all specifying different aspect of forest conservation, exploitation of forest products, training and reforestation. |
| Mozambique | <ul style="list-style-type: none"> - Legislation being worked out for forest conservation, national campaigns by Government indicate environmental problems on forest use and management to the people. |
| Senegal | <ul style="list-style-type: none"> - The Forestry Code consists of Loi No. 74-46 of 18 July 1974 and regulation Decree No. 65-078 of 10 February 1965, the latter regulating the forest types for conservation management. |
| Swaziland | <ul style="list-style-type: none"> - Forest Preservation Act 1910 protects forest in government and Swazi Nation Land. - Flora Protection Act 1952 for rare and valuable species in schedule of Act. |

- Control of Tree-Planting Act 1972 empowers Ministry of Agriculture and Natural Resources Board to designate tree-control areas in agricultural land.
- Tunisia
- The Forest Code according to Loi No. 66-60 of 4 July 1966 empowers Under-Secretary of State for Agriculture to control conservation of forests, wild life, game hunting and arms used.
- Uganda
- Forests Act (Cap. 246) 1947 covers all aspect of forest exploitation and management in national forest reserves, village forests are controlled by the local authority.
- Zambia
- Forests Act (Cap. 311) 1973 enacted to create, protect, manage and conserve national and local forests and for control on the utilisation of forest products their-in.

63. From the survey, zoning especially in urban areas, is taken into account in most African countries. In Zambia where the population is small in relation to the land area, and where the urban population is greater than that in the rural areas, zoning effectively controls squatters living in urban slums. Penalties for violation of land use after zoning, are enforced in Zambia, Botswana, Burundi, Swaziland, Uganda, Ethiopia and especially in Ghana where the Town and Country Planning Ordinance (cap. 84) makes elaborate provisions for fines and conviction against offences relating to alteration of approved building plans, creating of environmental nuisances, contravention of health and sanitation norms, the destruction of forests and the unsightly deposition of overburden, tailings and wastes during mining. It is also noted that land use legislation in Africa does not make adequate provision for environmental impact assessment to protect the land from mismanagement, soil erosion and degradation or for the rehabilitation of the land after exploitation of its natural resources in mining, deforestation, cultivation and other uses. However, in Burundi, a decree passed in October 1979, obligates land owner to construct and maintain anti-erosion trenches in agricultural land lying fallow, on pastures in steep slopes, in order to control the desertification process.

B. Forest Conservation Legislation

64. Table 3 gives a summary of forest conservation legislation in the selected African countries studied. In Botswana, Swaziland, Uganda and Zambia, the Department of Forestry in the Ministry of Agriculture is responsible for regulating the exploitation of forest resources. The Department of Forestry is under the charge of a Chief Conservator of Forests responsible for forest policy, conservation and management of forest resources.

The Chief is supported by a deputy and several assistant conservators of forests, and a few wildlife officers and foresters at the professional level of the field staff. Forest supervisors at the intermediate level supervise the junior field staff of Game Wardens, Forest Rangers and Forest Guards. This is a legacy of the British colonial administration where the Forestry Department is divided into sections dealing with forest utilization, forest protection, forest production and forest research. A similar structure and function exist in the Department of Forestry which is under the Ministry of Lands, Natural Resources, Fuel and Energy in Ghana and the Ministry of Agriculture and Natural Resources in the Gambia.

65. In French-speaking Senegal and Ivory Coast, a secretariat or directorate of Water and Forests is responsible for regulating the exploitation of forest resources, but under the Ministry of Rural Development in Senegal. Each country has a forestry code established by law. In the Ivory Coast, the Forestry Code was created by Loi No. 65-425 of 20 December 1965 in order to regulate the indiscriminate and wanton exploitation of the closed forests. Supporting regulations followed as various decrees in 1966 to create a Society for the Development of Forestry Plantations to advise government on forest taxes, fines and penalties as well as on the execution of a forest development plan. In Morocco, within the Ministry of Agriculture, there is the Department of Rivers, Lakes, Forests and Soils which consists of five sections: the division of forest service; the division of economic forestry; the division for hunting; fishing and the protection of nature; the division for reforestation and soil conservation; and, the division for forest research. The Director of Water and Forests co-ordinates the forest activities of these divisions, and reports to the Ministry

of Agriculture and Agrarian Reform responsible for his department. A similar set-up may exist in Tunisia and Mozambique with a National Directorate for Forest and Fauna Conservation but not enough information is provided on the structure and function. In Burundi, a National Timber Office was created in 1980 by Decree 100/4/ as a commercial and industrial corporation but with the responsibility to regulate forest exploitation and conservation.

66. Ethiopia has a situation in between the anglophone and the franco-phone set-up. There is a Forestry and Wildlife Conservation Organization under the Ministry of Agriculture. The organization has two departments: the Forestry Department and the Wildlife Conservation Department. The Forestry Department is subdivided into Forest Surveying and Registry Division and the Forest Utilization and Conservation Division. The Forestry and Wildlife Organization has a very wide range of activities, from formulating policies on conservation and regulating education programmes, environmental legislation, to pursuing silvicultural research for reafforestation of the ecological zones in Ethiopia, under the forest management planning bill (Legal Notice 245 of 1968).

67. Most countries have a forestry management planning requirement embodied in forest laws, ordinances and regulations as summarized in Table 3, which generally apply to both state or national forests and native or local forests. The basic legislative framework for forest management generally predates independence but most forest ordinances have undergone several recent amendments and additions as shown by Morocco's Forest Ordinance of 1917 on the Conservation and Exploitation of forests and Uganda's Forests Act, 1947. This has led subsequently to a complete revision of the old Acts and the enactment of new forestry legislation,

as seen for the forests Acts 1973 in Zambia, and the Forest Ordinance (Cap. 157) with the Forest Protection Decree 1974 (NCRD 243) in Ghana. 68. In Ethiopia, the legal framework for forest management was promulgated in the State Forest Proclamations 1 supplemented by several Legal Notice 343-351 of Negarit Gazeta 1968 on regulations for the Protection of Private Forests, the Protection of State Forests, the Exploitation of State Forests and the Exploitation of Private Forests. However, these have all been amended in the light of Proclamation No. 31 of 1975 which abolished private ownership of rural land including forest land. In Botswana, forest management is controlled by the Forestry Department and the legal framework is embodied in the Forestry Act (Cap. 38.04). Mozambique is now formulating a post-independence forestry ordinance.

69. The penalties for violation of the forestry laws are generally embodied in the legislation and in the regulations for the enforcement of the law. The offences vary from felling of timber trees and collection of other forest products to hunting, setting fire or clearing of forest patches for shifting cultivation in the reserve. Penalties also vary from fines (formerly inadequate to serve as a deterrent, see Ghana Forest Protection Decree 1974) to terms of imprisonment (in lieu or in addition to the fine), forfeiture of forest products, seizure of licences and even the paying of compensation for damage done (in Zambia, Ivory Coast and Senegal).

70. The difficulties encountered for effective forest law enforcement vary from place to place. In Morocco and Ethiopia, the situation is that a sizeable proportion of the rural population live and work for their subsistence in the forest reserve and protected or private forests. These people cannot be easily dissuaded from their traditional means of livelihood, hence they must be educated in conservation methods

TABLE 4. LEGISLATION ON NATIONAL PARKS AND WILDLIFE*Legislative Instruments**Country*

- | | |
|-------------|---|
| Botswana | <ul style="list-style-type: none"> - The National Parks Act (Cap.38.03) makes provision for declaring national parks. - The Fauna Conservation Act (Cap. 38.01) provides for declaration of game reserves and sanctuaries, both under Dept. of Wildlife, Ministry of Commerce and Industry. |
| Burundi | <ul style="list-style-type: none"> - Decret-Loi No. 1/6 of 3 March 1980 empowers the National Institution for Conservation of Nature to create national parks and nature reserves for wildlife; also regulates hunting, protects list of species, and various licences to hunt, trade in trophies, and arms control. |
| Ethiopia | <ul style="list-style-type: none"> - Proclamation No. 61 of 1944, Order No. 65 of 1970, Legal Notice No. 416 Of 1972 empowers Wildlife Dept., Ministry of Agriculture to establish various kinds of protected areas, also has list of threatened species. - Order 15/1970 makes provision for tourist activities in National Parks. |
| The Gambia | <ul style="list-style-type: none"> - Wildlife Conservation Act No. 1 of 1977 creates national parks, reserves and sanctuaries under the control of the Department of Wildlife Conservation and Management, Ministry of Agriculture and Natural Resources. |
| Ghana | <ul style="list-style-type: none"> - Wildlife Conservation Act 43 (1961) provides for establishment of reserves, national parks and sanctuaries under control of Department of Game and Wildlife; Act also provides a species list for protection, control hunting, arms, trade in trophies. |
| Ivory Coast | <ul style="list-style-type: none"> - Loi 65-255 of 4 August 1965 controls hunting and the protection of wildlife species according to categories; reinforced by Decrees No. 66-423, 66-424, 66-425 of 15 September 1966 on method of hunting, licencing and trade trafficking in game products. Decree No. 66-433 covers classification of reserves. |
| Morocco | <ul style="list-style-type: none"> - Dahir of 11 September 1934 and Decree of 26 September 1934 deals with protection of wildlife, reserves and parks; under the Department of Parks, Game and Wildlife of the Ministry of Agriculture. |
| Mozambique | <ul style="list-style-type: none"> - Regulations now exist for establishment of National Parks, regulating of hunting and arms control law. |
| Senegal | <ul style="list-style-type: none"> - Decree creates national parks managed under a Directorate of National Parks in the Ministry of Tourism; co-ordination exists with various ministries; Forestry Code applies here extensively for classification of reserves. |
| Swaziland | <ul style="list-style-type: none"> - The Game Act 1953 deals with the establishment of game sanctuaries under the Ministry of Agriculture. |

- National Trust Commission Act 1972 calls for establishment and management of national parks and nature reserves under the control of the Office of the Deputy Prime Minister.
- Tunisia**
- A law No. 74-12 under the direction of the Department of Forestry, Ministry of Agriculture, controls seasonal hunting, type of arms used and trade in wildlife, and conservation of wild fauna and flora in support of the Washington Convention signed in 1973 (CITES).
- Uganda**
- The National Parks Act, Cap. 227 and the Game (Preservation and Control) Act, Cap. 226 under the Board of Trustees and the Game Dept. of the Ministry of Tourism and Wildlife, establishes parks, reserves and protected areas. Seperate law - Hide and skin Trade Act, Cap. 225, controls wildlife trade.
- Zambia**
- The Parks and Wildlife Act, Cap. 316, 1968 with supporting regulations Act No. 57 (1968) and Act No. 65 (1970) establishes protected areas under Department of National Parks and Wildlife Services.

for sustainable exploitation of the forest. Other practical obstacles, common to all African countries, are lack of manpower such as the required number of forest guards and rangers to police the forest reserves. In Swaziland, the shortage of professional staff is very acute, there is only one Forestry Officer with eight assistants. The economic pressures (inflation, energy uses, high cost of living) mitigating against the rural population to earn a living from selling firewood and preparing charcoal for urban use, and the immediate profits to be derived from poaching and illicit timber and wild animal products trade across the borders, are serious in Burundi. Uganda and Ghana. The situation is further complicated in Ghana where a Land Commission instead of the Forestry Department gives concessions to timber companies thereby weakening the conservation effort of the Forestry Department.

C. Protected Areas and Wildlife Conservation Legislation

71. The summary of legislation on national parks and wildlife in Table 4 indicate that all the countries surveyed have national parks and game reserves where the wildlife is under protection by legislation. Besides national parks, the game reserves in Swaziland, Uganda, Botswana, Ethiopia, Ghana, Zambia and Morocco are classified as wildlife sanctuaries, strict natural reserves, controlled hunting areas, zoological and botanical gardens which are all identified by legislation. The legislation generally makes provision for altering the boundaries of these wildlife protected areas, and even for cancelling some of them. The procedure is generally through an amendment at the national legislative body or by a Proclamation by the Head of State or by the Minister responsible for parks and wildlife.

72. The earliest legislation for

creating national parks and game reserves on management areas in Africa dates as far back as the National Parks Ordinance 1934 in Morocco. More recent legislation are the Wildlife Preservation Act 1961 and the Wildlife Reserves Regulation 1971 in Ghana; the Parks and Wildlife Act 1968 (Cap. 316), of Zambia; the Wildlife conservation Regulation Legal Notice No. 416 of 1972 in Ethiopia; and, the Town and Country Planning Act 1977, the National Parks Act (Cap. 38.03), the Herbage Preservation Act (Cap. 38.02) and the Fauna Conservation Act (Cap. 38.01, amended in 1979) of Botswana. In most cases, the government agency responsible for the administration of the above protected areas are either the Forestry Department or a Wildlife Games Department affiliated to the former within the Ministry of Agriculture or other ministry responsible for forest and wildlife management. In Ivory Coast, there is no single government body for wildlife and reserves but collective responsibility is shared by various Ministries such as, Agriculture for the Wildlife, Interior for arms and hunting control, Water and Forests for the reserves. A similar ministerial contact exists in Senegal by its Directorate of National Parks which controls wildlife and reserves. These agencies regulate activities within the various classes of wildlife protected areas according to the legal designation of that particular area; for example, controlled hunting areas are the only wildlife protected areas development activity permitted within reserved areas. Most of the East African countries have safari hotel facilities, guided tours and watch-towers within national parks for tourist who come mainly from Europe, to satisfy their curiosity about African wildlife in their natural environment. Another activity allowed by legislation within a reserve is the establishment of field studies centres for the scientific and educational studies of African wildlife.

73. While legislative mechanisms

TABLE 5. LEGISLATION ON MINERAL RESOURCES DEVELOPMENT*Legislative Instruments**Country*

- | | |
|-------------|---|
| Botswana | <ul style="list-style-type: none"> - Mines and Minerals Act, Cap. 66.01 (1976) regulates mining operations and licences; - Atmospheric Pollution (Prevention) Act, Cap. 65.04 controls air quality during mining operations; other laws deal with discharge of mining waste water and mining land restoration. |
| Burundi | <ul style="list-style-type: none"> - No record of laws were supplied, although laws are known to exist. |
| Ethiopia | <ul style="list-style-type: none"> - Basic Mining Law is Proclamation No. 282 (1971) which deals with mining rights and licences/also covers environmental protection and preservation of historical findings during mining; - Proclamation 39 of 1975 covers specific mining activities concerning types of minerals to be mined and marketing. |
| The Gambia | <ul style="list-style-type: none"> - Minerals Act, Cap. 121 (1954) has environmental provisions for deposition of tailings in waterways, control of soil erosion, restoration of mined-out areas. |
| Ghana | <ul style="list-style-type: none"> - The Minerals Ordinance, Cap. 155 (1951 rev.) deals with general mining activities as well as pollution of waterways by waste, over-burden and tailings. - Mining Health Areas Ordinance, Cap. 150 regulate health and sanitation in mining areas. - Mining Rights Ordinances NRC Decree No. 165 (1973) and SMC Decree No. 109 (1977) regulates air pollution and workers protection in mines. |
| Ivory Coast | <ul style="list-style-type: none"> - Le Decret of 26 October 1926 of colonial origin for protection of environment in mining and oil exploration and in industry; - Loi No. 64-249 of 3 July 1964 covers the Mining Code dealing with mining prospecting, research and exploitation, with Decree No. 65-96 of 26 March 1965 on the regulation of the Mining Code. |
| Morocco | <ul style="list-style-type: none"> - No record of laws were supplied although "existing laws" are mentioned. |
| Mozambique | <ul style="list-style-type: none"> - No record of laws were supplied. |
| Senegal | <ul style="list-style-type: none"> - Regulation No. 7762 S ET of 8 December 1952 from colonial lays, controls mining activities. - Ordinance No. 60-24 MTP of 10 October 1960 established a Petroleum Code. |

- Decree Nos. 61-356 and 61-357/MTPHU-MI-G of 21 September 1961 regulates quarrying and codifies mineral exploitation, except for oil and gas.
- Swaziland
- Water laws control purification and discharge of waste water from mining activities.
 - Mines, Works and Factories, Act 1958 and Mining Regulations 1958, controls licencing for mining and site rehabilitation after mining.
- Tunisia
- No record of existing laws were supplied.
- Uganda
- Mining Safety Act, Cap. 248 and Regulations 1949, controls mining activities, discharge of waste water and rehabilitation of mined-out sites.
- Zambia
- Mines and Minerals Act No. 32 of 1976, controls mining activities but discharge of waste water and other environmental problems are under the Public Health Act, Cap. 535 as well.

designating strict nature reserves and wilderness areas exist in about half of the African countries sampled, the protection of ecologically significant or threatened species of plants or animal wildlife is a new innovation. However, Morocco's National Parks Ordinance 1934 protects migratory birds and their winter nesting sites as well as the gazelle and water bucks. Also Ethiopia's Wildlife Conservation (Amendment) Regulations 1974 protects the endemic simian fox and the Walia ibex and about 26 other threatened animal wildlife species. The legislations for Ghana, Zambia and Uganda also give a list of animal wildlife species requiring protection. Obviously, this is an area where African Governments must improve their legislation by ratification of the international convention on endangered and threatened species (Washington Convention-CITES) and the African Convention on the Protection of Nature and Natural Resources, 1968, both of which formed the basis for improved legislation in Tunisia.

74. The legislation dealing with parks and wildlife in these selected African countries specify various ways in which hunting can be regulated in the controlled hunting areas such as the prohibition of setting fires to hunt, a minimum size and bag limits, the procurement of licences to hunt specific game and the possession and carrying of firearms. Botswana has additional hunting regulations such as a hunting season, prescribed methods of hunting and an Arms and Ammunition Control Act (Cap. 24.01). Such provisions are also found in Burundi, the Gambia, Swaziland, Uganda and Zambia. But the ineffectiveness of law enforcement in these areas due to shortage of trained manpower to police the area, is the biggest embargo to control poaching. The situation has become so serious in East Africa that export/import and domestic trade in wild animal trophies and other products are now

banned by legislation, especially in Uganda after the civil disturbances. An attempt to solve the lack of manpower to police the game reserves has been made in Zambia and Ethiopia by the appointment of suitable experienced local persons as honorary game wardens, but being unpaid, the effectiveness of the system has to be seen. In Zambia, poaching to supplement meat sales is very widespread to curb inflation.

D. Mineral Resources Development Legislation

75. Table 5 indicates that in most cases, the Ministry of Mines regulates mining techniques, issues mining licences and makes regulations and rules for the enforcement of mining where it is the Ministry of Economic Planning and Industrial Development as well as the Ministry of Local Government and Lands. In Swaziland, the Ministry regulates mining activities which are still on a small-scale, privately-owned basis, under the Mines, Works and Factories Act of 1958 and the Mining Regulations of 1958. Mining activities in Botswana are similar under the Mines and Minerals Act of 1976 and the Pollution Act that takes care of environmental problems. In Senegal and Ivory Coast, mining activities are still regulated by colonial laws, although Senegal now has a Petroleum Code and Ivory Coast a Mining Code. The Ivory Coast Directorate of Industrial Environment, first created in 1973 under the Ministry of Mines, now under the Ministry of Economic Planning and Finance, controls industrial pollution through ensuring application of preventive measures by industries and by semi-annual inspection of industrial factories, including mining activities.

76. In Uganda, Zambia and Ghana, mining activities form a substantial part of the economy and contribute

substantially to the foreign exchange earnings. In these countries, mining legislation deals with environmental problems, with particular reference to health hazards. For example, the Gambia's Minerals Act, Cap. 121 of 1959 and Zambia's Mines and Minerals Act 32 of 1976 deals with pollution from the discharge of wastewater, the handling of refuse, tailings and overburden during mineral exploitation and extraction, as well as with health aspects due to neglect. The Ghana Mining Rights Regulation Ordinances - NRC Decree No. 165 (1973) and SMC Decree No. 109 (1977) - deal with the protection of the physical environment from pollution, worker protection and air quality during mining underground. In addition, Ghana has a Mining Health Areas Ordinance (Cap. 150) for regulating health and sanitation in the mining areas. For copper-nickel mining in Burundi, the mining company has a separate contract for the special pollution problems arising and the Government monitors its implementation. Senegal's mining laws regulate sanitation and security mainly and are inadequate on environmental protection

77. In Ethiopia and Mozambique as in Zambia, large-scale prospecting and extraction of certain minerals (precious metals, radioactive materials, oil, gas and coal) are government-controlled either entirely or jointly with a foreign company under the Ministry of Mining, Energy and Water Resources. Ethiopia's Mining Proclamation 282 of 1971 deals with mining rights and licenses, while Proclamation 39 of 1975 deals with specific mining activities, indicating what types of minerals can be exploited by the Government, foreigners or private citizens. The latter can only exploit marble, clays, sand and gravel, presumably for building purposes and pottery.

78. The restoration of mined-out sites is obligatory in most African

countries (Uganda, Burundi, Ethiopia, Morocco, Senegal and Swaziland) under existing legislation, although no provision for this exists in Mozambique as yet. Although the mining companies are obliged to take restorative measures on the land on the completion of mining, these may be very superficial. In Ethiopia, all that is required is land restoration to safeguard life, health and property of the people, while in Zambia, since mines are Government-owned, it is the responsibility of another government department to restore the land, probably the Ministry of Works. This is an obvious loophole in the law. African governments should aim at environmental rehabilitation of mined-out sites which involves not just clearing of tailings and levelling of the land, but also restoration of the top soil and re-vegetation of the site.

E. Marine and Coastal Zone Legislation

79. Legislation on coastal zone management and marine pollution as summarized on Table 6, does not affect land-locked Zambia, Botswana and Swaziland as much as land-locked Uganda where there are hundreds of miles of shoreline with scattered urban settlements along Lake Victoria. Even though Lake Victoria has extensive marshland with potential natural resources (peat), Uganda has no legislation for the protection of wetlands (for its wildlife) or for controlling offshore mineral exploitation on the lake as yet.

80. Coastal African countries sampled have regulations controlling shore-based development but the government agency responsible for such activities vary from country to country. In Ghana, the Railways and Port Authority and the Navy and Fisheries Department in the Ministry of Agriculture co-ordinate coastal development activities. In Morocco, it is the responsibility of the Ministry of

TABLE 6. LEGISLATION ON COASTAL ZONE MANAGEMENT AND MARINE POLLUTION

Legislative Instruments

<i>Country</i>	
Botswana	- Not a coastal state and no large inland waters.
Burundi	- Not a coastal state but it has shoreline with Lake Tanganyika.
Ethiopia	- Proclamation No. 139 (1978) establishes Marine Transport Authority to control marine pollution.
The Gambia	- Territorial Sea and Contiguous Zone (Amendment) Act, No. 9 (1969) sets 12 miles territorial sea but 200 miles fisheries zone.
	- Mining (Mineral Oil) Act, Cap. 122 (1955) regulates oil mining.
	- Port Authority Act No. 21 of 1972 controls pollution in territorial waters.
	- Continental Shelf Act Cap. 32 (1965) controls oil pollution of land and waters.
Ghana	- Offshore Mining Regulations 257 of 1963 deals with mining licences, pollution control and safety in drilling; complicated process for obtaining off-shore concessions.
	- NRC Decree No. 165 (1973) and SMC Decree No. 109 (1977) established territorial waters of 200 miles.
	- Oil on Navigable Waters Act 235 (1964) regulates oil pollution in the rivers and seas.
Ivory Coast	- Loi No. 61-349 of 9 November 1961 established Marine Merchantile Code for fisheries protection.
	- Regulation No. 819 of 15 March 1968 was passed to regulate marine pollution from oil, under Ministry of Public Works after signing the relevant international conventions and protocols; numerous regulations exist also.
	- Loi No. 70-489 of 3 August 1970 established a Petroleum Code for off-shore exploitation.
	- Loi No. 77-926 of 17 November 1977 extends jurisdiction of 200 miles EEZ.
Morocco	- Adopted the Mediterranean Plan of Action in 1976 and the Convention and Protocol for protection of the sea against pollution.
	- Starting with Dahir No. 1-58-227 on off-shore exploitation, there are laws on Fishing in territorial waters (1973) and creation of EEZ (1973).
Mozambique	- No regulations on shore-based development in coastal zones but ad-hoc regulations for off-shore mineral development. EEZ of 200 miles is claimed.

- Senegal - Maritime Fisheries Code creates a fishing zone of 50 sea miles within the 200 miles EEZ; regulations control sanitation in coastal areas near Dakar.
- Swaziland - Landlocked country and so not applicable, no large lakes or inland waterways
- Tunisia - Law No. 68-4 of 8 March 1968 protects marine wildlife such as Monk Seal.
- Law No. 73-9 of 23 March 1973 was enacted after Tunisia ratified International Convention on the Prevention of Pollution of the Sea by Oil.
- Uganda - Land-locked country with no coastal zone, but has long shoreline with Lake Victoria; no regulations on shoreline and wetlands protection, except where urban areas exist.
- Zambia - No coastal areas but large inland lakes, Lake Mweru and the man-made Lake Kariba, for environmental management.

Works and the Ministry of Commerce and Industry. But in Ethiopia, it is the Water Resources Commission and the Marine Transport Authority both of which have a much wider franchise than the control coastal area as they co-ordinate soil erosion activities, watershed management, inland fisheries and land reclamation as well. The latter infers that wetlands around the numerous volcanic crater lakes are protected and managed in Ethiopia. In Ghana, there is legislation to protect only tidal swamps but there is no legislation as yet for inland wetlands. It is also worth noting that even though some countries are land-locked, there do exist in the form of wetlands, inland valley swamps near rivers. These are useful in protecting the area's abundant aquatic wildlife and in regulating, as does a water reservoir, the flooding of the river.

81. For offshore mining and mineral development, Mozambique approaches the problem on an ad hoc basis with no specific legislation for it. Ethiopia's Mining Proclamation 282 of 1971 controls mineral development not only on land throughout Ethiopia but also at the sea-bed within its jurisdiction. There is a specific legislation in Ghana, namely Offshore Mining Regulation 257 of 1963 which deals with the issuance of mining licences, pollution control during operations and the safety and neglect of the offshore rigs for drilling. Morocco, however, has ratified international conventions of 1954, 1962 and 1969 on the subject and published national texts by which its Government action is guided.

82. There seem to be no regulations for offshore dumping of refuse or municipal wastes in the coastal countries sampled in Africa. With the proliferation of urban settlements and industrial complexes along the coast, especially in West and East Africa, it is becoming imperative that

legislation be enacted to control such land-based dumpings, especially because of the environmental health hazards posed by untreated sewage and other municipal wastes emptied on the beaches. Also, dumping of industrial wastes in coastal waters pollutes the sea and contaminates the marine fauna such as shellfish, crustaceans and fishes in the waters of the continental shelf, making them unfit, even though they look good, for human consumption.

83. Concerning the establishment of an exclusive economic zone (EEZ) beyond the territorial waters of a country, Ghana, Senegal and Mozambique have a 200-mile limit established by law /see NRC Decree No. 165 (1973) and SMC Decree No. 109 (1977) in Ghana/. The 1973 legislation in Morocco establishing a 70km exclusive zone for fishing is now being redrafted to extend the limit to 200 miles. Maritime Proclamation 137 of 1953 established a 100 km territorial water for Ethiopia, which may well include an exclusive economic zone, as no mention was made of this.

84. Obviously, marine pollution does not apply to land-locked Botswana and Swaziland, but in land-locked Uganda and Zambia, where there are large navigable lakes, water pollution can be a problem, as indicated earlier. There is no legal framework for marine pollution in Mozambique as yet, but Senegal has made provision for it in its draft Code for the Environment. Ethiopia's Marine Transport Authority Proclamation No. 139 of 1978 is responsible for the prevention and control of marine pollution, and new bills are being drafted now with the help of IMCO for legislation on discharges from ships and aircrafts on the high seas and on liability for environmental damage from oil spills. The Gambia, Tunisia, Ivory Coast have similar legislation to regulate offshore oil exploration, mining and oil pollution control.

TABLE 7. LEGISLATION ON WATER QUALITY*Legislative Instruments*

<i>Country</i>	
Botswana	<ul style="list-style-type: none">- Water Apportionment Act, Cap. 34.01 provides for control of water pollution under the Water Apportionment Board which sets standards for quality control for public water, discharge of wastes and treatment.- Boreholes Act, Cap. 34.02 regulates drilling of boreholes for rural water supply and Water Works Act, Cap. 34.03 deal with risks of water pollution.- Public Health Act, Cap. 63.01 controls pollution of drinking water and sanitation regulations.
Burundi	<ul style="list-style-type: none">- Ordinance of 1 July 1914 relates to control of water pollution, wastage and contravention penalties.
Ethiopia	<ul style="list-style-type: none">- Order No. 75 of 1971 established Natural Water Resources Commission to control disposal of sewerage and industrial effluents, prevent water pollution and improve drainage facilities; plans underway to establish Water Resources Authority with executing powers for water quality control and prevention of pollution.
The Gambia	<ul style="list-style-type: none">- Public Health Act, Cap. 154 of 1935 on abating water nuisance and regulating aerated water factories.- Utilities Corporation Act, No. 19 of 1972 set up corporation for supply of piped water for all kinds of uses.- Local Government Act, Cap. 109 of 1963 empowers District Authorities to control water pollution in natural water sources.
Ghana	<ul style="list-style-type: none">- Statutory Laws - River Ordinance Cap. 226, Oil on Navigable Waters Act, Cap. 235 of 1964 and Towns Ordinance Cap. 86 of 1892 regulate water pollution and quality control; these are supported by the Criminal Code Act, No. 29 of 1960 on sanitation and health aspects.
Ivory Coast	<ul style="list-style-type: none">- Decree No. 77-694 of 28 September 1977 indicates that Ministry of Urban Affairs is responsible for the conservation, regulation and policing of water usage through its Central Office of Sanitation which also deals with garbage.- Regulation No. 938 of 26 August 1978 deals with domestic water use and individual sanitation installations.
Morocco	<ul style="list-style-type: none">- Several Laws starting from Dahir of July 1914 to Dahir of 29 December 1967 establishing Inter-Ministerial Committee to co-ordinate problems on drinking water use, to Dahir of 25 July 1969 on conservation of water in semi-arid areas, to Dahir of 3 April 1972 setting up National Office for Water Quality Control.
Mozambique	<ul style="list-style-type: none">- Studies are being carried out on water quality control.

- Senegal** - Proposed Environment Code will have section on water pollution, sanitation and treatment of waste water.
- Swaziland** - Water Act, 1967 covers abstraction from and discharge of water into natural waterways, pollution control, purification of industrial water and effluent regulations for water quality control.
- Tunisia** - Loi No. 75-16 of 31 March 1975 established a Water Code, regulated by Decree No. 79-768 of 8 September 1979 under the National Office for sanitation.
- Uganda** - Public Health Act, Cap. 269 of 15 October 1935 empowers Medical and Health Officers to control water pollution assisted by government chemist.
- National Water and Sewerage Corporation Decree 1972, subjected to provisions of Public Health Act, regulating water quality standards and consumption.
- Zambia** - Public Health Act, Cap. 535 regulates water quality control under Ministry of Health and the Department of Water Affairs, for testing of water for pollutants from mines and industry.

85. Ghana regulates marine pollution by its Oil on Navigable Waters Act 235 of 1964, which was in response to its ratification of the 1954 International Convention for the Prevention of Pollution of the Seas by Oil. Morocco also ratified this convention in 1962 and the amendment in 1969; the Ministries of Commerce and Industry and of Works regulate the implementation. None of the countries has any contingency plans for dealing with oil spills either from tanker accidents, ships at port or from blow-outs in offshore oil wells. However, Morocco's Ministry of Urban Settlement and Land Use has drafted plans to establish a centre for the control of such oil spills.

F. Water Quality Control Legislation

86. Table 7 summarizes the legislation on water quality control in selected African countries. In the anglophone African countries surveyed, the Ministry of Health plays an important role in the regulation of water pollution. In Zambia, health officers in the Department of Water Affairs formulate policies which are implemented by local authorities. In Botswana, water pollution is regulated by the Water Affairs Department through its Water Apportionment Board. Technical advice on anti-pollution measures is given to the Board by the Senior Water Engineer (Pollution) under the Director of Water Affairs. Swaziland also has a Water Apportionment Board to co-ordinate the exploitation, development and use of water resources in the best interest of agriculture, urban and industrial development. In Uganda, medical officers are responsible for water pollution control. Ghana's Water and Sewerage Corporation Act of 1965 gives the Corporation control over water supply and sewerage works and systems, while water pollution problems are the responsibility of the Environmental Protection Council and the Ghana Standards Board, both of which have advisory rather than legal powers to enforce the law.

87. In Ethiopia, Morocco, Ivory Coast, the Gambia and Senegal, as in Ghana, emphasis has shifted from the Ministry of Health to the various ministries and agencies dealing with environmental matters for water pollution control. In the Ivory Coast, the Ministry for Urban Affairs control water pollution and conservation of water use whilst the Ministry of Public Works and the Ministry of Interior deal with domestic water supply and sanitation. In Senegal, it is the Ministry of Works and the Ministry of the Environment; in Morocco, it is the National Office for Drinking Water Control in the Department of Water and Forests and the Ministry of Commerce and Industry, while in Ethiopia it is the Ministry of Health and the Ministry of Mines, Energy and Water Resources. In Swaziland, the Water Apportionment Board advises the Ministry on water quality and pollution of streams and rivers.

TABLE 8. LEGISLATION FOR AIR QUALITY CONTROL

Legislative Instruments

Country

- | | |
|-------------|--|
| Botswana | - Atmospheric Pollution (Prevention) Act, Cap. 65.04 regulates air quality with monitoring net work programme under Department of Mines in controlled areas. Standard set up for ambient air quality are that of neighbouring countries. |
| | - Road Traffic Act, Cap. 69.01 regulates vehicle emission from exhaust gases and engine noise. |
| Burundi | - Article 86 of the Road Code relates to the vehicular, noise and gaseous emission, but no specific regulations on air pollution. |
| Ethiopia | - No legal provisions concerning prevention of air pollution from mobile or stationary sources but Transport Regulation No. 14 of 1963 prohibits use of vehicles exuding excessive vapour, smoke or gas. |
| The Gambia | - No specific legislation on air pollution, but Public Health Act. has provisions for nuisance to health and Criminal Code, Cap. 37 of 1934 makes it a misdemeanor to foul the air in trade or industry to the annoyance of the public. |
| Ghana | - The Factories, Offices and Shops Act, 328 of 1970 controls production of dangerous fumes on health. |
| | - Road Traffic Ordinance No. 55 of 1952 and its regulations (LI 952 and 953 of 1974) controls motor vehicle exhaust emission and noise, and stipulates penalties. |
| Ivory Coast | - No legal texts were obtained on air pollution. |
| Morocco | - The National Environment Plan calls for establishment of centres for control of air, water and marine pollution with support of relevant legislation. |
| | - Dahir of 24 January 1953 and its regulation of 19 January 1953 controls air quality from mobile sources. |
| Mozambique | - No legal provisions for air pollution now although written standards were established in 1970 under the colonial legislation. |
| Senegal | - The draft Code on the Environment would cater for air quality control. |
| Swaziland | - Factories, Machinery and Construction Works Act, 1972 deals with nuisances to worker's health from dusts, fumes and other impurities in the factory air. |
| Tunisia | - No legislative authority to control air pollution even though study has shown that the air in urban areas is highly polluted. |
| Uganda | - Penal Code provides for punishment on vitinating the atmosphere through business or by vehicles in public highway. |
| Zambia | - No comparative legislation on air quality control (with water quality). |

88. Most of the countries do not have a clearly defined water quality control programme. In Ghana, a bill has been drafted and in Senegal, the draft environmental code would have specified quantified standards for water quality as well as provisions for issuance of discharge permits and charging of effluent fees. However, the Ivory Coast's Directorate of Industrial Environment ensures water quality control for industrial use whilst in Uganda, Zambia and Ethiopia, the Ministry of Health tests surface and underground water for quality control under World Health Organization or other international standards. Similarly, only Zambia has a systematic monitoring programme for effluent control from factories, mining, textile and canning industries. Factories are required to pre-treat the waste before discharging into the local council's sewage treatment works. In Senegal, dischargers are obliged to monitor their own effluents and to report to the Government, but this latter obligation is not operative in Morocco. It was found that Ghana might have sufficient trained manpower, laboratory equipment and other resources to maintain an appropriate level of pollution control, but the laws are defective. Even with the monitoring system in Zambia, resources are inadequate to maintain the required level of pollution control there. These are obvious needs in Africa for follow-up action. The Gambia still has no systematic monitoring and testing for water quality control even for its piped water. In Burundi, urban water quality is controlled by la REGIDESO which is building a sewage treatment plant to prevent discharge of waste water and effluents into Lake Tanganyika; in the rural areas, the Ministry of Rural Development controls watersheds and pumped water.

89. Ghana's statutes have administrative remedies to regulate water qualities and penalties for water offences as indicated by sections

dealing with nuisance water for the protection of people in the Towns Ordinance 1892 (Cap. 86), the River Ordinance (Cap. 226) and the Oil in Navigable Waters Act of 1964 (Cap. 235). Ethiopia's National Water Resources Commission has the authority by Order 75 of 1971 to prevent the use of polluted water supply, but it has failed to issue the necessary regulations. A re-organization is now being undertaken by the Government to establish three water authorities under the Ministry of Mines, Energy and Water. The Water-Works Construction Authority has already been formed and the remaining two, the Water Supply Administration Authority and the Water Resources Authority are still under consideration. In the proposals, the Water Resources Authority will formulate national policy on water quality control and pollution and on treatment of sewage and effluents. It will also fix standards and monitor pollutants by its environmental protection department. The Authority will also establish a Water Code with penalties for health violations. Uganda has suspended all penalties for water quality offences as it lacks a water policy. Zambia's enforcement of water quality control regulations, especially for pollution from waste water discharged from mining activities, is very pragmatic and liberal, taking into account economic considerations. No country has any non-penal incentives for promoting water quality control.

G. Air Quality Control Legislation

90. Table 8 indicates that air quality control legislation for both stationary and mobile sources is absent in most African countries. The legislation, such as the Atmospheric Pollution (Prevention) Act (Cap. 65.04) of Botswana, deals with pollutants in controlled industrialized and mining

TABLE 9. LEGISLATION ON FOOD AND DRUGS QUALITY CONTROL*Legislative Instruments**Country*

- | | |
|-------------|---|
| Botswana | <ul style="list-style-type: none">- Public Health Act, Cap. 63.01 of 1971 controls food and drug quality, drinking water and sanitation.- Medical, Dental and Pharmacy Act, Cap. 61.02 regulates sale of drugs. |
| Burundi | <ul style="list-style-type: none">- Several laws exist on food and drugs manufacture and sale starting with Decree of 26 July 1910 to legislative ordinances (1911, 1946, 1953 and 1959).- Ordinance of 23 September 1939 deals with the exploitation of medicinal plant products for healing and Decree of 19 March 1952 regulates the art of healing.- Decree No. 100/180 of 18 December 1979 established National Pharmaceutical Office to control drug quality, manufacture drugs locally and carry out research on medicinal plants. |
| Ethiopia | <ul style="list-style-type: none">- Proclamation 100 of 1948 and Legal Notice 288 of 1964 control the quality, storage and distribution of drugs.- Legal Notice 147 of 1950 controls food quality through Municipal Public Health Officers.- Proclamation 127 of 1977 empowers Ministry of Health to control quality of all food and drugs, including beverages which are imported or locally produced, using WHO standards at a Central Laboratory. |
| The Gambia | <ul style="list-style-type: none">- Public Health inspectors regulate food hygiene but no agency is responsible for drugs. |
| Ghana | <ul style="list-style-type: none">- Standards Board Decree 1973, NRC Decree 173 amended by AFRC Decree 44 of 1979 and the regulations L.I 662 and 664, regulate standards on local and imported manufactured foodstuff and drugs for public safety and health; heavy penalties and fines for fraud and violations. |
| Ivory Coast | <ul style="list-style-type: none">- Loi No. 63-301 of 26 June 1963 empowers Ministry of Finance and Economic Planning to control fraud in the sale of foodstuff and agricultural products. Regulation No. 0031/MPA of 17 June 1976 empowers Ministry of Animal Production to control the quality of fish products for sale.- Loi No. 61-349 of 9 November 1961 and regulation No. 720 TP/MM of 17 April 1968 established Merchantile Marine Code to control fishing, trawler net mesh and amount of fish and shrimp catch. |
| Morocco | <ul style="list-style-type: none">- Numerous laws on sanitation and hygiene, ranging from Dahir of 12 July 1914 on importation of meat to Dahir of 8 July 1938 on sanitation in towns, to A.V. of 8 April 1941 on setting up central council and regional commission on hygiene and public health. |

- Mozambique** - No laws exist but ad-hoc administrative measures are taken at political level to protect the health of the people on trade of local foodstuff.
- Senegal** - A Code on hygiene is in preparation to deal with food and drugs gygiene and quality control.
- Swaziland** - Nutrition Council Act, 1945 empowers the Council to advise the Minister on malnutrition in the people; for the improvement of the diet.
- Public Health Act, 1969 deals with hygiene rather than quality control on food and drug; for quality control that of the South African Bureau of Standards is used.
- Tunisia** - No information was provided on legislation in this area.
- Uganda** - Food and Drugs Act, Cap. 271, 1959 regulates standards on the quality of local manufactured and imported food and drugs, with a heavy penalty for offences against the law.
- Pharmacy and Drugs Act, No. 39 of 1970 prohibits possession and use of narcotics and cultivation of narcotic plants, the Act also established the Pharmacy Board and Pharmaceutical Society.
- Zambia** - Food and Drugs Act 1972 under Ministry of Health established a monitoring programme for contaminants, with penalties for violation of the law.
- Public Health Act, Cap. 535 provides regulatory measures based on FAO/WHO Standards.

areas from stationary factory engines. Since the air pollution problem in Botswana is very serious, monitoring for air quality control is done by the Ministry of Mines which has two laboratories, one for industries around Gaborone and the other at the copper-neckel mines at Selebi-Phikwe. There, the air pollution monitoring network consists of continuously operating samples at nine stations maintained by the Department of Mines and eleven stations by BCL Limited, the mining company. This company sends monthly reports to the Ministry of Mines. Also, in Swaziland, the Factories, Machinery and Construction Works Regulation of 1972 provides for the removal of dust and fumes from the air in factories for the protection of the workers' health.

91. Legislation for vehicle emission control in the few countries where such laws exist, varies from the Transport Regulation No. 14 (1963) of Ethiopia, to the situation in Ghana where several statutes deal separately with stationary and mobile sources as shown by the Factories, Offices and Shops Act of 1970, Mining Regulations of 1970 and Local Government Act of 1971. Vehicle emission control is regulated by the Ghana Road Traffic Ordinance of 1952 and by the Road Traffic Offence Regulation of 1974; however, no air pollution control is mentioned in the Ghana International Iron and Steel Commission Decree of 1976, the Railway Decree of 1977 or the Port Authority Decree of 1977. Senegal has made provision for air quality control in its new code of environmental conduct, while Morocco has drawn up strict national legislation on air quality control after ratifying the relevant international conventions. A recent study in Tunisia by the French Ministry of the Environment has indicated that urban air in Tunisia cities are more highly polluted from diesel motor vehicles and factory engines,

than some metropolitan European or American cities. And so, the situation in Africa indicates that air quality control legislation is at an embryonic stage; and much care is needed to ensure that it keeps pace with the progress of industrialization in Africa.

H. Food and Drugs Quality Control Legislation

92. As indicated in Table 9, the Ministry of (Public) Health is responsible for maintaining food and drug quality in all the African countries sampled, except for the Ivory Coast where the Ministry of Finance and Economic Planning is responsible for the quality of food-stuff and agricultural products. However, there are additional provisions in Zambia, Ghana and Ethiopia and Uganda. The Zambia Food and Drug Act of 1972 established the Food and Drug Board to advise the Minister of Health in setting regulations for Health Inspectors, and the Public Health Act regulates standards for food and drug quality. Zambia is also being assisted by a FAO/UNEP programme to monitor food contaminants using the Codex Alimentarius. In Ghana, although drugs are monitored by the Ministry of Health, yet drug and food quality are monitored by the Ghana Board of Standards under a Standard's Decree 1973 (NRC Decree 193) which empowers the Board to test foods and drugs, and carry out research on specifications to maintain standards. In Ethiopia, within the Ministry of Health, the Division of Pharmacy Services under Pharmacy Regulation of 1964 (Legal Notice 288) controls drug quality based on the latest edition of the International Pharmacopeia. Although the therapeutic effects and safety of drugs are tested before they are put in the market in Ethiopia, there is no legislation on food quality control and so WHO standards are used for testing foods by the Food

TABLE 10. LEGISLATION ON SOLID WASTES AND SPECIFIC CHEMICALS DISPOSAL*Legislative Instruments**Country*

- | | |
|-------------|--|
| Botswana | <ul style="list-style-type: none">- Public Health Act Cap. 63.01 (1971) regulate solid waste management under Ministry of Health for urban areas and Ministry of Local Government in rural areas, under different standards and regulations.- Note that Mines and Minerals Act, Cap. 66.01 deals with export/import and use of radioactive minerals. |
| Burundi | <ul style="list-style-type: none">- Loi of 29 June 1962 calls into force all ordinances such as that of 29 June 1959 on public hygiene, of 9 January 1949 on public health and of 20 October 1931 on garbage disposal.- No legislation on specific substances including radioactive materials. |
| Ethiopia | <ul style="list-style-type: none">- Public Health Rules of 1943, Legal Notice 25 controls disposal of garbage, refuse from buildings; now, Higher Urban Dwellers Associations and the Kebele Units within them collect and dispose municipal solid wastes.- No legislation on specific substances but dangerous substances are regulated by Pharmacy Department of the Ministry of Health and Extension Department of Ministry of Agriculture. |
| The Gambia | <ul style="list-style-type: none">- Local Government Act, Cap. 109 (1963) and 110 (1954) deals with abatement of nuisance, disposal of rubbish, refuse, etc. through sanitation regulations by the city and area councils. The Act also covers discharge of dangerous chemicals in water.- Regulations on use of pesticides being planned although bye-law exist on shipment of dangerous goods in Gambian waters. |
| Ghana | <ul style="list-style-type: none">- Towns Ordinance, Cap. 86 (1951 Rev.) provides for sanitation in buildings and disposal of nuisance to health.- Several varied legislation on the use, but not control of pesticides, eg. Diseases of Animal Act, Cap. 83 (1961) , Cocoa Industry (Regulation) NRC Decree No. 278 (1968) and the Mosquito Ordinance, Cap. 75 (1951 Rev.).- Radioactive Minerals Ordinance, Cap. 151 (1951 Rev.) regulate mining of such minerals and workers protection for health.- Atomic Energy Commission Act No. 204 (1963) deals with peaceful uses, education, and development of radio-isotopes. |
| Ivory Coast | <ul style="list-style-type: none">- Decrees No. 76-01 and 76-03 of 2 January 1976 created a National Fund for Sanitation in the City of Abidjan to be extended to other towns in the five year Development Plan (1976-1980).- Decree No. 74-388 of 7 August 1974 relates to the sale, distribution and use of pesticides but no provision for environmental effects. |

- Morocco**
- Dahir of 19 October 1954 on the syndicate for the control of plant parasites and Decree of 5 August 1958 establishing composition of administrative commission on control of plant parasites.
 - Regulation of 1 August 1951 on the preparation, use and disposal of radioactive materials.
- Mozambique**
- No response on this section.
- Senegal**
- No legislative texts on solid wastes disposal or on the use of specific chemicals as pesticides by the Ministry of Agriculture; draft Environment Code will take care of this.
- Swaziland**
- Urban Areas Regulation 1962 takes care of disposal of municipal solid wastes by local authority, but not that in rural areas nor for industrial wastes.
 - Pharmacy Act 1929 controls the use of poison drugs but includes pesticides use and other toxic substances for industry and agriculture.
 - Control of radioactive materials Act, 1964 deals with dangers of ionising radiation to health.
- Tunisia**
- No legal provisions but industries examined for polluting capacity before permit is given; for pesticides in agricultural use, specialists test toxicity for 4-10 years and report to Ministry of Agriculture, see Loi No. 61-39 of 7 July 1961 and its Decree No. 61-300 of 28 August 1961 on the sale and use of pesticides.
- Uganda**
- Public Health Act, Cap. 269 empowers local authority to be responsible for municipal waste disposal; but the industrialist is responsible for dangerous industrial wastes.
 - Regulations exist on the importation, use and disposal of pesticides, fertilizers, toxic drugs and radio-active materials for the protection of health and safety.
 - Atomic Energy Decree 1972 establish Atomic Energy Control Board for protection of public against ionising radiation.
- Zambia**
- No national legislation on solid waste management, although draft legislation on refuse disposal is being prepared;
 - WHO standards are used for regulating pollution by specific substances.

Quality Control Section of the Division of Environmental Health in the same Ministry, in co-operation with the Ethiopian Standards Institution. The Food and Drugs Act 1959 in Uganda deals in detail on the sale of injurious food, spoilt food unfit for human consumption, adulterated drugs, false labelling and advertisement on food and drugs, the power of seizure of suspected food in transit and the registration of premises for sale or preparation of preserved foods (ice cream, sausages, etc.). The Act also established a Food Hygiene Advisory Committee to which the Minister of Health can refer.

93. Botswana and Swaziland do not have their own monitoring programme or regulatory standards for maintaining food and drug quality of locally manufactured or imported products. Due to economic and historical connections, they make use of that of neighbouring South Africa. Those countries that have a monitoring programme lack adequate manpower, laboratories and equipment to function at a national level, although the central laboratory may be able to cope with routine work. Penalties for violation of the legal provisions to control food and drug quality vary from fines in Uganda to imprisonment or fines in Ghana, or both in Zambia. In Mozambique, there are non-judicial, popular penalties for failing to maintain the health of the public during trade in foodstuff. In Ethiopia, while there are no specific penalties for food offences, violation of the Pharmacy Regulations for drug quality is punishable under the Penal Code or the Medical Practitioner Regulation Proclamation No. 100, 1948. While much has been done on food and drug quality, there remains a lot to be done in establishing monitoring programmes, training the required manpower and drafting legislation to set up standards for

quality control of manufactured and imported food and drugs. It is noted that only Burundi mentions its legislation on the exploitation of local medicinal plants and their use in the "act of healing". Other countries may wish to regulate this area of natural resources in traditional medicine for harmonization into modern medical practice as Nigeria is doing.

I. Legislation for Solid Wastes and Specific Chemicals Disposal

94. The survey questionnaire indicates that solid wastes have included domestic (human) waste, municipal wastes (refuse and garbage) and industrial wastes (generally toxic chemicals). Table 10 show that most of the countries regulate domestic and municipal wastes disposal through sanitation services under Public Health Acts, as is the case in Uganda, Ethiopia, under the Municipal Public Health Rules of 1950 (Legal Notice 146-148) and Ghana, under the Criminal Code of 1960 (section 296). Although the Ministry of Health is responsible for solid waste disposal at the national level, it makes provision for town councils or local authorities to handle solid wastes at the Municipal or local level, as in Zambia and Botswana, under a revision of the Town and Country Planning Act, and Ghana, under the Local Government Act, 1971. The rapid growth of certain capital cities in Africa coupled with modern development, has created serious sanitation problems in the older and often neglected parts of the city. For instance, Abidjan is solving that problem by creating a National Fund for Sanitation under Decree No. 76-01, as surcharge on water supply. Most of the countries do not seem to have any legislation for the disposal of industrial solid wastes from factories, mines and agro-industries except in Uganda, where the

TABLE 11. LEGISLATION ON HUMAN SETTLEMENTS AND POPULATION PRESSURE

Legislative Instruments

Country

- | | |
|-------------|---|
| Botswana | <ul style="list-style-type: none">- Town and Country Planning Act, Cap. 32.09 regulates urban development and improves shanty towns by up-grading programmes.- There are no laws controlling population migration from rural to urban areas but a National Settlement Policy exists to improve living standards and job opportunities in rural areas. |
| Burundi | <ul style="list-style-type: none">- Administrative measures of 1 December 1962, regulating rural migration to towns, has not been enforced for long.- No legal texts as yet on urban development as capital is still a small town and Government has launched programmes to improve infrastructure and housing in rural areas. |
| Ethiopia | <ul style="list-style-type: none">- Proclamation 127 of 1977 empowers Ministry of Urban Development and Housing to prepare overall planning of urban centres and the establishment of building standards to prevent slums and shanty towns.- Proclamation 31 of 1975 created public ownership of rural lands from feudal system, discouraging rural migration. |
| The Gambia | <ul style="list-style-type: none">- Lands Act, Cap. 102 and the Building Act, Cap. 17 of 1964 control land use and building regulations.- No law exists on rural-urban migration but Government counter this through rural development programmes. |
| Ghana | <ul style="list-style-type: none">- Town and Country Planning Ordinance, Cap. 84 of 1945 is legal framework for urban development.- No laws regulating rural-urban migration but industrial set-up in rural areas has privileges.- Social Security Decree (NRC) No. 127 of 1972 protects only invalid workers disabled at work. |
| Ivory Coast | <ul style="list-style-type: none">- Decree No. 71-672 of 19 December 1972 established a Building Society for Urban Areas to modernize old areas and establish new ones; Decree No. 75-095 of 31 January 1975 widened the scope to include sanitation and drainage infrastructure. |
| Morocco | <ul style="list-style-type: none">- Dahir of 30 July on urban development.- Dahir of 30 September 1953 on zoning and allotment of urban lands.- Dahir of 25 June 1960 on development of rural settlements. |

- Mozambique - No legal framework but Public Works Department deals with settlement planning.
- Senegal - No legal texts were found on this matter.
- Swaziland - Town Planning Act 1961 deals with planning and design of buildings (see also Buildings Act, 1968) and United Nations assistance exist on up-grading and prevention of squatters' slums.
 - No laws preventing migration from rural to urban areas but Government has rural development programme.
- Tunisia - An Urban Code exists with plans to control urban development, with detailed management practices to ensure proper zoning, building construction, sanitation and other infrastructure, conservation of historical heritage and proper allocation of land; the decree approving the Urban Code was not given.
- Uganda - Town and Country Planning Act, 1951 empowers Minister to declare planning areas and Planning Board to issue building permits.
 - Urban Development Act regulate slum development.
 - Community Farm Settlement Decree 1975 provides for rural vocational training of unemployed youths in towns.
 - Social Security Act 1967 provides for retirement benefit after 65, invalidity and survivor's benefit.
- Zambia - Town and Country Planning Act, Cap. 475, regulate all lands in urban areas as State lands including up-grading of shanty towns.
 - No laws exist as yet to control rural-urban migration but government is promoting rural development schemes.
 - Workmen's Compensation Act, and National Provident Fund Act cover social security.

responsibility lies with the industrialist, and Morocco, where the Ministry of Interior assumes control. In Tunisia, emphasis is on preventive measures by preliminary examination of polluting capacity of various industries before a permit is given for establishment of the industry.

95. No legislative provisions and administrative arrangements for the regulation of specific substances such as pesticides, fertilizers, toxic substances and radioactive materials, exist in Botswana, Swaziland or Mozambique, Senegal, Burundi, but in Ethiopia, they are regulated by the Pharmacy Department of the Ministry of Health and in Zambia by the use of WHO standards. Tunisia has instituted an elaborate system for the trial of pesticides by agricultural specialists who report through the Commission for the study of toxic and anti-parasitic products to the Ministry of Agriculture on the efficacy and toxicity to man and beasts. Senegal has incorporated legislation on these specific substances into its draft Code for the Environment. In Uganda and Morocco there is legislation (not quoted) on these substances dealing with the health and safety of the people. Ghana has specific legislation on each, except for the control of fertilizers; for example, the Mosquito and Tsetse Fly Ordinance 34 of 1955 controls the use of insecticides and pesticides, the Poison Ordinance controls the use of toxic substances, the Radioactive Minerals Ordinance (Cap. 151) regulates the prospecting and mining of such minerals and the Atomic Energy Commissions Act 204 of 1963 controls the safety and health of workers, the scientific use of radioisotopes and makes provision for advising the Government on such matters. Uganda, Swaziland, Morocco and Botswana also have legislative provisions on atomic energy and the control of ionising radiations on the health of man and animals. In no case is environmental

quality taken to be a major consideration; the legislation and regulations concern only the health and safety of the people.

J. Legislation on Human Settlements and Population Pressure

96. From the summary of legislation in this area in Table 11, the Ministry of Town and Country Planning regulates urban development to prevent slums and to upgrade shantytowns under Town and Country Planning Acts in Botswana, Swaziland, Zambia (Cap. 475), Uganda and Ghana. Urban development is also controlled by the Urban Authority Act in Uganda, the Towns Ordinance in Ghana, and the Lands Act, Cap. 102 and the Buildings Act, Cap. 17 of 1964 in The Gambia. In Morocco, the law on Urban Development of 1952 and that on Allotment of Lands of 1953 control urban development, whilst Tunisia has an Urban Code under the Inter-Ministerial Committee for urban development. The situation in Ethiopia is similar, with the Ministry of Urban Development and Housing empowered under Proclamation 127 (1977) to protect and administer all government buildings, houses, urban lands and roads; issue building permits for private houses; licence contractors, register surveyors, engineers and architects; maintain building standards and carry out socio-economic research on problems of urban settlement.

97. No country has any legislation preventing migration from rural to urban areas; but most countries have a policy of positive action to prevent migration by improving the standard of living and creating job opportunities in rural areas rather than by various kinds of preventive measures through legislation. Botswana, Ghana and Uganda are encouraging the development of rural areas for the population. Ethiopia has instituted producer co-operatives and cottage industries in the rural areas and its Proclamation No. 31, 1975, on public ownership of rural lands enables

TABLE 12. LEGISLATION ON CULTURAL ENVIRONMENT AND NOISE CONTROL

Legislative Instruments

Country

- | | |
|-------------|--|
| Botswana | <ul style="list-style-type: none"> - Noise and Nuisance bye-laws enacted by local authorities only. - Monuments and Relics Act, Cap. 59.03 under Ministry of Home Affairs protects objects of aesthetic, archeological, historical and scientific value and interest. - Town and Country Planning Act, 32.09 empowers Board to control architecture of new buildings. |
| Burundi | <ul style="list-style-type: none"> - No national legislation on noise control. - Draft laws are now being prepared to protect several historical sites and monuments scattered about the country as well as its cultural heritage. |
| Ethiopia | <ul style="list-style-type: none"> - No legal provisions or standards exist for noise control in factories or building sites but Civil Code (Art. 1225) regulates household noise, Legal Notice 279 (1963) regulates vehicle noise from motor car disrepair and sounding of the horn, and Penal Code makes provision for violations. - Proclamation 127 of 1977 rescinds Antiquities Proclamation 229 of 1966 on the protection of ancient archives, relics and antiquities. |
| The Gambia | <ul style="list-style-type: none"> - Lands Act, Cap. 102 (1946) controls noisy, offensive or dangerous trade or nuisance in urban areas. - Monuments and Relics Act, No. 8 of 1974 establishes a Commission with powers to protect national relics and historical sites even during mining (see Minerals Act). |
| Ghana | <ul style="list-style-type: none"> - Civil Aviation Act, No. 37 (1958) regulates aircraft noise, see its Regulation L.I. 674 (1970). - Road Traffic Offences Regulation L.I. 952 (1974) deals with motor vehicle noise. - National Museum NLC Decree 387 of 1969 creates Museum and Monuments Board to control antiquities and objects of archeological interest. - Town and Country Planning Ordinance, Cap. 84 deals with places of natural beauty, architectural and archeological objects including landscapes. - Concessions Ordinance, Cap. 136 (1951 Rev.) protects fetish grounds, venerated by customary laws. |
| Ivory Coast | <ul style="list-style-type: none"> - Penal Code deals only with night rumpus but not environmental control of noise during the day. |

- Loi No. 56-1106 of 3 November 1956 deals with protection of natural monuments and historic sites, scientific and ethnographic objects from excavations, but now a draft law to improve on this to cover national museum for Ivorian artists and a Cultural Agency, is being planned.
- Morocco
- Noise control regulations under the Ministry of Transport and Ministry of Works and the Interior, but no laws exist.
 - Dahir of 21 July 1945 (amended 28 June 1954) deals with conservation of historic monuments and sites, objects of antiquity and art, ancient towns and architecture (see also Regulation of 30 April 1967 on Tangiers).
- Mozambique
- No information on legislation for noise control or on cultural heritage was provided.
- Senegal
- Penal Code deals with noise rampage at night only, environmental treatment of noise will be incorporated in the Environmental Code.
 - Loi No. 66-49 of 27 May 1966, amended by Loi No. 79-78 of 28 December 1979 with its regulation Decree No. 66-1976 of 31 December 1966 deals with the Urban Code to integrate general policy on built-up areas with economic development; besides health measures, the policy also deals with safeguarding of the cultural and aesthetic values, with penal sanctions for infringement.
- Swaziland
- Factories, Machinery and Construction Works Regulations 1972 enforces an 85 decibel noise level in factories, controlled by the Ministry of Labour, but no control for motor vehicle noise.
 - National Trust Commission Act, 1972 provides for preservation of national monuments, relics and antiquities.
 - Town Planning Act, 1961 regulate architectural design of buildings.
- Tunisia
- Strict legislation on noise as a nuisance was said to exist but not one was mentioned in the text.
- Uganda
- Penal Code prohibits loud noise in trade or otherwise to the offense of the public.
 - Historical Monuments Act, 1967 empowers Minister to protect any object of archeological, palaeontological, ethnographical, traditional or of historical interest which are then vested in the Uganda Lands Commission, under Ministry of Culture and Community Development.
- Zambia
- No laws were mentioned for the preservation of the cultural heritage or for noise control.

farmers to own their own farmland. Zambia and Swaziland have definite plans for rural development in their Third National Development Plan, the latter with emphasis on transforming subsistence farming to commercial agriculture. Similarly, there are no legal provisions for redrafting of the population from the urban to the rural areas, not even to State Farms where they exist. Very few countries make provision for some sort of social security during unemployment. In Ghana, the Social Security Decree of 1972 (NRCD 127) protects employees during periods of unemployment leading to invalidity, while Zambia's Workers Compensation Act and National Provident Fund Act as a sort of social security, although not with the same provisions as are made under the British system. Some countries such as Botswana are seeking the assistance of the ILO for a study on work conditions and a social security programmes for workers. Uganda's Social Security Act of 1967 provides for retirement, invalidity or survivor's benefits for all workers.

K. Legislation for Cultural Preservation and Noise Control

98. From the summary of legislation in this area in Table 12, Botswana, Swaziland, Uganda, Zambia and Mozambique have no specific legislation on noise control from vehicular traffic, construction works or factories, although the Public Health Acts sometimes identify noise as one of the public nuisances under their jurisdiction (in Uganda). In Morocco, the Ministry of Transport, Interior and Works regulates noise under certain standards which are not mentioned. Under the Transport Regulation of 1963 (Legal Notice 279) of Ethiopia, the Traffic Police regulate excessive noise from any vehicle. Senegal stated that the regulation of environmental noise control will be included in the draft Code of the Environment, but like the Ivory Coast,

its Penal Code only caters for noisy rumpus at night. Tunisia seems to have several laws to control noise but they are not enforced and so noise is one of the causes of psychiatric diseases for pensioners nowadays. Ghana's Criminal Code (section 296) prohibits excessive noise to the annoyance of the public, such as music and dancing at night unless it is done under licence. Its Factories, Offices and Shops Act of 1970 (section 26) also prohibits excessive noise and vibration in factories, for the welfare of the workers. Vehicle noise is controlled by the Road Traffic Regulation of 1974 and aircraft noise and vibration by the Civil Aviation Regulation of 1970 (Legal Instrument 674).

99. It is now evident that legislation to regulate noise and vibration from various sources except from vehicular traffic is virtually non-existent in Africa and that provisions for controlling the level of noise are rather arbitrary in the absence of a scientific standard. In order to enforce noise regulations and penalties for violation, African countries should adopt international standards for noise levels. The threshold for human hearing as indicated by the quiet of a forest is about 15 decibels; in a quiet library, it is 35 decibels, but in a busy office it is about 65 decibels; heavy traffic noise and construction site noise are above 85 decibels, rock music is about 112 decibels and jet aircraft noise at 127 decibels causes intense pain to the human ear. It is only in Swaziland's Factories, Machinery and Construction Works Act 1972 that this scientific standard of 85 decibel is used as the limits of noise level in factories.

100. The situation regarding laws and administrative arrangements for the preservation of the cultural environment is not much different from that for noise regulation. The classific-

TABLE 13. LEGISLATION ON ENVIRONMENTAL EDUCATION AND TRAINING*Legislative Instruments**Country*

- Botswana - No mention was made of environmental education legislation in the reports.
- Burundi - No mention of environmental education legislation in the reports.
- Ethiopia - No laws on environmental education but conservation of natural resources and environmental health are taught at secondary schools; also the university offers elective on environmental law; there are also ad-hoc environmental programmes in the news media.
- The Gambia - Although no laws exist yet the Banjul Declaration by the President in 1977 created a Wildlife Department in his Office; also World Wildlife Fund provided a mobile cinema unit for environmental education purposes. It also maintains an Education Display Centre within Abuko Nature Reserve, 12 miles from Banjul.
- Ghana - No environmental education laws exist but syllabi for schools in this area are being worked out with provisions for in-service training of teachers to use the curricular materials.
- The news media are very receptive to the Environmental Protection Council Education Programme.
- Ivory Coast - No laws enabling environmental education to be taught at school or environmental awareness to be created in the public sector; however, the Ministry of Agriculture and the Ministry of Water and Forests produce and circulate popular journals for farmers as 'Fortnight of Progress', 'The Earth and Progress'.
- Morocco - No laws exist but popular education on environmental concern should be encouraged at schools and through mass media; and a school syllabus is being prepared.
- Mozambique - No information on this subject area.
- Senegal - Council of Ministers in 1979 decided to integrate environmental education into the school curriculum but interdisciplinary nature raises problems; otherwise, no legal provisions exist in this area.
- Swaziland - No legislation in this area but school syllabi cover important environmental issues through traditional subjects; News media also devote time to environmental protection.
- Tunisia - No information on legislation in this area was provided.
- Uganda - No legislation exists in this area but primary and secondary education cover environmental protection in courses in civics and agricultural practices; also

the University has a course on Legal Control of Natural Resources dealing with environmental law.

Zambia

- There are no legislation providing for environmental education and training to be taught in schools and college; no environmental law is taught at the University and no programmes for the mass media in this area.

ation of historical sites for preservation is gazetted under Conservation of Antiquities by the Ministry of Culture and Community Development in Uganda and by the Ministry of State (Cultural Affairs) in Morocco. The Ministry of Culture and Sports in Ethiopia deals with Ethiopian prehistory, ancient monuments and relics, registration and safekeeping of antiquities and the restoration and reconstruction of historical sites and buildings under articles published in Negarit Gazeta No. 29, 1977. In Ghana, the National Museum Decree of 1969 (NLCD 387) and the Town and Country Planning Act (Cap. 84) empower the Ghana Museum and Monument Board to recommend to the Minister of Education the preservation and safe-guarding of monuments and antiquities. The Board also issues licences to excavate relic sites, but all artifacts must be reported for registration, with penalty in default. For the aesthetic regulation of the architectural quality of new buildings, Morocco has a local commission dealing with this matter, whilst Botswana's Town and Country Planning Act empowers the Board to decide on the merits of the design. Also in Botswana, the Monuments and Relics Act (Cap. 59.03) empowers the Ministry of Home Affairs to protect monuments, ancient workings, relics and such like objects which can be displayed in the National Museum and Art Gallery. The Ivory Coast has a similar law (No. 56-1106 of 1956) on the protection of natural monuments and historical sites. But being of colonial origin, the law does not adequately cater for the present needs of the country and so a draft new law is in preparation for the creation of a National Museum for Ivorian works of art and the establishment of an agency to promote cultural development.

L. Legislation for Environmental Education, Training and Information Dissemination

101. Table 13 indicates that none of the African countries sampled have legislation on environmental education. A few have courses on environmental protection in their primary or secondary school curricula probably through the activities of the Science Education Programme for Africa (SEPA) which has been developing environmental science curricula materials for African primary schools and teacher training colleges over the past 20 years. Topics on environmental protection such as soil erosion, forest conservation, health and pollution, are taught in schools through the traditional primary school subjects hygiene, health science, nature study, gardening, rural science or through biology and geography in secondary schools in Africa. In the case of the universities, environmental law as such is not taught in the Law Faculties, although it is offered as an elective at the University of Addis Ababa and Makerere University (Uganda) offers a course on Legal Control of Natural Resources. In most cases, environmental protection involving conservation principles, pollution problems, resource management are dealt with in the Faculty of Sciences in the Universities. However, a few staff are pursuing research on environmental problems and legislation and are encouraging students to undertake honours course projects in this area within the African context. It was gratifying to note that Morocco is developing a syllabus for a national institute in environmental studies.

102. Although no law requires the mass media to devote space or time to educate the public on the importance of environmental protection, yet daily newspapers, the radio and television cover this topic regularly especially by using relevant foreign materials. Ivory Coast has an innovative series of vernacular publications - Journals for farmers, dealing with environmental problems in agriculture. Developing countries can follow the example of Ghana which has an elaborate World Environment Day (June 5) programme in which the mass media, with direction from the Environment Protection Council, plays a major role in disseminating material on environmental protection through vernacular talks, broadcast seminars, television films and radio discussion groups.

CHAPTER V

REGIONAL AND INTERNATIONAL CO-OPERATION ON ENVIRONMENTAL LEGISLATION

A. International Conventions and Protocols

103. To protect the world's environment as a whole, it is necessary for Governments to accept obligations under international agreements and to create the required national environmental machinery and other institutions to implement such legislations. To help Governments to identify those conventions and protocols in the field of the environment to which they are entitled to become parties as requested in General Assembly resolution 3436(XXX) of 9 December 1975, UNEP is preparing a register of the important conventions adopted since 1933. The list is presented annually to the Governing Council since 1977 as document UNEP/GC/INFORMATION/5 and supplements 1, 2, 3 and 4, pointing out the status of existing conventions with particular reference to ratifications, accessions and entry into force as well as information on draft agreements at various stages of preparation and negotiation.^{9/}

104. Some of the more relevant international conventions and protocols which have been adopted (at the first dates shown) and have come into

force at some time or the other (at the second date indicated) are listed below for information and necessary action. Although, these conventions and protocols are global, they are of interest to the African environment as is indicated by the number of African countries (bracketed after each entry below), who have ratified, acceded or become parties to them up to the end of 1980:

- International Plant Protection Convention; adopted 6 December 1951; entry into force 3 April 1952; (9 African countries).
- International Convention for the Prevention of Pollution of the Sea by Oil, 12 May 1954 (amended 11 April 1962; 12 October 1971); (14 African countries).

^{9/} A/36/142 of 1 September 1981. International Conventions and Protocols in the field of the environment. Note by the Secretary-General, Development and International Economic Co-operation: Environment.

- Convention concerning the Protection of Workers Against Ionizing Radiations 22 June 1960; 17 June 1962; (5 African countries).
- Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water, 5 August 1963; 10 October 1963; (28 African countries).
- International Convention for the Conservation of Atlantic Tunas, 14 May 1966; 21 March 1969; (7 African countries).
- International Convention on Civil Liability for Oil Pollution Damage, 29 November 1969; 19 June 1975; (9 African countries).
- International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 29 November 1969; 6 May 1975; (3 African countries).
- Convention Concerning Protection against Hazards of Poisoning arising from Benzene, 1971; 27 July 1973; (4 African countries).
- Convention on Wetlands of International Importance especially as Water Fowl Habitat, 2 February 1971; 21 December 1975; (2 African countries).
- Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-bed and the Ocean Floor and in the Sub-Soil thereof, 11 February 1971; 18 May 1972; (19 African countries).
- International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 18 December 1971; (4 African countries).
- Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircrafts, 15 February 1972; 7 April 1974; (No African country).
- Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (biological) and Toxin Weapons, and on their Destruction, 10 April 1972; 26 March 1975; (21 African countries).
- Convention concerning the Protection of the World Cultural and Natural Heritage, 23 November 1972; 17 December 1975; (15 African countries).
- Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 29 December 1972; 30 August 1975; (8 African countries).
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, 3 March 1973; 1 July 1975; (19 African countries).
- Convention on the Prevention of Pollution by Ships, 2 November 1973; (2 African countries).
- Protocol Relating to intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil, 2 November 1973; (1 African country).
- Convention for the Protection of the Mediterranean Sea against Pollution, 16 February 1976; (see under Regional Conventions in the next paragraph).
- Convention on the Prohibition of Military or any Other Hostile Use of Environment Modification Techniques, 10 December 1976; (15 African countries).
- Convention concerning the Protection of Workers against Occupational Hazards in the Working Environment due to Air

Pollution, Noise and Vibration, 20 June 1977; (1 African country).

- Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979; (11 African countries).

B. Regional African Conventions and Protocols

105. Six conventions, protocols, agreements and treaties were identified as specifically relating to the African regional environment. Three of the most recent of them are treated in detail below whilst the other three are: Convention on the African Migratory Locust, 25 May 1962; Act regarding Navigation and Economic Co-operation between States of the Niger Basin and its Agreement for a Niger River Commission, 26 October 1963; and finally the Phyto-Sanitary Convention for Africa, 16 September 1967. The three recent conventions dealing specifically with the African region are:

- (i) African Convention on the Conservation of Nature and Natural Resources which was adopted by the Organisation of African Unity (OAU) at its Fifth ordinary session of the Assembly of Heads of State and Governments, held in Algiers, on 15 September 1968. The convention came into force on 9 October 1969, a month after at least four member States (Upper Volta, Swaziland, Kenya, Ghana and Ivory Coast) had submitted their instruments of ratification to the OAU Secretariat. Up to the end of 1979, 27 African member States had ratified this Convention which superceded the 1933 London Convention on the African Flora and Fauna. The Convention was very comprehensive and it provided for all aspects of African development—soil, water,

flora, fauna and trafficking, customary rights, conservation management measures for the protection of the environment. There is a provision in the African Convention for a call for revision five years after it has been in force. This requires serious consideration now by member States of OAU and ECA in view of the Monrovia strategy for African development during this Third United Nations Development Decade as indicated in the Lagos Plan of Action.

- (ii) Barcelona Convention for the Protection of the Mediterranean Sea against Pollution and its two related Protocols, was adopted on 16 February 1976 by sixteen States bordering the Mediterranean Sea, of which five, i.e. Algeria, Egypt, Libya, Morocco and Tunisia, are in the African continent. The Convention and its related Protocols were adopted in the Final Act of the Conference of Plenipotentiaries of the Coastal States of the Mediterranean Region. The Conference was organized by the United Nations Environment Programme (UNEP) under its Regional Seas Programme. The three legal instruments entered into force on 12 February 1978, a month after six instruments of ratification had been deposited by the States with the Government of Spain. UNEP was designated as the secretariat for the convention and it continued to assume over-all co-ordination of activities.
- (iii) Abidjan Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region and its related Protocol,

concerning Co-operation in Combating Pollution in Cases of Emergency, were adopted at the Conference of Plenipotentiaries organized by UNEP under its Regional Seas Programme, in Abidjan from 16 to 23 March 1981. Twenty West African coastal and island States as well as a few inland States attended the Conference, and signed the Final Act of the Conference consisting of an Action Plan, the Convention and its related protocol. The Final Act was the result of five years preparatory, concerted and co-operative efforts between UNEP's Regional Seas Programme and the Governments in the West and Central African Region, to develop a programme of action for the protection and enhancement of the region's marine and coastal environment. The depository for the Convention is the Ivory Coast and UNEP was designated as the Secretariat of the Convention. The Convention also makes provision for a Steering Committee of seven States to co-ordinate administrative policy and financial matters and a Regional Co-ordination Unit under the advice of UNEP to implement the technical aspects of the Action Plan, the Convention and its related Protocol. The Convention and its Protocol will enter in force on the sixtieth day following the date of deposit of at least six instruments of ratification, acceptance, approval or accession to them by the contracting parties.

CHAPTER VI

RECOMMENDATIONS AND GUIDELINES FOR FOLLOW-UP ACTION

106. In conclusion, the guidelines and recommendations for follow-up action which are incorporated in this report, were the result of discussions arrived at the Seminar for Lawyers for the Development of Environmental Protection Legislation in the ECA Region. The framework for the guidelines were determined during the debate on legislation for sectoral development activities (see Agenda item 7 of the Seminar). In the general discussions during the debate on each set of topics considered, various guidelines emerged for assisting African countries to develop and improve their environmental protection legislation. The guidelines were presented as a set of principles to be taken into account in the formulation of environmental legislation. It would be inadvisable to consider the guidelines as a model for Africa in view of the differences in legal systems, the socio-cultural diversity of the peoples and above all, the policy priorities of a government on environmental matters.

107. In general, the guidelines suggested here stipulated that in developing legislation for environmental protection

in any sector of development activities, a few questions must be answered, such as:

- Is the objective of the legislation clearly stated?
- Does the content of the Act or Law cover the subject matter adequately - that is, the environmental components and the legal implications?
- Have provisions been included for infractions of the law? and
- What are the regulations and administrative measures for enforcement?

It is within this framework that the following guidelines were presented at the debate and adopted by the Seminar.

A. Guidelines on Natural Biological Resources Legislation

108. The objectives for protective legislation on forestry, fisheries or wildlife resources, are to provide for their development, utilization, conservation and preservation. The content of the law

(Act, Bill) should deal with controlled methods of exploitation through the issue and suspension of licences; surveillance on the type, quality and quantity of resource used up; control on the mechanism for exploitation, such as the method of lumbering by clear-cutting of the forest; and the prevention of smuggling of resources such as forest products across the border. Provisions should also be made for various offences, with punishments to be meted out for breaching certain regulations and rules, through administrative measures to enforce the law.

109. The Seminar noted that most national legislation on natural resources use in Africa emphasized control rather than planning. Hence, there is need for legislation to provide for planning organ responsible for originating policies on natural resources use in the country. Such a planning body can also serve in an advisory capacity to Ministers who are generally vested with blanket powers to control the use of natural resources. It was noted that such over-all umbrella powers are a legacy of colonialism. The legislation must also provide for a requirement to compile an inventory of natural resources which can serve as reference points for the policy-making organs to monitor resource use. For a legislation to be effective, the Act of Parliament should contain general regulatory provisions, leaving regulation on specific matters as the responsibility of the designated organ entrusted with the development planning of the sector.

110. In summary, participants considered the need to:

- (a) Shift emphasis from the traditional preservationist attitudes towards harmonious utilization and management of natural biological resources, and more specifically, to strike a balance between utilization

on the one hand and preservation on the other, so as to ensure rational economic exploitation of such resources for the development of the Continent;

- (b) Indicate to Governments that effectiveness of enforcement mechanisms to control natural resources exploitation, will greatly depend on the extent to which countries in Africa will improve the living conditions of their peoples;
- (c) Include planning requirements in legislations in this sector, attention being paid to elaboration of institutional frameworks, the collection of the necessary data for the assessment and the conservation of natural biological resources as well as the review from time to time of the state of these resources.

B. Guidelines for Wildlife Legislation

111. Discussions on guidelines for formulating wildlife legislation were based on the summary of a study being carried out by the Legal Office of Food and Agriculture Organisation on legislation for the fauna in Africa.^{10/} The discussion leader pointed out that in comparing the 'protectionist' idea of legislation in the 'sixties' to the law-makers view of 'rational exploitation' of the 'seventies', the cost of protection of fauna in nature reserves under present day economic burden on land use and development, needed serious consideration. He further stressed that to obtain maximum and equitably-distributed benefits from the

^{10/} La Legislation sur la Faune, la Chasse et les Aires Proteges dans certains Pays Africains - FAO Legislative Study No. (in press)

development of fauna as a natural asset, it is necessary to give priority to the local population to supplement the available livestock for human consumption with game-meat, rather than to the commercial opportunist in search of skins, ivory and trophies. The cultural and touristic appeal of wildlife should also be enhanced in such a plan. The plan would require conservation management policy supported by legislation for both the wildlife fauna and their habitats as protected reserves, in order to ensure the survival of economic and non-economic species.

112. More specifically, legislation on wildlife in Africa should deal with the classification of species for protection, that is, completely protected, partially protected, ordinary game and vermin species; the right to hunt, licences and the effect on the customary rights of the local indigenous forest dwellers; the control of trade in wildlife products including traffic in trophies and live animals; the non-commercial hunting for game-meat; provisions for controlling wildlife destruction of agricultural land; and finally the creation, demarcation and at times zoning, of a range of types of protected areas as national parks, nature reserves, sanctuaries and so on.

113. During the discussions at the debate on wildlife legislation, many participants stressed that conservation and rational use, far from being at odds, were two complementary notions. The protection of the environment in general and of wildlife in particular, was perceived as the basis for long-term development. The rational management and protection of wildlife were to be placed in the broader context of land use planning, bearing in mind that choices could not exclusively follow economic criteria when deciding on the allocation of the land to one use or the other.

114. It was pointed out that, there again, the bottle-neck is at the enforcement phase. Innovative ideas were needed, one of them being the appointment of experienced local persons as honorary game wardens. However, the effectiveness of such a system will depend on sound training and education. Education and participation were found to be key issues in wildlife protection.

115. One participant mentioned that more attention seemed to have been paid by the national legislation, to commercial, large-scale hunting and fishing, while individual and private actions had received less attention, although the latter were as destructive as the former. Another participant called for stricter regulation of hunting and fishing techniques such as the use of poisons or of electric and explosive devices.

116. Again, regional and global co-operation was called for. In this connexion, the World Conservation Strategy was mentioned, since it was committed to preserve essential ecological processes, preserve genetic resources diversity, and use the species in such a way that their survival was assured.

C. Guidelines for Mineral Resources Development Legislation

117. In opening the debate on guidelines for legislation controlling the development of mineral resources in Africa, the discussion leader pointed out the role of the Lagos Plan of Action ^{11/} in providing guidelines for this sector of development. Among the guidelines were: Africa's huge resources must be applied principally to meet the needs and

^{11/} The Lagos Plan of Action.

purposes of its peoples; Africa's almost total reliance on the export of raw materials outside the region must change, and instead, these raw materials must be used to support the development of the region so as to promote a regionally located, self-reliant and self-sustaining socio-economic development process; African countries should accelerate multi-country co-operation at various levels, including the pooling of their human and physical resources for the development of the African region.

118. In view of the above, the Seminar noted that an urgent review of existing legislations dealing with mineral resources development in the African countries was necessary to reflect the requirements of the Lagos Plan of Action. In particular, new legislation concerning the following main areas was considered important:

- (a) Modalities for multi-country co-operation in mineral resources development;
- (b) The roles of foreign transnational corporations in mineral resources development in Africa, and the monitoring of their activities;
- (c) The roles in mineral resources development of the 80 per cent or more of the African population which resides in the rural areas;
- (d) The control of environmental hazards in mineral development activities;
- (e) The migratory labour from some of the independent countries of Africa to the mines of the Republic of South Africa.

119. The seminar emphasized that continental co-operation in mineral resources development involving the

pooling of local resources for the production of goods and services for the majority of the African peoples, constituted the most important basis for the improvement of the African environment.

120. It was also noted that the Mining Codes and Mining Regulations of many African countries gravitated predominantly on the maintenance of safe working conditions around mines and mineral processing centres. Appropriate measures are required by governments to broaden the scope of existing mining legislation to cover the environmental aspects of mineral resources development.

121. One participant pointed out that legislation was still insufficient concerning the choice of equipment to be used in land-strip mining activities. The choice of equipment may influence future possibilities for reclamation. Although much choices could be oriented by provisions in the contracts signed between Governments and multi-national corporations, it was thought that such provisions should not, in any case, be a substitute for sound national legislation.

D. Guidelines for Marine and Coastal Zone Legislation

122. In introducing the topic, the consultant pointed out that the item should be of interest to coastal and land-locked countries alike. The emerging Law of the Sea introduced additional territorial jurisdiction by virtue of the new concept of the exclusive economic zone, (EEZ), which would increase rights and obligations for coastal states, and burden still further their limited capacity to respond to management needs in the areas of natural jurisdiction. There were also provisions according rights to the land-locked countries of participation in the exploitation of living resources in the new zone. Thus those countries had a stake in the

environmental quality of the marine and coastal area. The consultant also pointed out that some of the principles for coastal states management could usefully apply to coastal areas of large inland waters, like international lakes shared by more than one country. Furthermore, land-locked, as well as coastal states, contribute to land-based sources of pollution, the major cause of coastal and marine pollution.

123. The meeting took note of the work carried out by UNEP and FAO on the legal aspects of marine pollution in the Gulf of Guinea and adjacent areas. The work of the UNEP Group of Experts on Environmental Legislation was also mentioned although it was found that its current programme of work on legal aspects of off-shore mining and drilling was not of paramount importance to the African countries for mere geographical reasons. The Barcelona Convention and its protocols dealing with the Protection of the Mediterranean Sea against pollution were also recalled.

124. Several participants expressed their concern about the negotiation of unbalanced joint venture contracts with the multi-national corporations in the exploitation of marine natural resources. Considering the historical experience of Africa and the role of the oceans in its development and exploitation of its natural resources, any guidelines for formulating legislation to protect the coastal zone and marine resources, must take into account;

- (i) Preservation of the unique and important ecological, aesthetic and cultural values of the heritage of the coastal nations;
- (ii) Ensuring rational amangement of the marine resources exploitation for the benefit of present and future generations and enhancing the

restoration of natural and man-made coastal environment in terms of productivity, variety, beauty and other measures of quality;

- (iii) Creating new opportunities for nationals to use and enjoy coastal environment;
- (iv) Development of integrated marine resources management to enhance productivity of the living resources and the survival of the natural ecosystems on which they depend, eg. in mangrove swamps.

125. One participant emphasized the human settlements problems specific to coastal zone development. Port towns, he said, are growing fast without adequate planning, resulting in acute congestion and deficiencies in urban infrastructure. Hinterlands development is being neglected; there is need to conceptualize port towns and their influence regions as distinct morphological entities, and to develop them in a comprehensive and integrated manner.

126. Many participants called for regional co-operation, in particular (a) to specify conditions and modalities for land-locked States to realize rights of access to the sea, (b) to collect all necessary data for a complete assessment of the resources, (c) to exchange information on conditions made in joint venture contracts, (d) to monitor coastal and marine pollution, and (e) to arrest contraveners of the law.

E. Guidelines for Pollution Control Legislation

127. The discussion leader made the following points in introducing the topic. Proposals for pollution control must in every country be drawn from an over-all environmental policy.

Such a policy should in itself take account of Africa's fundamental concern, namely, that of rapid development. In short, in the attempt to develop, one must be careful to do so without ending up with the sorts of environmental problems which the industrialized world ended up with. For we know that cleaning up the environment may be a far more expensive exercise than prevention.

128. In very broad terms a system of sound pollution control should encompass two kinds of programming:

(a) Programming directed at the proper choice of development techniques. Such techniques whether borrowed or indigenous should be (i) adaptable to Africa's conditions, (ii) clean without being expensive, and (iii) capable of communication to the general public who in the final analysis was the prime factors in the development process;

(b) Programming directed at the formulation of an integrated management system. Management approaches might involve one or a combination of two of the following three options:

(i) That concerned mainly with the definition of minimum standards of conduct for those whose activities might in any way bear on the environment. These would mean, for example, that before use, industrial technology would have to be evaluated against quality standards and criteria drawn from an over-all national environmental policy. Similarly, ordinary human conduct should be subjected to evaluation, and if need be, to sanc-

tions in the event of wilful damage to the environment;

(ii) That concerned mainly with the control of production or performance standards. This was the more popular option in Africa and underlay standards legislation in most countries. Such control being concerned mainly with the emissions, effluent disposal or of the quality of consumer products, usually failed to control the primary source of pollution, namely, the production process itself;

(iii) That concerned mainly with structural intervention through institutions empowered to prescribe and administer standards drawn from an over-all national environmental policy. Many African countries have shield away from structural intervention because it is unpopular with investors and in any case tends to create institutions too powerful to be amenable to political control. Eventually, however, Africa has no option but to work towards this last option.

129. But, however sound a policy was on paper, and whichever programming option was chosen, their effectiveness would in the final analysis depend on the degree of commitment which the political elites were willing to lend to those efforts. In most African countries, that was what is lacking.

130. During the discussion, it was clear that the general view of participants was that law should not be concerned with prohibitions and sanctions for violation

thereof per se. Law should be primarily concerned with facilitation of decision-making compatible with sound environmental management. It should embody goals capable of achievement within a given economic context and should provide for a scheme of incentives in respect of compliance with those goals.

Among incentives suggested by participants were the following:

- tax rebates for industries that indicated sensitivity to environmental standards;
- tax deductions on imports or manufacturing of anti-pollution equipment;
- other forms of governmental subsidy especially in respect of industries willing to modify existing installations in conformity with environmental standards;
- encouragement to recycle wastes, since they were a very important source of investment for industry.

131. The participants agreed that constant monitoring for pollution both before and after development activity was important, but that this was unlikely to be effective unless:

- honest and comprehensive scientific advice was available;
- industries especially were encouraged to establish monitoring equipments within them, the operation of such equipment to be susceptible to independent verification;
- regional monitoring units are established to take care of transnational aspects of pollution control.

132. However, the participants were cautioned about the following pitfalls

in pollution control legislation:

- Political considerations might still frustrate efficient monitoring programmes to establish baseline information before pollution occurs as well as to determine when pollution has occurred;
- no amount of pollution control could be effective without an infrastructure for social welfare policy and legislation;
- cultural susceptibilities as well as the interdisciplinary nature of human activities in the total environment should be taken into account;
- although industrial pollution was becoming a serious issue in Africa, it should be understood that industry as such was not yet the primary source of pollution in Africa;
- the carrying capacity of the environment can be perceived as a resource, hence environmental quality criteria should be imposed in conjunction with flexible effluent standards rather than relying on strict, uniform emission standards;
- imposing of sanctions such as "polluter pays" or "tax levy for pollution load" can be ineffective as industrialists often agree to pay and then pass on the cost of pollution to the customers;
- in adjudication on pollution cases according to the practice in law for evidence, the court itself might have to be composed of lawyers as well as technical experts in the natural sciences.

F. Guidelines for Human Settlements,
Cultural Heritage and Land Use
Legislation

133. In introducing his paper, the discussion leader highlighted the following points:

- (a) The ultimate objectives of all development endeavours is to improve man's environment and quality of life;
- (b) The contemporary African city has not kept pace with the massive urbanization;
- (c) Africa has had an age-old and rich heritage of both rural and urban cultures;
- (d) Land is a precious endowment and should therefore be put to rational and optimum use and it is necessary to have a unified system of land policy, land-use programme and land-use legislation;
- (e) Comprehensive land-use planning is a pre-requisite to the development of land in both urban and rural areas.

134. The discussion leader identified the shortcomings of the land-use legislation in selected countries of Africa and advocated:

- (a) Reviewing and updating the existing land-use legislation;
- (b) Incorporating building bye-laws, subdivision regulations, zoning ordinances and sanitary codes, etc. into over-all development plans of urban places.

135. One participant suggested that cadastral work should be undertaken before land-use classification and land-use allocation were decided upon. There was a general consensus that in the

development of human settlements, every effort should be made to conserve the areas and buildings of cultural significance, historical importance and architectural merit.

136. It was generally agreed that several urban development plans had been prepared but what was lacking was their implementation, due to constraints of finance, technical man-power and legal support. It was suggested that the tools for implementation should be built into the master plan itself. It was also observed that it was adequate to prepare structure plans or simplified/outline development plans which were realistic and financially reliable.

137. One participant noted that the present physical planning and housing endeavours were urban-oriented and that the policy should be rural-biased. He advocated a rational land distribution programme, in addition to land policy, with a view to securing an equitable distribution pattern. It was the consensus of the Seminar that the "neighbourhood concept" was not suited to serve as a basis for development of residential areas. Another participant stressed that there could be no effective land-use policy without a suitable land tenure system. Whether land tenure patterns were a key issue or not was a much debated matter. Several participants were of the opinion that public control of private property for the purpose of conservation, may well be achieved by developing the notion of the "social obligations of private property".

138. It was generally agreed that human well-being should be the basic objective of land-use planning and land-use legislation. Several examples of irrational and wasteful uses of land in urban areas necessitating heavy investment of scarce capital resources were cited. This was attributed to over-emphasis on national prestige, wrong national priorities and imposing alien ideas and methods on indigenous communities.

139. The Seminar was of the view that new concept and a more rational approach to site and services schemes and upgrading programmes were needed. It was necessary to ensure the well-being of the affected community through re-settlement and rehabilitation.

G. Guidelines for Environmental Education Legislation

140. The discussion leader pointed out that there was a lack of educational laws specific to environmental education. However, the Seminar took note of the encouraging initiatives taken throughout Africa on formal education by the Science Education Programme for Africa (SEPA), including the inclusion of ecology, conservation and environment-related subjects in some university programmes. The establishment of a regional institute for an integrated programme on environment, one participant said, could be another welcome initiative.

141. The representative of UNEP recalled the Tbilissi Conference on Environmental Education organized in 1978 by UNEP and UNESCO. He also recalled the efforts made by the United Nations system to promote environmental education in Africa. The Seminar's attention was brought to Article XIII of the Algiers Convention on the Conservation of Nature and Natural Resources (1968) which urged the contracting parties to develop conservation educational programmes and information campaigns. The ratification of that convention by all States of the region would help in promoting these important aspects.

142. Several participants stressed the fact that although many countries conduct education and information programmes through radio and television broadcasts, and even through newspapers, they were generally a most ineffective means of disseminating information since

these media sources reached only a very small percentage of the population. It was, therefore, thought that the increase of public awareness on environmental issues, through non-formal education systems and the innovative use of existing institutions and public officials, might be a more efficient method. The possibility of organizing information campaigns prior to the drafting or before the implementation of environment-related laws and regulations was mentioned. One participant also referred to the organization in several countries of an environment day or week.

143. Several participants emphasized the paramount importance of campaigns to eradicate illiteracy if environmental education was to become efficient. A number of participants also mentioned the opportunity to organize programmes in local languages.

H. Recommendations of the Seminar

144. (a) Institutional framework

Many African countries now had some machinery to deal with environmental matters, either at the national or at the local level. However, there was still a need for strengthening or for establishing institutions for:

- (i) The sound assessment of natural and human resources;
- (ii) The formulation, planning, promotion, implementation, co-ordination and monitoring of environmental policies;
- (iii) The review and evaluation of the effects of such policies.

Governments should incorporate environmental provisions and policies into their development planning. It was, therefore, recommended that countries should identify existing environmental

institutions, strengthen them, or where absent, establish an appropriate institutional framework. It was also recommended that African Governments should support the existing Intergovernmental Regional Committee for Human Settlements and Environment to enable it to fulfil the above recommendations at the regional level, whenever necessary.

(b) Legislative process and role of law

- (i) The observable trends were that existing laws were rule-oriented and as a result, in spite of their existence, abuses on the environment were common. It was recommended that environmental legislation, in order to be comprehensive, must be management-oriented;
- (ii) Environmental legislation should be designed to:
 - a. Facilitate compliance with environmental management standards;
 - b. Harmonize national rules to conform with regional standards and criteria for environmental quality control;
 - c. Promote and increase public awareness of the need for sound conservation;
- (iii) It was further recommended that the law and lawyers should be considered as an integral part of the process of formulating and developing policies for the environment and should be involved in every stage of the process;
- (iv) The process of developing environmental legislation must be based on scienti-

fic principles, such as problem identification and data collection, followed by development of policy options for the decision-makers to formulate the law and its enforcement method.

(c) Environmental impact analysis

- (i) African Governments should establish adequate procedures to carry out an effective assessment of proposed development activities likely to have significant impact on the environment;
- (ii) As a prerequisite for conducting that exercise, performance standards relevant to the African environment should be set up, based on an adequate scientific and technological data base. In that connexion appropriate institutions such as national standards boards and national research councils should be established in each country to determine environmental standards and criteria as a basis for decision-making;
- (iii) It was noted that only 21 African countries were now members of the African Regional Organization for Standardization (ARSO) and it was recommended that all State members of ECA and OAU should become members of ARSO in order to achieve harmonization of national standards in the region.

(d) Environmental education and training

Governments should give greater prominence to promoting formal and non-formal educational activities with a view to creating and enhancing public awareness of the need to manage the environment rationally, and to disseminating information on environmental matters.

In that regard, it was recommended that African Governments bear in mind article XIII of the African Convention on the Conservation of Nature and Natural Resources (1968) and seriously consider ways and means of implementing this provision, including formulation of legislation to that effect, at both national and local levels.

(e) Land use

Legislation for comprehensive land-use planning in Africa was generally directed towards development in urban areas, to the neglect of the rural areas. Although opportunity existed in some African countries, during public discussion on land-use planning, to infuse environmental considerations into development projects, yet existing legislation must be improved to make adequate provision for the protection of the land from mismanagement during exploitation of natural resources or for its rehabilitation after exploitation.

(f) Forest conservation

African Governments were urged to up-date forestry laws and regulations to cater for the rational management of forest products and habitats. They should also provide for the regulation of forest related trade,

and for the eradication of practices, such as wildlife destruction, forest depletion, timber smuggling and widespread deforestation arising from firewood and charcoal production, through policies to cater for alternate sources of fuel and building materials.

The law enforcement sector should be strengthened by increasing the manpower to police forest reserves, by instituting training programmes on conservation, and by adopting measures to combat violation of conservation laws and regulations.

Furthermore, forest conservation policies must ensure a meaningful life for the inhabitants of forest areas.

(g) Wildlife

African Governments should progressively develop their wildlife conservation legislation to cope with poaching and the trade in live wildlife and products derived therefrom, to ensure rational management and habitat protection.

Governments were requested to ratify the International Convention on Trade in Endangered and Threatened Species (1973) and other relevant conventions and protocols.

Law enforcement for wildlife conservation should be strengthened. Governments could use the revenues derived from hunting licences and from taxes on the development of hotels, sight-seeing tours, scientific stations in national parks and game reserves for the implementation of the laws.

(h) Protected areas

African countries were urged to enlarge or to set up in the frame-

work of land-use planning certain terrestrial and marine areas to protect representative ecosystems.

(i) Coastal zone and marine resources management

There were gaps in the legislation for the protection of coastal areas in Africa concerning in particular tidal swamps, and the continental shelf, from shore-based industrial activities causing marine pollution. In view of the fact that African Governments under the Convention of the Law of the Sea would be entitled to create a new Exclusive Economic Zone (EEZ) and the necessity for the effective policing of the zone to prevent marine pollution arising from oil and other dangerous chemicals dumped from ships, African Governments were urged to promote regional co-operation and, for those which had not yet done so, were urged to ratify the relevant international conventions and protocols. They should also develop the appropriate national legislation and machineries to protect coastal areas from marine pollution in order to combat, for example, emergency oil spills and to prevent depletion of fisheries. Land-locked countries in Africa with navigable lakes should also enact similar legislation to protect wetlands and natural resources in them, in agreement with other riparian States.

(j) Minerals development

Most African countries whose economies were based on the mining of minerals as well as on the exploitation of oil and gas had adequate legislation to protect workers' health in the disposal of mining site wastes (overburden and refuse) and mineral extraction wastes (polluted water and tail-

ings). However, legislation for the restoration of mined-out sites was generally lacking or inadequate. Legislation to rehabilitate the land must be enacted to take care of the restoration of the top soil after levelling of the site, removal of toxic metals not mined but accumulated in the tailings which can be absorbed by crops grown on the site, and revegetation of areas to restore their original aesthetic quality and economic usefulness.

(k) Water quality

African countries which already had water resources management legislation, were urged to see to its enforcement in order to prevent water wastage and urban, agricultural and industrial pollution.

Those countries which did not have such legislation were urged to endeavour to formulate, within reasonable time limits, a regulation appropriate for their needs conducive to the conservation of their water resources and to the attainment of the most favourable quality criteria.

Water legislation must emphasize in particular, quality control of solid and liquid effluents, in conformity to international criteria accepted by World Health Organization (WHO).

(l) Air quality

In view of the steady increase in air pollution in African countries, due to certain agricultural and industrial activities, and to the growth of motor and air traffic, governments should urgently formulate appropriate legislations to control noxious emissions which poisoned the air, kill the veget-

ation, caused the landscape to deteriorate and, more generally, harmfully affected the quality of life and human health.

(m) Solid wastes and other specific substances

The majority of African countries required legislation for the regulation of all solid wastes and liquid effluents from factories. At present, they were discharged into rivers and streams, causing serious pollution, especially from agro-based industries. There was also a great need for legislation to regulate the use of pesticides, insecticides, fertilizers, toxic metals and organic compounds and radioactive materials. In the few countries where such legislation existed, it should deal not only with the safety and health of the people, but also with regulating environmental quality.

(n) Noise

Although some African countries had legislation to regulate traffic noise from vehicles, there was no control of noise from other sources such as industrial machinery in factories, drilling at road works and at other construction sites. There was need for legislation to regulate noise levels on a scientific basis for the protection of the health of the workers and the general public.

(o) Cultural environment

As only a few African countries had legislation for the preservation of historical sites, ancient monuments and relics, and antiquities, there was an urgent need for African countries to legislate for the preservation, restoration, reconstruction and

registration of those items and of historical buildings. Also, archeological excavations should be controlled by licences, and all artifacts found should be registered by law.

(p) Population and urban development

Most African countries had legislation on town and country planning to regulate urban development and prevent slums and shantytowns, but they seemed to have been ineffective. Governments should therefore strengthen or, if necessary, modify existing laws.

Legislation to promote rural development was generally lacking; hence, Governments should promote integrated rural development as incentives to prevent the migration of the rural population to urban areas. Also, workers in Africa should be protected by law under a social security scheme, not only in the case of disability resulting from accidents at work, but for old age benefits and pensions.

(g) Food and drug quality

Many African countries already had legislation to control food or drug quality or both. Facilities were generally lacking for analytical laboratories and bureaux of standards, and for monitoring of imported and locally manufactured food and drugs. There was the need for African Governments to legislate for the establishment of new, or strengthening of existing national bureaux or boards of standards and analytical laboratories, the training of the required manpower and the provision of adequate laboratory equipment and work facilities.

145. The Report of the Seminar for Lawyers (document E/CN.14/787) containing the above recommendations and guidelines were presented at the Second Meeting of the Technical Preparatory Committee of the Whole (TEPCOW) which was held in Freetown from 24 March to 2 April 1981. TEPCOW comprises of a group of technical experts from the fifty member States of ECA, who critically examine the technical merits of all reports, programme proposals, policies and strategies of any position papers suggested or put forward by the ECA Secretariat. The TEPCOW report^{12/} was then considered by the Sixteenth session of the Commission/Seventh meeting of the ECA Conference of Ministers responsible for Development and Economic Planning, that followed immediately at Freetown from 6-11 April 1981.

146. In presenting the Report of the Seminar for Lawyers at the TEPCOW meeting, the Director of the Environment Co-ordination Office highlighted the major development sectors requiring urgent review for environmental legislation as indicated in the recommendations and guidelines. The attention of member States was also drawn to those international conventions and protocols of particular concern to the African environment, which can provide a framework for drafting or improving national legislation during the process of ratification by the member State. In the discussions that followed, the delegates pointed out:

- that environmental education and training, and administrative arrangements were essential to an effective programme of environmental control; this

^{12/} E/CN.14/813/Corr.1 Report of the Second Meeting of the Technical Preparatory Committee of the Whole, Freetown, 24 March - 4 April 1981.

would prevent member States undertaking economic development at the expense of the environment;

- that since development of necessity created pollution of the environment and development was partly in the hands of contracted companies that were only interested in profits, not pollution, member States should negotiate with companies to preserve the quality of the the environment by ensuring that the contracts take account of environmental factors;
- that member States should be selective in controlling pollution especially with regards to the choice of industrial machinery and technology, emphasis should be placed on the recycling of industrial solid wastes as a means of reducing pollution.

147. At the ECA Conference of Ministers, Resolution 412(XVI) endorsing the Report of the Seminar for Lawyers was adopted. The text of the resolution^{13/} which spelt out the nature of the follow-up action to this project on environmental protection legislation as envisaged by the ECA member States, is recorded as Annex E to this report. The resolution has already been summarized in paragraph 12 at the Introduction to this report.

^{13/} See E/1981/54 or E/CN.14/814, Economic and Social Council, Official Records, 1981 - Supplement 14, United Nations.

ENVIRONMENT CO-ORDINATION UNIT
UNITED NATIONS ECONOMIC COMMISSION
FOR AFRICA

Survey of Environmental Legislation
in the ECA Region^{1/}

Introduction

1. This questionnaire is designed to provide up-to-date information on the state of environmental protection laws and legislation in the ECA region. It is a modification of the questionnaire used in the ESCAP region (Asia and the Pacific) to survey the state of environmental legislation for inputs to an Inter-governmental meeting on Environmental Protection Legislation in 1977.

2. Responses to the questionnaire should be as short and to the point as possible, but important details should not be sacrificed for the sake of brevity. Information for the questionnaire can be sought from government departments, from local agencies and from experts in the country on environmental law and legislation. Analysis of the country responses to the questionnaire would provide a regional overview as inputs to the Seminar/Workshop of Legal Experts on Development of Legislation for Environmental Protection in the ECA region, to be held in Addis Ababa, 26-30 May 1980.

Structure of the Questionnaire

3. The questionnaire comprises the following six sections:

- I Institutional Setting
- II Role of Law
- III The Legislative Process
- IV Environmental Impact Analysis
- V Education
- VI Particular Environmental Topics

4. The first five sections above deal with the legal framework within which environmental statutes and regulations must function. The sixth section, "Particular Environmental Topics", seeks more detailed information with respect to the environmental legislation currently in effect within each country. In order to facilitate further research, we are requesting thorough citation of all laws discussed as well as submission of principal statutes and regulations themselves.

Particular attention should be given to those topics which are the subject of more than one statute. A special effort should be made to determine (i) the sources of possibly overlapping or duplicated authority, and (ii) the way such authority is administered in practice. That is, although several agencies may have apparent authority to regulate a particular activity, it may be that in practice only one agency actually exercises the function in question. Any such discrepancy between the content of the laws and actual practice should be carefully reported.

5. Also, there may be cases in which a statute is less important than the ministerial regulations which have been issued pursuant to it. For example, an anti-pollution statute might simply delegate to a minister broad authority to determine the best means of regulating pollution and the sources to be regulated. In such cases, reference to the relevant regulations, and submission of copies, are particularly important.

6. As in the first five sections of the questionnaire, it may appear that the questions in Section VI are not fully applicable to the circumstances of a particular country. In such cases, the questions should be treated merely as a guide and any other information deemed relevant to this survey should be furnished. Again, however, the outline suggested by the questionnaire should be followed as closely as possible.

7. In order to ensure adequate time for the analysis of the questionnaire and the reproduction of documents for the seminar/workshop on Environmental Protection Legislation, it is requested that responses be sent to the consultants not later than 15 December 1979.

THE QUESTIONNAIRE

Note: Please attach copies of principal enactments and regulations cited

I. INSTITUTIONAL SETTING

A. If a constitution is currently in force, please describe any features which relate to environmental regulation.

- Does the constitution set forth an environmental policy? (If so, please cite and quote).

- Does the constitution assign different legislative topics to different levels of government?

B. Please describe the organization of your Government's environmental functions.

- Has responsibility for the formulation of environmental policy been specifically assigned to any agency or other governmental body? If so, which?

- Has your Government established a central environmental ministry or other operating agency (i.e., a body with enforcement powers as well as policy-making responsibilities)?

- Whether or not a central environmental agency has been established, what other agencies deal with environmental problems?
 - If there is a central environmental agency, please cite the act, decree, or other legal instrument pursuant to which it was established.
 - Please describe any mechanisms that exist for coordinating the efforts of different agencies with environmental responsibilities (inter-agency committees, clearance procedures, etc.). Is such co-ordination mandatory and, if so, pursuant to what legal instrument or instruments?
 - Please list any environmental functions that are delegated exclusively to levels of Government other than the national level.
- C. Are environmental factors legally required to be considered in your country's long-range and short-range planning mechanisms?
- If your Government is currently operating under a comprehensive plan (five-year, ten-year, etc.), does the plan include a statement of environmental policy? If so, please give the formal citation and enclose a copy of the relevant portion.
 - Whether or not there is a legal requirement calling for the inclusion of environmental considerations in broad national planning, does the pro-

gramme planning process in fact include a routine assessment of the environmental impact of development-related activities? If so, please describe.

- Does the Government insist that environmental considerations be taken into account in the contracts or agreements signed with foreign or local investors for development project financing?

II. ROLE OF LAW

A. Describe generally the attitude of most citizens toward law.

- To the extent that a generalization is possible, is yours a "rule-conscious", law-oriented society, or a society characterized more accurately by less formal constraints on behavior (e.g., customary or traditional rules of conduct)? Does the enactment of a new law normally result in an immediate change in societal conduct?
- Are prevalent attitudes toward law and law enforcement likely to be an obstacle to the implementation of new regulatory programmes for environmental protection?

B. Describe generally the role played by lawyers within Government agencies.

- Is legal counsel routinely sought as part of the Government's decision-making processes, or only when a specific legal problem arises? Whether or not legal counsel is sought routinely, is it readily available?

- Please estimate the number of Government lawyers who deal principally with issues related to environmental management. Are they assigned to different operating departments, located only at the ministerial level, or employed primarily by a "ministry of justice" or similar agency?
 - How do civil service salaries for lawyers compare with compensation levels available in the private sector?
- C. Describe generally the role of the courts, if any, in adjudicating environmental issues.
- In general, is litigation regarded as the normal means of resolving disputes?
 - Do citizens have standing to bring suit in court against government agencies? If so, are such suits often filed?
 - Are the administrative decisions of your Government reviewable by courts?
 - Is free or low-cost counsel available to citizens seeking to redress wrongs suffered by large classes of victims, or seeking to litigate issues primarily of public, rather than private, significance?
 - If an assessment is possible, what is the attitude of the judiciary toward environment-related prosecutions?

III. THE LEGISLATIVE PROCESS

- A. Is any agency of your Government responsible for conducting a continuing review of legislation and for recommending improvements when needed? Has any body been established specifically for the purpose of reviewing and recommending improvements in environmental legislation?
- B. Describe briefly the process by which legislation is formulated. Where do ideas for new legislation normally originate, where are bills drafted, and how long, generally, does it take for a bill to move through the legislative process to enactment?
- C. What mechanisms have been established to ensure that the results of scientific and technical research are considered during the development of new environmental legislation? Is there a base of economic and technical data sufficient to support the establishment of appropriate standards for pollution control, soil conservation rules, re-afforestation requirements, etc.?

IV. ENVIRONMENTAL IMPACT ANALYSIS

- A. To what extent and by what procedure is environmental impact analysis performed today in connexion with new development projects in the public and/or private sectors? By which agencies?

B. To what extent and by what procedure are the views of the public considered in assessing the environmental impact of particular projects?

C. What criteria are used in selecting the projects to be evaluated?

D. Is there any procedural mechanism to ensure that the results of an environmental assessment are taken into account in the planning of a project or other activity?

V. EDUCATION

A. Is the importance of environmental protection being taught in your country's primary and secondary schools?

B. Are the media required by law to devote any time or space to educating the public on the importance of environmental protection?

C. Is environmental law taught by your country's university law faculties? If so, in which universities? Please attach any available environmental law course syllabus.

V. PARTICULAR ENVIRONMENTAL TOPICS

A. Land use

- Do your laws require comprehensive land use planning as a prerequisite to particular land use decisions? If so, at what governmental levels? In both urban and rural areas? Which agency or agencies are responsible for this function?

- Does the land use planning process incorporate a mechanism for considering the views of all relevant Government agencies? The views of the public?

- Whether or not there is a comprehensive land use planning requirement, describe your country's requirements, if any, for governmental review and approval of proposed developments affecting land use. (You may wish to cross-reference this answer to the responses furnished under Category IV, "ENVIRONMENTAL IMPACT ASSESSMENT").

- Whether or not there is a comprehensive land use planning requirement, is zoning employed as a means of controlling land use in urban or rural areas?

- If your country regulates land use, describe the enforcement provisions which apply.

B. Forest Conservation

- Which agency of your Government is charged with responsibility for regulating the exploitation of forest resources? Please describe its structure and functions.

- Has your Government established any forest management planning requirements?

- Please describe your Government's legal framework for forest management.

- What penalties are prescribed for the violation of your country's forestry laws?

- What practical obstacles, if any, hamper the enforcement of your Government's forest protection laws?

C. Parks and Wildlife

- Does your country have legislation setting aside certain areas as national parks (including marine Parks), reserves, wildlife or waterfowl sanctuaries, or protected areas under some other designation?
Which agency or agencies are responsible for the administration of such areas?
- Are there different classifications of protected areas? If so, how are such areas defined? Are such reserved areas identified specifically in legislation or are they identified only administratively by regulation? What procedures have been established for altering the boundaries of protected areas? For adding or removing particular areas from the protected category?
- Please describe briefly the way in which activities are regulated within reserved areas. If development projects are permissible within reserved areas under certain circumstances, what criteria are set forth in the applicable statutes for evaluating proposals for such projects?
- Is there a legislative mechanism for designating "strict natural reserves" or "wilderness areas" in which no development activities of any kind are permitted? For the protection of ecologically significant or threatened areas?
- Does your country's legislation include provisions for the protection of particular

species of wildlife? If so, please describe.

- Please describe the way in which hunting is regulated in your country (e.g., licensing, closed seasons, minimum sizes, bag limits, prohibited methods, etc.).
- Are there provisions in your country's legislation for regulating the export, import, or domestic sale of protected animals and/or animal trophies? The hides or other products of protected animals? Are there any restrictions on the use of such products in taxidermy?
- Are licences required by law for the possession and use of firearms?
- What practical obstacles hamper the implementation and enforcement of your country's parks and wildlife legislation?

D. Coastal Zone Management (answer only if applicable)

- Has your Government established any system for regulating shore-based development in the coastal zone?
- Is any agency specifically charged with responsibility for such regulation? If so, please describe its structure and functions.
- What protection measures have been promulgated with respect to wetlands?
- Please describe your Government's regulation of offshore mineral development.
- What controls, if any, have been established with respect to offshore refuse dumping?

- Has your Government claimed an "exclusive economic zone" beyond the limits of your country's territorial waters? If so, how many miles?

E. Minerals Development

- Which agency in your Government regulates mining techniques? Do environmental considerations play any part in this regulation?
- What requirements have been established with respect to waste-water discharge from mining operation? With respect to the deposit of refuse, tailings, etc.?
- Are mining companies obliged to take restoration measures upon completion of mining operation?

F. Water Quality

- Which agency or agencies are responsible for the regulation of water pollution? Please give a brief description of the structure and functions of such agencies.
- Please describe your country's water quality control programme. Does it incorporate enforceable, quantified standards? (If so, please attach). Does the programme include the issuance of discharge permits? Does it include effluent fees or charges? If so, on what basis are such fees or charges calculated?
- Describe any monitoring programme used in connexion with your system of water pollution control.
- Are dischargers required to monitor their own effluent

and report the results to the government?

- Are manpower, laboratory and other resources available in sufficient quantities to support an appropriate level of pollution control activity? If the answer is no, please describe the deficiencies.
- Are administrative remedies ever used in enforcing water quality regulations (e.g., agency-imposed fines, licence suspensions etc.), or must all enforcement actions be brought to court?
- What penalties are prescribed in law for water quality offenses?
- Does your Government employ any non-penal incentives in connexion with its regulation of water quality (e.g., favorable tax treatment for investment in abatement facilities reduced import duties on waste treatment equipment, direct subsidies, etc.)?

G. Air Quality (stationary sources)

- Substitute "air" for "water" in the questions under "water quality", above, and respond accordingly.

H. Air Quality (mobile sources)

- Does your Government regulate vehicle emissions? If so, please describe the regulatory programme.
- Which agency or agencies are responsible for the regulation of vehicle emissions?
- Which, if any, of the following approaches to mobile

source air pollution reduction have been adopted:

- + Restrictions on emissions per vehicle
- + Restrictions on chemical composition of fuel (maximum levels for lead, etc.)
- + Restrictions on vehicle use within designated areas and/or at designated times
- + Staggered working hours to improve rush hour traffic flow
- What penalties are associated with the regulation of air pollution from mobile sources?

I. Solid Waste Management

- Please describe any provisions in your country's national legislation for the regulation of solid waste disposal.
- Please describe the regulation of solid waste disposal if any, as it occurs at the municipal level.

J. Noise

- Please describe your Government's provisions, if any, for regulating noise, and identify the responsible agency or agencies. If any noise standards have been issued, please attach.
- Are there provisions for controlling noise from vehicles? Construction sites? Factories?
- How are noise regulations enforced? What penalties are prescribed for violation of noise rules?

K. Specific Substances

- Please describe your country's legislative provisions and

administrative arrangements for the regulation of:

- + Pesticides
- + Fertilizers
- + Toxic substances
- + Radioactive materials
- Is environmental quality included among the objectives of legislation regarding these substances, or is the legislation confined to health, safety, adequacy of supply, etc.?

L. Cultural Environment

- Please describe your Government's laws and administrative arrangements for the reservation of the cultural environment, with specific attention to the following topics:
 - + Registration and control of artifacts
 - + Preservation of historic sites
 - + Preservation of historic buildings
 - + Aesthetic regulation of the architectural quality of new buildings.

M. Marine Pollution

- Please describe any legislative measures enacted to deal with marine pollution. Which agency or agencies are responsible for marine pollution control?
- Has your country adopted legislation prohibiting discharges of pollution on the high seas?
- Does your country's legislation establish "strict liability" on the part of

tanker owners, oil companies, etc., for environmental damage from oil spills and offshore oil well blow-outs?

- Has your Government adopted an oil spill contingency plan?

N. Population and Urban Development

- Please describe your Government's legal framework for urban development (against slums, shanty towns).
- Are there laws preventing migration of population from the rural to the urban areas?
- Is there any government policy for rural development to provide work for the rural population?
- Does your country's legislation make provision for social security during unemployment or drafting of labour from urban to rural sectors of the economy?

P. Food and Drugs

- Which agency is responsible for food and drug quality?
- Are there any monitoring programmes for food and drug quality, any laboratory and available manpower to carry out such a programme against contaminants?
- Has your Government legal provisions for regulating standards on the quality of local, manufactured and imported foods and drugs?
- What penalties are prescribed in the laws for violations against food and drug quality control?

Notes: If any topic of significance is not adequately covered in this questionnaire, please furnish any additional information required for a thorough summary of environmental law and legislation in your country.

ECONOMIC COMMISSION FOR AFRICA

Seminar for lawyers on Development of
Environmental Protection Legislation
in the ECA region.

Addis Ababa, 29 September to 3 October
1980

PROVISIONAL AGENDA

1. Opening of the Meeting by the
Executive Secretary of ECA
2. Election of Officers
3. Adoption of the Agenda and
Programme of Work
4. Discussion of the Consultants'
Mission Report on the Survey and
Analysis of Environmental Protec-
tion Legislation in selected
African countries
5. Discussion of Participants'
Country Reports
6. Debate on selected sectoral
topics of environmental legisla-
tion in Africa:
 - (a) Marine and coastal zone
legislation
 - (b) Natural biological resources
(excluding wildlife) legisla-
tion

- (c) Wildlife legislation
- (d) Mineral resources and other physical resources legislation
- (e) Pollution legislation
- (f) Environmental education legislation
- (g) Human settlements, cultural heritage and land use legislation

ANNEX B

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.ECA / ECU / 80 / 1
ECU / 530 / L

21 April 1980
Original : ENGLISH

- 7. Guidelines for developing Environmental Protection Legislation
- 8. Any other business
- 9. Adoption of the report.

Distr. LIMITED
ECA / ECU / 80 / 3 / Rev. 1
October / octobre 1981
Original : ENGLISH / FRANCAIS

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COMMISSION ECONOMIQUE POUR L'AFRIQUE

Seminaire de juristes sur l'elaboration
 d'une legislation relative a
 la protection de l'environnement dans
 la region de la CEA

Addis Abeba, 29 september - 3 octobre
 1980

List of Documents including
 Country Papers submitted
 at the Seminar for Lawyers

- A. Consultants Mission Reports* on
 Survey and Analysis of Existing
 Environmental Legislation in selected
 African Countries (submitted
 between January to May 1980):
1. Dr. H.M. Joko Smart Mission
 Reports on:
 - (i) the Gambia, 15 pages;
 - (ii) Ghana, Part I.28 pages;
 Part II.18 pages;
 - (iii) Ethiopia, Part I.22
 pages; Part II.16 pages;
 - (iv) Uganda, 8 pages.
 2. H.E. Paul B. Engo Mission Re-
 ports on:
 - (i) Zambia, 17 pages;
 - (ii) Mozambique, 12 pages;
 - (iii) Botswana, 10 pages;
 - (iv) Swaziland, 10 pages;
 Summary Report, 16 pages.
 3. Dr. R.M. Dossou Mission Reports
 on:
 - (i) Senegal, 24 pages;
 - (ii) Ivory Coast, 23 pages;
 - (iii) Zaire (no report)
 4. Mr. C.E.K. Kumado Mission Re-
 ports on:

* N.B. These mission reports sub-
 mitted exclude the annexes
 as copies of Acts, ordin-
 ances, regulations, nation-
 al gazettes, and so on.

- (i) Morocco, 28 pages;
- (ii) Tunisia - no report;
- (iii) Egypt - no report.

B. Secretariat documents:

1. E/CN.14/ECU/1 - Environmental Protection Legislation Needs for Africa, 14 pages;
 - (Les besoins de l'Afrique en matière de législation sur la protection de l'environnement, 13 pages);
2. E/CN.14/ECU/2 - Survey and Analysis of Environmental Protection Legislation in Selected African Countries (Summary of the four consultants' mission reports), 23 pages;
 - (Etude et analyse de la législation relative à la protection de l'environnement en vigueur dans certains pays Africains (Resume des rapports de mission des consultants)), 25 pages
3. E/CN.14/ECU/3(a)-(g) - Discussion Leaders (seven) Annotated Papers, 34 pages;
 - Documents annotés relatifs à la législation
4. E/CN.14/ECU/4/Rev.1 - Report of the Seminar for Lawyers on Environmental Protection Legislation in the ECA Region, 17 pages;

Addis Ababa, 29 September - 3 October 1980 (submitted as E/CN.14/784 to the Sixteenth session/Seventh meeting of the ECA Conference of Ministers, Freetown, 24 March - 11 April 1981)

 - Rapport du séminaire de juristes sur l'élaboration d'une législation relative à la protection de l'environnement dans la

region de la CEA, 18 pages
 Addis Abeba, 29 september -
 3 octobre 1980

5. UNEP/IALS Manual on Environmental Legislation, February 1979, 116 pages (for information)

Programme des Nations Unies pour l'Environnement - Manuel de législation de l'environnement en coopération avec l'association internationale des sciences juridiques, février 1979, 159 pages

C. Participants Country Reports:

<u>Country</u>	<u>Country Paper (in original language)</u>
1. Botswana	- Environmental Control in Botswana, 10 pages - Surveillance de l'environnement au Botswana,
2. Burundi	- Une législation pour mieux assurer la protection de l'environnement au Burundi, 16 pages - (A législation to assure better environmental protection in Burundi),
3. Egypt	- No country report submitted - (Aucune étude nationale n'a été présentée)
4. Ethiopia	- The state of environmental protection legislation in Ethiopia, 28 pages - (L'état d'une législation relative à la protection de l'environnement en Ethiopie),
5. Gambia	- Environmental Legislation and Institutions in the Gambia, 13 pages

- (Lois sur l'environnement et institutions chargées de l'environnement en Gambie),
- 6. Ghana
 - Environmental protection legislation and strategies for the future in Ghana, 20 pages
 - (La protection de l'environnement législation sur l'exploitation de terre et les stratégies pour l'avenir au Ghana),
- 7. Ivory Coast
 - Protection de l'environnement et impératifs économiques: état de la pratique, 22 pages
 - (Protection of the environment and economic priorities: the state of the legislation and its application),
- 8. Morocco
 - Memoire sur ensemble arsenal juridique en matière d'environnement au Maroc, 38 pages
 - (Report on the collection of environmental legislation in Morocco),
- 9. Mozambique
 - No country report submitted
 - (Aucune étude nationale n'a été présentée)
- 10. Senegal
 - No country report submitted
 - (Aucune étude nationale n'a été présentée)
- 11. Swaziland
 - Environmental aspects of Swaziland's development, 29 pages
 - (Aspects environnementaux du développement de la Swaziland),
- 12. Tunisia
 - La situation et les droits de l'Environnement, 17 pages
 - (The situation and environmental laws)
- 13. Uganda
 - Survey and analysis of existing environmental legislation in Uganda, 25 pages
 - (Etude et analyse des lois existantes sur l'environnement en Ouganda),
- 14. Zaire
 - No country report submitted
 - (Aucune étude nationale n'a été présentée)
- 15. Zambia
 - No country report submitted
 - (Aucune étude nationale n'a été présentée)

ANNEX D

*Distr. LIMITED / LIMITEE
ECA / ECU / 80 / 7 / Rev. 1
3 October / octobre 1980
Original : ENGLISH / FRANCAIS*

ECONOMIC COMMISSION FOR AFRICA

Seminar for lawyers on Development of
Environmental Protection Legislation
in the ECA region

Addis Ababa, 29 September - 3 October
1980

COMMISSION ECONOMIQUE POUR L'AFRIQUE

Séminaire de juristes sur l'élaboration
d'une législation relative à la
protection de l'environnement dans
la région de la CEA

Addis Abéba, 29 septembre - 3 octobre
1980

LIST OF PARTICIPANTS

LISTE DES PARTICIPANTS

DELEGATES

Botswana

Mr. C.M. Lekaukau, Deputy Permanent
Secretary, Ministry of Mineral Re-
sources and Water Affairs, Gaborone

Burundi

No participant, Mr. Evariste
Bazikwinshi, Habitat Division, Ministry
of Public Works, Bujumbura, did not
arrive.

Côte d'Ivoire

Mr. Wodie Francis, Faculté de Droit
Abidjan, Abidjan

Egypt

No participant, Dr. Ahmed R. Khafagi,
Deputy Chief Judge, Supreme Court of
Egypt, Cairo, did not arrive.

Ethiopia

Mr. Belaineh Olana, Legal Advisor,
Ethiopian Water Resources Authority,
Addis Ababa

Mr. Jirata Fida, Legal Advisor, Ministry
of Agriculture Addis Ababa

Mr. Kifle Lemma, Head/Legal Services,
Ethiopian Water Resources Authority,
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Mr. Wakgari Gunjo, Legal Advisor,
Ministry of Mines, Energy and Water
Resources, Addis Ababa

The Gambia

No participant

Ghana

Mr. E.D. Djarbeng, Barrister-at-Law
and Senior Assistant Secretary,
Ministry of Lands Natural Resources
Fuel and Power, Accra

Mr. M.A. Akuamo, Counsellor, Embassy of Ghana, Addis Ababa

Morocco

Mr. Manaf Mohamed, Administrateur-Adjoint, Chef de Service Habitat et Aménagement du territoire, Casablanca

Mozambique

No participant

Senegal

No participant

Swaziland

Mr. Stephen Dlamini, Water Control Officer Mbabane

Mr. H.J. O'Hagan Ward, Member of Swaziland National Trust Commission, Manzini

Mr. Paul Nhlengetfwa, District Education Officer, Mbabane

Mr. Mbuso Dlamini, Physical Planner, Mbabane

Tunisie

Mr. Ben Aouali Abderrahman, Chargé du service de la prévention contre les pollutions et Nuisances Ministère de l'Agriculture de Tunisie.

Uganda

No participant, Mr. J.M.N. Kakooza, Commissioner for Law Reform, Revision of Laws, did not arrive.

Zaire

No participant

Zambia

No participant, Prof. M. Ndulo, Dean of School of Law, University of Zambia (Lusaka), did not arrive

OTHERS

ECA/UNEP Consultants on Environmental Legislation (for the project)

Mr. Paul B. Engo, Minister Plenipotentiary, C.E. United Republic of Cameroon, Yaoundé

Mr. H.M. Joko Smart, Fourah Bay College, University of Sierra Leone, Freetown

Mr. Robert M. Dossou, Doyen de la Faculté des Sciences Juridiques Economiques et Politiques de l'Université Nationale du Benin, Benin

Mr. C.E.K. Kumado, Lecturer, Faculty of Law, University of Ghana, Legon

Discussion Leaders

Mr. H.W.O. Okoth-Ogendo, Dean Faculty of Law, University of Nairobi, Nairobi

Mr. Hamisi Kibola, Assistant Lecturer, University of Dar-es-Salaam

WHO

Mr. M.D. Goya, WHO/Liaison Offices/ECA/OAU, WHO, Addis Ababa

Mr. P.A. Oluwandé, Sanitary Engineer, Environmental Health Project, National WHO Co-ordinating Office, Addis Ababa

FAO

Mr. Dominique Alhéritère, Legal Officer (Environmental Law) Rome

Mr. Robert B. Ridgway, FAO Expert, Addis Ababa

Mr. Abebe Mengesha, Counterpart, FAO Addis Ababa

UNDP

Mr. Christian T. Atchou, Head, UNDP Liaison Office with ECA and OAU, Addis Ababa

Ms. Ursula King, Assistant Regional Representative, Addis Ababa

UNEP

Mr. J. Ofori-Boateng, UNEP, Nairobi

OAU

Ms. Tchouta-Moussa, OAU Assistant Legal Advisor, Addis Ababa

ARSO

Mr. Zawdu Felleke, Secretary-General, African Regional Organization for Standardization (ARSO), Addis Ababa

USAID

No participant

IUCN

Mr. W.E. Burhenne, Parliamentary Secretary-General, International Union for the Conservation of Nature and Natural Resources, (IUCN) Law Centre, Bonn

IIED

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Mr. A.M. Akiwumi, Legal Advisor, Economic Co-operation Office (COES)

Mr. N.M. Masemola, Legal Office, Economic Co-operation Office (COES)

Mr. T.M. Ocran, Transnational Co-Operations, International Trade and Finance Division

Mr. C.J. Ngoy Wa-Kassangana, Policy and Programme Co-ordinating Office (COES)

Mr. S.K. Adeyoku, Joint ECA/FAO Agriculture Division

Mr. N.H. Ayodele Cole, Environment Co-ordination Unit (COES)

Mr. Lucas T. Tandap, Environment Co-ordination Unit (COES)

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10 April 1981

412 (XVI) Strengthening of national capabilities for environmental legislation, assessment and management as a development strategy 47/

The Conference of Ministers

Recalling General Assembly decision 33/437 of 20 December 1978, the concerns of which are repeated in the International Development Strategy 48/ for the third United Nations Development Decade, stressing the need for increased environmental protection activities through the incorporation of environmental principles into development strategies,

Recalling also its own resolution 332 (XIV) of 27 March 1979 on the Development Strategy for Africa within the context of international economic co-operation in the establishment of a New International Economic Order,

Bearing in mind its resolution 378 (XV) of 12 April 1980 on the establishment of a programme within the Commission for (i) a survey of major environmental problems in member States for national priority program-

ming, (ii) the establishment of national environmental machineries, technical and manpower capabilities and institutional framework, and (iii) environmental assessment and management in development-oriented activities,

Aware that environmental perspectives, principles and priorities are being gradually accepted by most Governments, as the development effort in the developing countries generally results, among other things, in serious environmental degradation that demands the mobilization of all available environmental capabilities for the protection of the environment,

Recognizing that the achievement of eco-development (ecologically oriented development) in terms of a healthy and balanced environment depends on the adoption of appropriate technological processes operated by adequately skilled manpower, that often demands regional co-operation especially for transnational environmental problems,

47/ See chapter III, paragraphs 70 and 71 of E/CN.14/814

48/ General Assembly resolution 35/56 of 5 December 1980.

Recognizing further that environmental management capabilities are necessary to begin the process of environmental monitoring and assessment from the initial stage so as to achieve high cost-benefit returns in the long run,

1. Endorses the report ^{49/} of the Seminar for Lawyers on Development of Environmental Protection Legislation in the African region, held in Addis Ababa from 29 September to 3 October 1980 under ECA/UNEP sponsorship;
2. Urges member States which have not already done so to enact the necessary legislation for an institutional framework for the development of environmental protection legislation and for the incorporation of environmental provisions and policies into their development planning efforts;
3. Further urges member States which have not already done so to enact the necessary legislation supported by regulations and administrative measures for the enforcement of environmental protection legislation for land use planning, wildlife and forest conservation, coastal zone and marine resources management, minerals development, water and air quality, solid waste and other toxic chemicals disposal, food and drug quality control and population migration;
4. Calls upon member States to provide intensive and sustained efforts in developing public education for promoting environmental consciousness in both the formal and the non-formal systems within the country and also to promote the dissemination of relevant environmental information to enhance the rational management of the environment in development activities;

5. Further calls upon member States which have not already done so to legislate for the preservation, restoration, reconstruction and registration of items of historical sites, ancient monuments and relics, antiquities and artifacts from archeological excavations for the preservation of their cultural heritage and for the promotion of scientific study and tourism;

6. Directs the Executive Secretary, in collaboration with the Executive Director of the United Nations Environment Programme to provide, on request, technical assistance to member States to develop their national capabilities for environmental legislation, assessment and management;

7. Invites member States, development finance institutions, the United Nations Environment Programme, the United Nations Development Programme and other countries outside the region to continue their financial support to the Commission to enable the regional programme on the environment to be implemented within the context of the Lagos Plan of Action.

^{49/} E/CN.14/784.