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Field Document 6

INSTITUTIONAL SUPPORT FOR THE PROTECTION OF EAST AFRICAN BIODIVERSITY

Regional Consultancy to Assess Institutional Linkages for Biodiversity Conservation in East Africa

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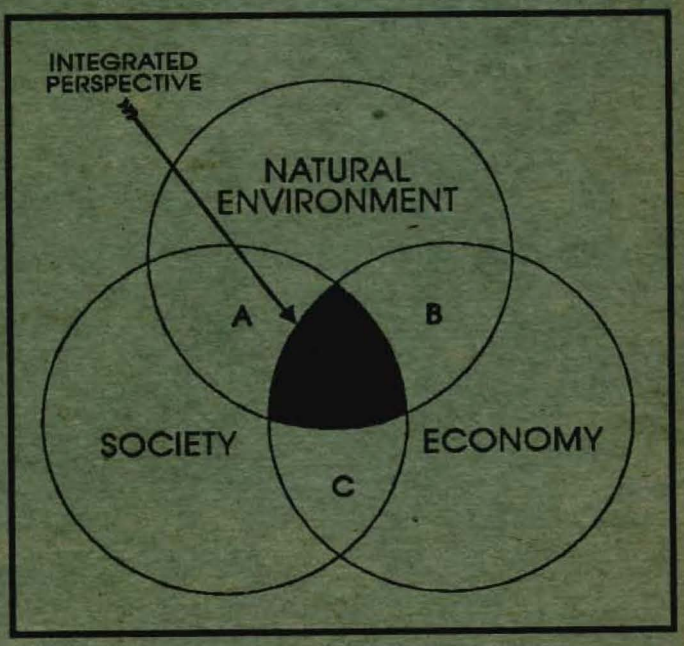

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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INSTITUTIONAL SUPPORT FOR THE PROTECTION OF EAST AFRICAN BIODIVERSITY

REGIONAL CONSULTANCY TO ASSESS INSTITUTIONAL LINKAGES FOR BIODIVERSITY CONSERVATION IN EAST AFRICA

FINAL REPORT

A Consultancy Report Submitted to
the Food and Agriculture Organization of the United Nations

Compiled by

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NOTE

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INSTITUTIONAL SUPPORT FOR THE PROTECTION OF EAST AFRICAN BIODIVERSITY

This Global Environment Facility (GEF) biodiversity project is funded through the United Nations Development Programme (UNDP) and executed by the Food and Agriculture Organization (FAO). The project started in October 1992 and runs for 4 years. The headquarters are in Tanzania, and the project covers the three countries of East Africa : Kenya, Tanzania and Uganda.

The overall development objective of the project is as follows :

> **'To create the institution awareness and capability within the relevant government and non-government organisations of East Africa, so as to ensure adequate protection to the biological resources (biodiversity) of the region.'**

Within this broad mandate of institution building, the project addresses the agencies which deal with biodiversity training, research, conservation and coordination issues in each country. The project focuses on forest and wetland biodiversity with less attention to traditional large mammal, marine or great lakes biodiversity.

A further goal of the project is to increase the linkage and cooperation between the different agencies and, through enhanced national capabilities, to develop greater regional interaction.

The project thus comprises a set of separate but inter-linked components in each country. Support for each is designed to increase their capacity to deal with biodiversity through the provision of training opportunities, expertise and infrastructure. The project has a low level of direct international expertise, but utilises expertise already in the region, and in many cases builds on their existing development programmes with governments.

This consultant report deals with coordination and linkages between the institutions which address biodiversity. The consultancy was developed from within the three national environmental agencies which are supported by the project: The National Environment Secretariat, Kenya; The National Environment Management Council, Tanzania, and The Department of Environment Protection, Uganda. These are the agencies which have a major role in coordination, as defined by their overall mandates.

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ACKNOWLEDGEMENTS

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The consultants would also like to thank the project staff members in the three countries who helped to prepare for, and to administrate, the national seminars and workshops.

Particular thanks must go to Dr. Alan Rodgers, the Chief Technical Advisor, and the various government, donor and non-governmental personnel listed in **Appendix 4**. It is the contributions of these people which have formed the basis of the output of this study.

DISCLAIMER

The content of this report is intended to reflect the diversity of opinions as heard by the consultants in the various fora during the two phases of this study. The responsibility for the final collation, synthesis, analysis and presentation of ideas in this report remains solely that of the consultants. The views and opinions expressed do not necessarily reflect those of the Food and Agriculture Organization of the United Nations (FAO); the Governments of Uganda, Kenya or Tanzania (GOU, GOK, GOT); the Institute of Environment and Development (IIED); or the African Centre for Technology Studies (ACTS).

LIST OF ABBREVIATIONS

ACTS	-	African Centre for Technology Studies
AWF	-	African Wildlife Foundation
CAPPA	-	Computerised System for Agriculture and Population Planning Assistance and Training
CAWM	-	College for African Wildlife Management (Tanzania)
CDD	-	Community Development Department (Tanzania)
CNR	-	Commission of Natural Resources (Zanzibar)
COL	-	Commission for Lands (Tanzania)
COLE	-	Commission for Lands and Environment (Zanzibar)
COSTECH	-	Commission for Science and Technology (Tanzania)
CSA	-	Contractual Services Agreement
CSB	-	Central Statistical Bureau
CTA	-	Chief Technical Advisor
DDC	-	District Development Committees
DEO	-	District Environment Officer (Uganda and Kenya)
DEP	-	Department of Environment (Uganda)
DEP	-	Department of Environmental Protection (Uganda)
DEPO	-	District Environment Protection Officer (Kenya)
DGMS	-	Department of Geological Mines and Surveys (Uganda)
DNRO	-	District Natural Resources Officer (Tanzania)
DOE	-	Department of Energy (Uganda)
DPE	-	Department of Petroleum Exploration (Uganda)
DPH	-	Department of Public Health (Uganda)
DSM	-	Dar es Salaam
DWT	-	Directorate of Water (and Marine) Transportation (Tanzania)
EAWLS	-	East African Wildlife Society
EDG	-	Environment and Development Group (Oxford, UK)
EIA	-	Environmental Impact Assessment
EIS	-	Environmental Impact Statement
ERC	-	Economics Research Centre (Uganda)
FAO	-	Food and Agriculture Organization of the United Nations
FODO	-	Forest Operations (in FAO)
GEF	-	Global Environmental Facility
GEMS	-	Global Environment Monitoring Service (in UNEP)
GIS	-	Geographic Information Systems
GOK	-	Government of Kenya
GOT	-	Government of Tanzania
GOU	-	Government of Uganda
ICDP	-	Integrated Community Development Programme
IDS	-	Institute of Development Studies (UDSM)
IIED	-	Institute of Environment and Development (London)
IRA	-	Institute of Resource Assessment (University of DSM)
ITE	-	Institute of Tropical Ecology (Uganda)
IUCN	-	International Union for the Conservation of Nature and Natural Resources - The World Conservation Union
JKUAT	-	Jomo Kenyatta University of Agriculture and Technology
KARI	-	Kenya Agricultural Research Institute
KEFRI	-	Kenya Forest Research Institute
KEMA	-	Kenya Environmental Management Agency (planned)
KENGO	-	Kenya Energy Non Governmental Organisation
KFMD	-	Kenya Forestry Master Plan
KIFCON	-	Kenya Indigenous Forest Conservation Project
KIPOC	-	Korongoro Integrated People Oriented to Conservation (Tanzania)
KWS	-	Kenya Wildlife Service
MAAIF	-	Ministry of Agriculture, Animal Industry and Fisheries (Uganda)
MENR	-	Ministry of Environment and Natural Resources (Kenya)
MFEP	-	Ministry of Finance and Economic Planning (MFEP) (Uganda)
MISR	-	Makerere Institute of Social Research (Uganda)
MLG	-	Ministry of Local Government (Uganda)

MLHD	-	Ministry of Lands, Housing and Urban Development (Uganda)
MNR	-	Ministry of Natural Resources (Uganda)
MOE	-	Ministry of Education (Uganda)
MOF	-	Ministry of Finance
MOF	-	Ministry of Foreign Affairs (Uganda)
MOH	-	Ministry of Health
MOI	-	Ministry of Information (Uganda)
MOIT	-	Ministry of Industries and Trade (Tanzania)
MOJ	-	Ministry of Justice (Uganda)
MOL	-	Ministry of Labour (Uganda)
MRCT	-	Medical Research Council of Tanzania
MSTHE	-	Ministry of Science, Technology and Higher Education (Tanzania)
MTCI	-	Ministry of Trade, Commerce and Industries (Uganda)
MTWA	-	Ministry of Tourism, Wildlife and Antiquities (Uganda)
MUIENR	-	Makerere University Institute of Environment & Natural Resources (Uganda)
NARC	-	National Agricultural Research Council (Tanzania)
NARO	-	National Agricultural Research Organisation (Uganda)
NBU	-	National Biodiversity Unit
NCA	-	Ngorongoro Conservation Area (Tanzania)
NCSSD	-	National Conservation Strategy for Sustainable Development
NEAP	-	National Environment Action Plan (World Bank)
NEIC	-	National Environment Information Centre (Uganda)
NEMA	-	National Environment Management Authority (Uganda)
NEMC	-	National Environment Management Council (Tanzania)
NES	-	National Environment Secretariat (Kenya)
NGO	-	Non Governmental Organisation
NMK	-	National Museums of Kenya
NPC	-	National Project Coordinator
NPCD	-	National Plan to Combat Desertification (NPCD) (Tanzania)
NPO	-	National Project Officer
NRC	-	National Research Council (Uganda)
NRC	-	National Radiation Commission (Tanzania)
NRM	-	National Resistance Movement (Uganda)
NWSC	-	National Water and Sewage Corporation (Uganda)
ODA	-	Overseas Development Administration (UK)
ODDEA	-	Overseas Development Division East Africa (ODA)
PA	-	Protected Area
PAWM	-	Planning and Assessment for Wildlife Management (Tanzania)
PLC	-	Planning Commission (Tanzania)
PLO	-	Project Liaison Officer
PM	-	Project Manager
PMO	-	Prime Minister's Office (Tanzania)
PR	-	Public Relations
PRA	-	Participatory Rural Appraisal
RC	-	Resistance Council (Uganda)
SCP	-	Selous Conservation Programme (Tanzania)
SEMP	-	Serengeti Ecological Monitoring Programme (Tanzania)
SRCS	-	Serengeti Region Conservation Strategy (Tanzania)
STAP	-	Scientific and Technical Advisory Panel (GEF in UNEP)
SUA	-	Sokoine University of Agriculture (Tanzania)
SWRI	-	Serengeti Wildlife Research Institute (Tanzania)
TBS	-	Tanzania Bureau of Standards
TFRI	-	Tanzania Fisheries Research Institute
TGNP	-	Tanzania Gender Networking Programme
TNP	-	Tanzania National Parks
TOR	-	Terms of Reference
TPRI	-	Tropical Pesticide Research Institute (Tanzania)
TWMP	-	Tanzania Wildlife Monitoring Programme
TWPF	-	Tanzania Wildlife Protection Fund

UDSM	-	University of Dar es Salaam (Tanzania)
UFIR	-	Uganda Fisheries Research Institute (FIRI), formerly Uganda Freshwater Fisheries Research Organization (UFFRO)
UIE	-	Uganda Institute of Ecology
UNCED	-	United Nations Commission on Environment and Development
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environment Programme
UNP	-	Uganda National Parks
USAID	-	United States Agency for International Development
USB	-	Uganda Standards Bureau
WCA	-	Wildlife Conservation Act (Tanzania)
WCED	-	World Commission on Environment and Development
WCK	-	Wildlife Clubs of Kenya
WCMC	-	World Conservation Monitoring Centre (UK)
WCST	-	Wildlife Conservation Society of Tanzania
WCU	-	Wildlife Clubs of Uganda
WRI	-	World Resources Institute (USA)
WWF	-	World Wide Fund for Nature
WDD	-	Water Development Directorate (Uganda)

EXECUTIVE SUMMARY

S1 BACKGROUND

The project under study by this consultancy is entitled "Institutional Support for the Protection of East African Biodiversity". This is a regional project funded by the Global Environmental Facility (GEF) over the period 1992-1996. It support activities in the three East African countries of Uganda, Kenya and Tanzania. The primary function of the project is to support capacity building in several interacting institutions dealing directly with the understanding and conservation of biodiversity. It does not aim to conserve, manage or document biodiversity *per se*, but intends to give government and non-governmental organisations a better capability to do so.

The project is complex, involving 32 sub-components and interaction with a large number of collaborating international and national institutions. The project is giving particular support to build institutional capacity within the "designated lead agencies" for the environment in each country. One such agency was selected by each government to be strengthened by the project. This designation is understood to mean that these institutions are the key agencies to coordinate activities within the project, and that they have a major role in biodiversity activity in their country and region,

These agencies are:

Kenya	-	National Environment Secretariat (NES)
Tanzania	-	National Environment Management Council (NEMC)
Uganda	-	Department of Environmental Protection (DEP)

S2 THE CONSULTANCY

The consultancy was commissioned by FAO and comprised three international and three national consultants. It was carried out in two phases. Phase I (March, 1994) was undertaken to make contacts, to collect background information, to "scope" issues and to outline possible future solutions. The results were summarised in an Interim Working Document. This was widely distributed in the region to stimulate debate prior to the Phase II mission (May, 1994) when National Workshops and a Regional Workshop were held to build consensus on a way forward.

S3 THE APPROACH

Analysis of the specific project issues of institutional capacity building and sustainability are difficult to divorce from the broader issues of sustainable development and environmental concerns in general. This wider context has been taken as a particularly relevant backdrop of international, regional, national and local concerns within which to assess the specific questions raised in the terms of reference for this consultancy.

The approach to the study focused on inter-active methods and literature reviews. Many senior representatives and experts of the government, the parastatal agencies, the donors and the non-governmental organisations were interviewed, and also took part in seminars and workshops organised by the consultancy. Further institutional analysis was carried out by questionnaires and also supported by participatory appraisals with selected village communities and district-level government officials.

S4 AN OVERVIEW OF ISSUES

Understanding and acceptability

1. There is a limited understanding by governments or the general public

about biodiversity. This includes a lack of knowledge on what biodiversity is; what are social, economic and ecological values of biodiversity, and; what are the various established national laws, policies and international conventions to promote biodiversity conservation.

2. There is a lack of adequate acceptability of, and support to, biodiversity issues by the governments. This reflects their limited understanding of biodiversity, as well as the priorities given to the other various pressing economic and political problems which confront them.

Environmental protection

3. There are no strong and active non-governmental institutions with abilities to function as "watchdogs" of the environment.

4. There is a weak legal basis for environmental protection in the three countries. The courts of law currently lack the moral abilities and competence to provide litigation on environmental issues.

Participation

5. There is a lack of adequate people's participation and no established mechanism to ensure that local people have access to natural resources in protected areas. Generally, there are no resource tenure regimes appropriate to sustainable biodiversity conservation and use.

6. There are no appropriate institutional mechanisms to involve the local people in the decision-making and management processes which concern biodiversity and sustainable development in general.

Types of institutions

7. The distinction between institutions that address environmental conservation, and those that address biodiversity conservation, is blurred and exhibits much overlap in functions and mandate. Perhaps this is advantageous, since biodiversity conservation efforts, though in need of focus, should be integrated within broader environmental conservation efforts.

8. The types of institutions involved in environmental and biodiversity conservation and management can be classified on the basis of their functions as: those involved in research; in education and training; in co-ordination; in management of natural resources and; those impacting on the environment. They all have different types of functions to perform for biodiversity management and conservation.

Institutional strengths and weaknesses

9. The designated lead agency in each of the three countries has various strengths and weaknesses. These tend to be common and not country specific. Their main strengths are: they are in position and functioning; they are beginning to make their presence felt; they are gaining experience, and; they are developing a capacity to prepare project proposals and attract funding.

10. Their major weaknesses are: a lack of legal authority; weak professional abilities; a lack of self-confidence; a lack of financial resources, and; a lack of clarity about their mandate or role.

11. The lead agency is seen as having one or more roles - advisory, co-ordinating, or regulatory. It can advise informally or formally, and can co-ordinate activities of other agencies in a manner that is mutually or collectively beneficial for all concerned, even before, or without, being empowered legally to do so.

12. In all three countries, the lead agencies lack the requisite legal and administrative authority to regulate activities that might only be

selectively beneficial, and where some agencies might be restrained from undertaking certain activities that could be destructive of the environment.

13. In all three countries, various other national institutions are involved with the management and conservation of natural resources. The main strengths of the national institutional structure are: the existing institutional diversity; the availability of diverse expertise; the existence of various laws and policy statements; the availability of basic data; the existing momentum for strengthening institutions for biodiversity conservation, and; the significant global interest in East African biodiversity.

14. The major weaknesses are: the multiplicity of agencies lacking effective co-ordination; overlapping jurisdictions and functions (but there are gaps covered by no institutions); resultant inter-agency conflicts; often a lack of adequate legal authority, and; uncertainty of their own role and the role of other sister institutions.

S5 STRENGTHENING INSTITUTIONAL CAPABILITIES FOR BIODIVERSITY CONSERVATION AND MANAGEMENT

Pre-requisites

There are various pre-requisites to institutional strengthening efforts: identification of required institutional tasks; assessment of current institutional strengths and weaknesses; development of a strategy for institutional strengthening, and; the existence or development of a conducive socio-political environment.

The tasks

1. Strengthening of institutional capacities involves the strengthening and creating of institutional structures, institutional instruments, and linkages between them.

2. Strengthening of institutional structures involves strengthening both human and physical resources, as well as the institutional processes which allow the institutions to function.

3. Different types of linkages can be strengthened and created: those that exchange information and expertise; those that facilitate co-ordination, and; those that enable regulation.

S6 RECOMMENDATIONS

Institutional coordination and integration

1. Develop the designated lead agency as a co-ordinating, integrating and linking institution for environmental and biodiversity conservation.

2. Strengthen co-ordination between sectors and levels of the government, by empowering the designated lead agency in each country to effectively perform this role.

3. Link and network agencies and individuals relevant to environmental and biodiversity conservation and management, with the designated lead agency acting as a catalyst.

4. Integrate environmental and biodiversity concerns into all sectors and levels of the government by creating an environmental capacity within each sectoral Ministry/Department and by creating an environmental integration cell within the Planning Commission/Planning Ministries/Departments.

Acceptability

5. Promote higher levels of acceptability for biodiversity conservation at all levels and sectors of the government and society. This should be done especially by involving the people in the task and by: establishing the economic value of biodiversity conservation and management; ensuring the values of biodiversity are recognised in national and local planning and budgeting; ensuring equity in the sharing of benefits, and; by sensitizing and educating the bureaucracy and policy makers on biodiversity issues through special training programmes.

Biodiversity values and knowledge

6. Create National Indigenous Knowledge Databanks within the lead agencies for environmental management to promote the preservation and effective utilization of local/indigenous knowledge.

7. Focus aspects of the research and database programmes to provide practical and cost-effective biodiversity data that can be well-integrated into national planning and budgeting mechanisms.

8. Appraise whether the evolving FAO computerised "K2" system of environmental and sustainability indicators could contribute to national, regional and global biodiversity monitoring and assessment efforts.

9. Establish programmes on biodiversity prospecting that are aimed at enabling local communities to generate revenue from some of their resources and knowledge.

Awareness

10. Raise public awareness and participation, especially through participatory and decentralised planning and management of biodiversity resources, by supporting and strengthening the district-level environmental functionaries.

11. Raise awareness (particularly informing politicians of the socio-economic importance of biodiversity conservation) and establish public acceptability for biodiversity programmes through print media and radio.

12. Establish national programmes to provide local people with relevant information on biodiversity conservation and management, including information on their obligations and rights contained within international and regional conventions, as well as within national laws. The Convention on Biological Diversity and the Global Biodiversity Strategy should be translated into national/local languages.

Environmental protection

13. Develop or create an environmental regulatory process with 'teeth', by setting up a Special Standing Committee on the Environment, and by making environmental regulation and impact assessment legally mandatory.

14. Strengthen NGO activities and abilities to monitor, analyze and take action on any political or/and private commercial activities that may be harmful to the environment.

15. Review and consolidate policies and laws, enuring integration and comprehensive coverage.

16. Strengthen the courts to address public environmental issues by improved training and deployment of environmental lawyers.

17. Establish some form of environmental ombudsmen or environmental tribunals.

18. Develop environmental standards and fiscal measures of conservation.

Comprehensiveness

19. Fill critical gaps in institutional coverage for biodiversity conservation, especially in relation to the management and conservation of wetlands, rangelands, and coastal ecosystems, and in relation to captive breeding and research.

Resource tenure

20. Set up consultative mechanisms (through policy research and participatory appraisal) for resource tenure review and establish public support for the formulation of resource tenure regimes appropriate for long-term conservation.

21. Incorporate resource tenure reforms into the policy research activities of the lead agencies. The lead agencies may also be avenues for establishing consultative groups to review various forms of resource tenure.

22. Elicit donor and government support for resource tenure and land use policy research and the training of specialists in land policy and law.

Donor roles

23. Set up National Donor Consultative Groups involving representatives of donor agencies, various sectoral ministries of government, and NGOs to establish priorities for conservation and identify local participation in project implementation.

24. Coordinate donor agencies to consider committing financial and technical resources to train local people to develop their capacities to deal with new environmental problems.

Sustainability

25. Establish a GEF/project sustainability analysis framework and one that incorporates a focus on process indicators (i.e. to assess changes in how things are done and who is involved, to complement indicators to show changes in what is done).

26. Develop training courses in sustainable development processes and sustainability analysis.

1. INTRODUCTION

1.1 A BACKGROUND TO THE PROJECT

The project which is the subject of study under this consultancy is entitled "Institutional Support for the Protection of East African Biodiversity". It is a regional project being funded by the Global Environmental Facility (GEF) over the period October 1992 to October 1996. It covers support activities in the three countries of East Africa - Uganda, Kenya and Tanzania.

This regional project was conceived in early 1991 by the United Nations Development Programme (UNDP) GEF Secretariat in New York, and the Scientific and Technical Advisory Panel (STAP) for GEF in the United Nations Environment Programme (UNEP). Project designs were appraised in early 1992. Subsequently, the Food and Agriculture Organization of the United Nations (FAO) were requested to execute the project. The Chief Technical Advisor (CTA) was appointed and the project commenced in October 1992.

The project concept evolved in the period immediately prior to the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in June 1992 (the "Earth Summit"). It was designed to operate flexibly in a rapidly changing policy and institutional environment. The project's content was directed at on-going environmental initiatives and to provide them with a greater focus on biodiversity.

The project's regional context was dictated by the initial rules of GEF funding. Whilst most activities are national in nature, the merits of developing and maintaining strong regional ties, through some integration of training and research activity, have been recognised.

Due to potential overlaps with other donor and government programmes, and GEF rules, support was concentrated in the forest and wetland sectors, with less emphasis on large mammals, great lakes and the marine areas.

Four main themes were identified where support activities would try to enhance coordination and linkages. These themes are:

- research and documentation
- training and education
- awareness
- field conservation activity

The overall project is complex, involving 32 sub-components at a national level in the three East African countries. Project activities have been developed with a large number of cooperating international and national institutions. An overview of current institutional linkages and support activities is given in **Appendix 1**.

The project is giving particular support to build institutional capacity within the designated agencies for the environment in each country. These agencies are:

Kenya	-	National Environment Secretariat (NES)
Tanzania	-	National Environment Management Council (NEMC)
Uganda	-	Department of Environmental Protection (DEP)

It should be noted that the Government agency for the environment in each country was selected by each government to be the counterpart agency for this project. These environmental agencies were to be strengthened with the assistance of the project, including support for setting up biodiversity

units. Whilst the project interprets this to indicate that Governments see a specific role in biodiversity for these agencies, the issue of a central coordination role in biodiversity conservation and management is best interpreted from the main mandates of each agency. This report comments on the tasks and functions of coordination in considerable detail.

1.2 PROJECT OBJECTIVES

The primary function of this regional project is building institutional capacity and linkages in the broad field of biodiversity. The immediate objectives of the project have been given as:

(a) To create a biodiversity unit in each designated lead national environmental agency with responsibility for integrating and coordinating biodiversity issues into other sections of government development activity and furthering regional cooperation.

(b) To increase the quantity and quality of training in all aspects of biodiversity and to improve levels of awareness of biodiversity in government.

(c) To upgrade the institutional capacity and capability to collect, analyze and disseminate information and biodiversity, so as to further conservation.

(d) Within selected priority areas for biodiversity conservation to undertake management and planning activity to enhance existing conservation capability in a demonstrative and integrated way. (Project Inception Report, 1992).

The project thus supports capacity building in several interacting institutions dealing directly with the understanding and conservation of biodiversity. It does not aim to conserve, manage or document biodiversity *per se*, but intends to give government and non-governmental organisations a better capability to do so. However the project document does specify a number of tasks that the agencies would carry out with project assistance. These include the development of a biodiversity strategy for example.

1.3 THE CONSULTANCY

1.3.1 Consultancy Programme

This consultancy was commissioned by FAO in early 1994 and the terms of reference are given in **Appendix 2**. Key elements are summarised here:

> Assess the institutional strengths and weaknesses of the lead agencies for the environment, in regard to biodiversity in its broadest sense.
>
> Develop parameters for monitoring strengths and weaknesses.
>
> Examine the present institutional plans for biodiversity units in these agencies, both within the agencies and their linkages to other agencies concerned with biodiversity.
>
> Advise on sustainability analysis capabilities for this project and its activities in the field of biodiversity.

The consultancy team, comprising three international and three national consultants, carried out the study in two phases. The team's work schedule and

the persons met are given in **Appendix 3** and **Appendix 4** respectively.

Phase I (March, 1994) was undertaken to make contacts, to collect background information, to "scope" issues and to outline possible future solutions. The results were summarised in an Interim Working Document (Spooner, B., Singh, S. and Mugabe, J., March 1994). This document was widely distributed in the region to stimulate thought and debate prior to the follow-up Phase II mission (May, 1994) when National Workshops were held in each country. The interactive discussions finished with a Regional Workshop which was held in Tanzania. The workshop programmes and participants are listed in **Appendix 5**.

1.3.2 Study Methods

Analysis of the specific project issues of institutional capacity building and sustainability are difficult to divorce from broader issues, such as sustainable development and environmental concerns in general. The team takes this wider view of sustainable development and environment as a relevant backdrop within which to assess the specific concerns requested of this consultancy. We consider biodiversity to be firmly embedded within the broad field of environment, they are not two separate issues. This broader context is discussed is **Chapter 2** and referred to elsewhere within the main text as and when it is relevant.

The study methods included:

(a) Personal interviews with senior representatives and experts of government, parastatal agencies, donors and non-governmental organisations.

(b) Seminar and workshop interaction with a few, selected key officers and experts, including the commissioning of workshop papers on selected key topics.

(c) A review of laws, policies and other documents relevant to the areas of concern.

(d) Completion of six questionnaires for each country, under the supervision of the national consultant, covering:

- No.1 The institutional capacity within the government to perform critical biodiversity conservation and management tasks.
- No.2 The institutional capacity within the government for following critical biodiversity conservation and management strategies.
- No.3 The legal basis for various aspects of biodiversity conservation and management.
- No.4 The institutional capacity for biodiversity conservation and management.
- No.5 The institutional capacities for meeting the obligations emanating from the Convention on Biological Diversity.
- No.6 The institutional options for the national lead agencies.

(e) Village and district level participatory rural appraisals (PRA) of biodiversity issues.

(f) District level participatory government appraisals (PGA).

This methodology could not be completed comprehensively for various reasons. It was not always possible to find authors who were available in the time frame or dates set to write workshop papers. The questionnaires and PRAs were completed in both Uganda and Tanzania. However, it was not possible to commission a local team to carry out the PRA in Kenya within the time frame of the study. The questionnaires from Kenya were not completed during the time of the consultant's visit to Kenya or subsequently when the national consultants convened in Tanzania for the Regional Workshop. Thus, this substantial part of the analysis remained incomplete for Kenya. A PGA exercise was carried out only in Tanzania.

There was only one formal written response to the Interim Working Document. This was received from the Commission for Science and Technology (COSTECH) in Tanzania. Some verbal comments were received during the course of the Phase II mission. These were largely supportive (CTA, pers. comm.). From this response, the consultants presume that its contents may be taken as read and are included as a part of the overall analysis.

1.3.3 Study Approach and Report Content

The study has been conducted jointly by the consultants working as an inter-active multi-disciplinary team. Each consultant has been responsible for producing individual chapters which have been reviewed by the other team members and the CTA. The main conclusions and recommendations of the team were presented at the final regional workshop in Tanzania. The comments received from the representatives of the three countries have been taken into account in the final report.

The report which follows is broken into main text and supporting appendices. The allocation of materials between the two reflects the focus of the terms of reference. Supporting information and detailed data are dealt with exclusively in appendices.

The main text which follows starts in **Chapter 2** with a contextual introduction to the background and key terminology related to biodiversity in general. **Chapter 3** provides an analysis of the socio-political issues of biodiversity management in the three countries of East Africa. The main institutional analysis is contained within **Chapter 4** and comprises three parts. This includes :- discussion of the main factors involved in strengthening institutional linkages; the features which would further a strategy for strengthening institutional capacities for biodiversity conservation and management; and the main recommendations deriving from the analysis. **Chapter 5** discusses the critical areas for assuring the sustainability of the project's inputs to institutional strengthening. This final chapter is supported by **Appendix 8** which provides more general discussion of sustainability analysis.

2. BIODIVERSITY AND SUSTAINABLE DEVELOPMENT

2.1 TERMINOLOGY AND CONCEPTUAL FRAMEWORK

The critical terms used throughout this report and in the project are "biodiversity", "environment" and "sustainable development". Therefore, it is essential that the team's use of these terms is defined.

Both the terms, biodiversity and environment, are used in their widest sense in this study; reflecting also the requirements of the terms of reference. The two terms are closely related such that almost all efforts at environmental conservation are also to be seen as efforts for biodiversity conservation. The converse is universally true. For this reason, it is often counter-productive to separate discussions on biodiversity from those on the environment in general.

The word environment is taken as an all-inclusive term to include all the features and interactions between the natural and human world. Thus, this perspective is holistic and incorporates an integrated view of the world's key social, political, institutional, economic and ecological components.

More specifically, biodiversity refers to the variety of living organisms on earth. The importance of this diversity exists at three levels: genetic diversity, species diversity and ecosystem diversity (World Resources Institute (WRI) et al, 1992). It can be perceived as an inter-acting complex of plants, animals, and micro-organisms in the natural environment. Biodiversity encompasses materials that provide a direct basis of human survival, as well as those that are not. Biodiversity provides many sources of raw materials used in agricultural, medical and industrial innovations. Its multiple resources and resource potential constitute the foundation of sustainable development.

Sustainable development has been defined already in over 300 ways. The early definition coined by the World Commission on Environment and Development (WCED), which is also known commonly as the Bruntland Commission, was:

> "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED, 1987).

More recent definitions see sustainable development as only being possible to define locally. They see sustainable development essentially as a process trying to balance conflicting interests within and between present and future generations so as to achieve a quality of life that it maintainable over many generations. The outcomes of this process have to be seen as being socially desirable, economically viable and ecologically sustainable (International Institute for Environment and Development (IIED)/World Conservation Union (IUCN), 1993).

2.2 EROSION OF BIODIVERSITY

The world's heritage of biodiversity is being eroded. There is a significant and growing scientific consensus that biodiversity is being lost at rates higher than those ever witnessed in the course of human evolution. Recent studies have attempted to assess the extent of the loss. For example, it has been estimated that 17 million hectares of forests in the tropics are being lost every year; while about 25 percent or more of the world's species of plants, and perhaps higher rates of loss of insect and vertebrate species, may occur in the next thirty years, if the present rates of destruction continue (WRI et al., 1992). The causes of the loss of biodiversity are many and include climatic change, habitat destruction and fragmentation, the introduction of exotic species, the spread of mono-cultures of crops or forest plantations, pollution and other human economic activities.

2.3 AWARENESS FOR BIODIVERSITY CONSERVATION AND MANAGEMENT

The past two decades have witnessed a growing awareness on the need to conserve and manage biodiversity. The 1972 United Nations Conference on the Human Environment held in Stockholm provided the first clear signs of international political concerns for biodiversity conservation. Principle 2 of the Declaration of the Stockholm Conference called on all nations to identify and institute an international programme to conserve and manage biodiversity.

The Stockholm principle was reinforced by the WCED which was mandated to identify long-term strategies for achieving sustainable development through environmentally sound means. It was to suggest legal, policy and institutional mechanisms to ensure that all nations of the world act as one in dealing with global environmental and development problems (WCED, 1987).

The WCED addressed a wide range of environmental issues including a focus on issues of biodiversity. It articulated the importance of all floral and faunal species and stressed the need for a holistic approach to conservation. It highlighted the inter-dependence of nations as, irrespective of their origins, genetic resources supply benefits to all nations. The Brundtland Commission called on the industrialized countries to help build technological and institutional capacities within the developing countries to ensure that the earth's endowment of species and natural ecosystems be conserved and managed for the benefit of all. The WCED further advocated an approach of preventative action by dealing with the root causes of species depletion, and also anticipating the results of destructive development policies.

Biodiversity management has since become one of the critical issues on the international agenda on environment. A number of international, regional and national initiatives have evolved to address issues of biodiversity management. International institutions, such as the FAO, IUCN, WRI and UNEP have all initiated, or become involved in, biodiversity programmes.

2.4 BIODIVERSITY IN THE UNCED PROCESS

The United Nations Commission on Environment and Development Conference, commonly referred to as the "Earth Summit", was held in Rio de Janeiro in June 1992. In the lead-up to the UNCED, significant efforts were invested in identifying measures for enhancing global and national efforts to manage biodiversity. The WRI, IUCN and UNEP, in collaboration with several non-governmental organizations (NGOs), developed a comprehensive Global Biodiversity Strategy. This provided a wide range of policy and institutional measures for dealing with the problems of biodiversity erosion (WRI *et al*, 1992).

One of the major outputs of UNCED was the Convention on Biological Diversity which was signed by 156 governments including Kenya and Tanzania and has been ratified by Uganda. The objectives of the Convention are:

> "the conservation of biological diversity, the sustainable utilization of its components and the fair and equitable distribution of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, ... and by appropriate funding." (UNEP, 1992)

The growing concerns and initiatives on biodiversity have become linked increasingly to demands for a major redirection of public and private policies to address issues of sustainable development. A consensus on what was required to confront these issues was unanimously ratified at the Earth Summit under the Agenda 21.

Agenda 21 articulates the importance of institutional development and capability building for effective biodiversity management. Paragraph 15.11 calls on governments to:

"strengthen existing institutions and/or establish new ones responsible for the conservation of biological diversity and to consider the development of mechanisms, such as national biodiversity institutes or centres".

It also stress the importance of institutional coordination within the framework of government and non-governmental institutions. Paragraph 15.11(d) calls for programmes aimed at enhancing:

"the capacity of governmental and private institutions, at the appropriate level, responsible for protected area planning and management to undertake intersectoral coordination and planning with other governmental institutions, non-governmental organizations and, where appropriate, indigenous people and their communities".

2.5 THE GLOBAL ENVIRONMENT FACILITY (GEF)

One of the major international institutional innovations for strengthening national capacities for biodiversity management is the Global Environment Facility (GEF). The GEF was established in 1990, initially as a three-year pilot programme (1991-93). Responsibility for administering the GEF is shared between the World Bank, UNDP and UNEP. The original GEF had four theme areas for its funding criteria: global warming; pollution of international waters; biodiversity destruction; and depletion of the ozone layer through the emissions of greenhouse gases. Criteria and priorities for GEF project selection were formulated with the help of the STAP, a group of 15 scientists from industrial and developing countries, based in UNEP.

The GEF was endorsed by the UNCED as the main multilateral mechanism to finance and manage international environmental agreements. It was agreed that GEF be the interim funding instrument for implementing two UNCED outcomes - the Framework on Climate Change, and the Convention on Biological Diversity. In March 1994, after 15 months of negotiation, 80 countries reached agreement to restructure and replenish the GEF. This totals some $ 2 billion contributed from 26 countries.

The GEF rationale is to fund those investments which may have limited net gains to the host country, but which have ample rationale in their contribution to their global benefits.

2.6 GEF IN EAST AFRICA

East Africa has several GEF projects relevant to biodiversity from the first pilot phase. There were four regional projects including the project under study by this consultancy. The three other regional GEF projects are:

(a) The prevention of pollution and degradation on Lake Tanganyika; involving four countries.

(b) Support to biodiversity conservation at Lake Nyasa; involving three countries.

(c) Environmental management of Lake Victoria; involving three countries.

National GEF projects include:

(a) Support for conservation and local communities on the Tana river in Kenya

(b) Bwindi Forest Trust Fund in Uganda.

Plus several small projects in Kenya from the GEF Small Grants Facility.

2.7 BIODIVERSITY IN THE EAST AFRICAN CONTEXT

The three East Africa countries are endowed with a great diversity of plant and animal genetic resources. They are also characterized by a considerable diversity of ecosystems/habitats. East Africa is increasingly recognized as one of the world's 'mega-biodiversity' regions.

It is estimated that East Africa has some 15 000 species of higher plants, a high proportion are localised strict endemics (KENGO, 1989, and UNEP, 1989). Closed forests cover about 2.0 percent of Kenya's total land area of which about 85 percent are indigenous forests. The same figures hold for Tanzania. In Uganda, forests account for 6 000 sq km of the country's area. The countries have unique species of wild animals, such as rhinos and elephants, as well as many species of endemic birds and other animals. The region has great climatic and ecological variations that largely contribute to the diversity of plant and animal genetic resources.

Each of the three countries has areas and communities considered as biodiversity "hot-spots". These include:

(a) The large herbivore communities of the savanna grasslands, recognized as the greatest wildlife spectacle on earth.

(b) The diverse fish faunas of the three African Great Lakes. Each has its own distinctive fauna with almost total endemism.

(c) The offshore marine systems, especially the coral reefs and sea-grass beds.

(d) The closed evergreen forests including three important areas:

- The forests adjacent to the western rift valley refuge on the Uganda-Zaire border.
- The forests of the coastal zone in Kenya and Tanzania with high endemism in tiny fragmented patches.
- The forests of the 'Eastern Arc' mountains in Tanzania - old, isolated, wet mountain forests with exceptional diversity and endemism, often referred to as the 'Galapagos of Africa.'

East Africa is, therefore, of great global significance in its biodiversity resources.

2.8 SOCIO-ECONOMIC CONTEXT OF BIODIVERSITY IN EAST AFRICA

Ecological diversity determines the distribution of biological resources and the nature of socio-economic activities undertaken in the three countries. East Africa as countries, and as diverse rural peoples, have an almost total dependence on living natural resources as a subsistence and a cash economic base for survival. Therefore, biodiversity in national contexts is more than a global interest in the science or the potential of biodiversity. It is already the very basis of life.

The region's economic fortunes are dependent to a great extent on the management of biodiversity. The countries have similar main economic activities: agriculture and tourism. These activities are either directly, or indirectly, dependent on the integrity of the country's biodiversity. Agriculture contributes about one-third of the Gross Domestic Product (GDP) and employs more than 65 percent of the countries' population. The agricultural sector, apart from being the main source of food for the country's population, is a major source of foreign exchange. Agricultural activities and progress in the countries depend on the availability of improved plant and livestock genetic material and the sustainability of the ecological systems, and sustainability of the systems in which they operate.

Tourism, which is another major source of revenue for the countries, is also greatly dependent on biodiversity, mainly wildlife resources in protected

areas. In Kenya, the tourist industry generates about ten percent of total employment in the country. Apart from being the base of the agricultural and tourism sectors, biodiversity, in the form of fishery resources, also provides incomes and is a major source of proteins, minerals, vitamins and oils for a significant portion of populations of these countries.

Forest's biodiversity provides a major source of energy for the rural populations. Forests also contribute to the regulation of the climatic variations and the water resources crucial for agricultural production.

However, socio-economic changes are resulting in irreversible degradation of biodiversity. The changes are associated largely with the rapidly growing population and changes in the social modes of production with correspondingly limited growth in technological knowledge and skills to manage the ecological base. Kenya's population is estimated to grow at a rate of over three percent per year. Most of the population is concentrated in the high potential lands which hold most of the indigenous forests.

These comments above serve to put this consultancy in perspective. The Biodiversity Units in the three government environment agencies and their institutional linkages are placed in a position of responsibility for the sustainable use of one of the earth's great natural treasure houses.

3. SOCIO-POLITICAL ISSUES OF BIODIVERSITY MANAGEMENT

3.1 INTRODUCTION

The management and conservation of biodiversity involves a number of socio-political issues. The setting of institutional structures for biodiversity management are located in a socio-political environment that determines their nature and effectiveness. Therefore, before establishing institutions and institutional linkages, or strengthening institutional capacities for conservation, the socio-political issues must be prioritised and understood.

This chapter reviews and discusses the socio-political issues for effective institutional building for biodiversity management in East Africa and institutional capacity building for such management. The issues dealt with include:

the levels of environmental leadership;

the nature and level of political support to conservation;

people's participation in conservation and decision-making on various issues of sustainable development;

resource tenure;

decentralization of governance to provide institutional space and authority to local people to participate in decision-making and development planning;

the various donor approaches and policies, particularly in the area of biodiversity conservation.

3.2 GENERAL FRAMEWORK

Decisions on institutional formation and capacity-building for effective biodiversity management are not simply administrative and technical. They are based on value judgments which are often made in highly sensitive political situations. These judgement are also based on imprecise technical concepts, a limited understanding of various institutional changes and complexities, and an imperfect state of scientific knowledge. Biodiversity management, and the establishment of institutional structures for it, demands the support of a wide group of various stakeholders. These groups have different, and often conflicting, interests in the use and conservation of biodiversity.

Biodiversity conservation and management require a balance between the points of views of officials at national level (where broad environmental and economic policies are made, and where environmental regulations are drawn up), and those of local people (amongst who the policies and regulations are enforced). Therefore, a system of effective biodiversity conservation and management demands, not only a formal administrative structure, but also a widespread acceptance of the legitimacy of the process by which various policies/decisions are reached.

Effective biodiversity conservation requires strong agencies or institutions capable of generating effective knowledge and management systems. The strength of institutions lies in their abilities and flexibility to learn, interpret, and synthesize new management strategies and change. But the flexibility and abilities of these institutions is determined largely by the socio-political context in which they evolve and operate. The socio-political context and conditions may be either favourable, or unfavourable, to efforts of institutional capacity strengthening.

Many institutional decisions are also normally political decisions and can pertain to such issues as the creation of institutions; priority setting and funding of institutions for conservation; training to enhance the human

capital base; the utilization of the trained personnel and; the allocation of land to various conservation activities. Therefore, an understanding of the socio-political context in which specific institutions operate is crucial to analysing their performance. It is also crucial for the identification, as well as the establishment of, measures for strengthening institutional capabilities. The main socio-political considerations to be taken up in the context of biodiversity management in the three countries are:

(a) the level of political commitment to addressing biodiversity degradation problems, and initiating, as well as strengthening, institutions for conservation.

(b) the degree of decentralization of political and administrative authority, in order to empower local communities to contribute to the formulation of policies and programmes that articulate their socio-economic interests.

(c) the methodology of public policy formulation and political decision-making in the contexts of international relations and national socio-economic changes.

(d) the role of institutions such as the judiciary, the police, the military and NGOs in supporting publicly accepted activities of conservation.

(e) the role of multilateral and bilateral donors, their policies and approaches to project conception and implementation, and their interests in conservation, and

(f) the nature and level of people's participation in conservation and in decision-making on various issues of sustainable development.

3.3 CRITICAL SOCIO-POLITICAL PRE-REQUISITES

The strengthening of institutional capacities is not, by itself, a sufficient condition for effective biodiversity management. The creation of strong institutional structures, in the absence of critical socio-political pre-requisites, will not be productive in terms of biodiversity management. Some of these socio-political pre-requisites are:

(a) Political support and leadership to promote biodiversity conservation and management.

(b) Strong and active people's institutions with an ability to function as 'watchdogs' of the environment, and a willing and systemic ability to promote the effectiveness of these watchdogs.

(c) Public acceptability and support of various institutional efforts of biodiversity management.

(d) Institutional capabilities and the political will to provide, especially to the poor, alternative, sustainable sources of basic needs that, otherwise, were being met through the destruction of biodiversity.

(e) Institutional abilities to ensure the sustainable flow (through resource tenure or other mechanisms) of the material and economic benefits of conservation and management of biodiversity resources to the poor.

(f) Institutional capabilities and political will to involve the people, especially the rural stakeholders, in the decision-making and management processes which concern biodiversity.

(g) National abilities to ensure that the costs of biodiversity conservation are not left entirely to the poor, and that the benefits

of utilisation or destruction are not, concurrently, in the hands of the rich (i.e. a greater level of equity).

(h) National abilities to ensure that biodiversity conservation and management, within the larger context of sustainable development, is appropriate to the needs of the country, and is not dictated by external, often vested, interests.

(i) National abilities to develop collaborative efforts to confront issues, rather than to avoid them.

(j) National abilities to achieve greater institutional pluralism linking all levels of government to society.

(k) National abilities to achieve a multi-faceted approach to address all stakeholders, prevailing cultural and ethical norms, formal and informal institutions and public/private processes and functions in society.

3.3.1 Environmental leadership and political suppo

There has been significant growth of environmental a eness in the circles of political leadership in the three countries over the past twenty years. This is demonstrated by the manner in which various political institutions/parties have incorporated environmental considerations into their manifestos. However, these concerns have not been provided with adequate administrative and political support to effect the implementation of various plans and policies stipulated by the parties.

Uganda: In Uganda there is a certain level of political commitment to enhancing environmental management. This commitment is reflected in both the policy framework of the National Resistance Movement (NRM) and the various measures that the NRM has established. In order to provide a strong basis for environmental concerns and management, and create a profound national basis of commitment to environmental protection, Uganda's draft constitution (to be discussed by the recently elected constitutional assembly) incorporates environmental considerations as a subject of national attention deserving political and public policy attention. However, the government is, at the moment, involved in a process of reconstructing the socio-economic and political system. This process demands considerable resources and it is unlikely that biodiversity issues (as understood within the international environmental community) will be given significant political and policy attention unless external support is provided to the government.

Kenya: In Kenya, the four main political parties have incorporated environment in their manifestos. However, the parties have not integrated environmental issues in their activities. While some have established positions (shadow ministers) to address national environmental issues, these offices are dormant. The parties lack the technical and financial abilities to incorporate environmental issues in their public campaigns.

The President of Kenya has, on various occasions, taken up environmental issues in his public addresses. He has also, by virtue of executive powers, established the Permanent Presidential Commission on Soil Conservation and Afforestation (1981). The Commission has helped to raise public support for soil conservation. Despite the efforts of the Commission, environmental considerations have not been effectively incorporated into the fabric of Kenyan politics. Some politicians have made pronouncements on the importance of conservation. However, these pronouncements have not been backed by deliberate efforts to establish political and administrative structures capable of translating the pronouncements into action. There is a disjunction between political pronouncements and institutional responses to biodiversity conservation and management.

There are cases in Kenya where political decisions and action have threatened efforts of biodiversity conservation. For example, there were political pressures to de-gazette the Ndere Island National Reserve in 1992

to create land for private commercial enterprises (Mugabe, J. 1994). The Kenya Wildlife Service (KWS) had to invest its resources in lobbying against the political forces and ensure the de-gazettement was revoked.

Tanzania : Tanzania has recently completed a National Environment Action Plan, which has received Presidential Assent. The country has an ongoing National Conservation Strategy for Sustainable Development process, an Agenda 21 process, and several sectoral strategies are under review - land, agriculture, forests, environment.

The political process has an understanding of environmental issues, but they, like many other problems are subordinated to the larger political processes going on in the country concerning multi-partyism, institutional restructuring etc. Environmental laws, rules and regulations are not strong, and the civil services have lost capability to enforce these rules.

3.3.1.1 Participation in Conventions

The three countries are signatories to a number of international and regional conventions relating to biodiversity, including the Convention on Biological Diversity. Political leaders in other countries are expected to provide support for the implementation of the Convention. Discussions are starting by political institutions in the three countries on the ratification and implications of the Convention and how to implement those articles that demand national resources.

3.3.1.2 Reasons for limited environmental leadership

The limited environmental leadership and political support for biodiversity management is a result of a lack of adequate understanding by politicians and other persons within the government of what biodiversity is, what approaches are socially and technically feasible for its management, and what the various socio-economic facets of biodiversity management are. As such, it is difficult for politicians and political institutions to effectively participate in policy discussions on biodiversity management and sustainable use.

3.3.1.3 Enhancing environmental leadership

In order to establish environmental leadership and solicit political support for biodiversity management it is crucial that *measures aimed at raising the understanding of politicians on issues of biodiversity be instituted*. The awareness raising should inform politicians and others in authority within central, regional and district governments of the economic and socio-political importance of conserving biodiversity. This is one task that the three environmental agencies could integrate into their current awareness activities through print media, radio and other forms of public outreach. It could involve also the use of public fora, such as national independence celebrations.

The use of print media and radio/television should inform the general public of the importance of biodiversity conservation. In addition, mobilization of public attention for conservation should involve the inclusion of biodiversity in educational programmes. As the lead agencies in Kenya and Uganda have already started to appoint personnel at district level (see **Chapter 4**), it may be appropriate to have public awareness campaigns on biodiversity through the use of public meetings at village and district levels. The sensitization of the public in these ways may allow pressures to be put on political institutions to take conservation considerations more seriously.

3.3.2 Legal and other support for environmental protection

A wide range of non-governmental organizations (NGOs) already work in the area of environment in the three East Africa countries. Most are involved in conservation activities at the local community level. Some NGOs were created to take advantage of the availability of funds from the donor community.

Various donors have been developing strategies to support institutional arrangements alternative to the established government structures since the early 1980s. Some NGOs have 'flourished', not because of their performance, but because of the high levels of funding that they have had access to. However, a few NGOs have been active in raising public awareness for conservation, and acting as 'watchdogs' for the environment.

The efforts of many of these institutions lack adequate legal or judicial support. The judiciary systems of the three countries, which are supposed to be the custodians of law, and ensure that those whose activities lead to public environmental degradation are prosecuted, lack moral authority. They lack the institutional capacities to undertake judgement on matters of environmental law. There are two reasons for this. First, the judiciaries seem not to be independent of the governments in passing judgement. Second, the courts lack enough competent persons who have adequate understanding of environmental issues and law (Asiema, J., Mbilinyi, M., pers. comm., May 1994). Third, the courts operate on an adversary system. This weighs the case of one party against that of the other, and is not necessarily directed by the public interest. Since environmental questions are first and foremost matters of broad social concern, the courts, in their present form, are not the most suitable agency for their consideration. The proposed Kenya Environmental Management Agency will have an Environmental Tribunal for environmental litigation.

In the absence of an appropriate institutional basis to provide litigation on environmental cases, NGOs and other institutions, that have the willingness and resources to act as 'watchdogs' on environmental issues, are unlikely to enforce environmental standards and ensure that government decisions do not go against conservation efforts.

To provide an appropriate institutional basis for monitoring the effect of political and private activities on the environment, *new stronger and more active NGOs should be established. The existing ones should be supported by donors to strengthen their abilities to monitor, analyze and take action on any political or/and private commercial activities that may be harmful to the environment*. But the mere creation and strengthening of NGOs to act as 'watchdogs' for the environment is not, in itself, a sufficient basis from which to ensure that public environmental concerns are respected by political and private interests. *A strong legal basis for environmental action should be established in the three countries.*

The courts of law are the main institutions that have, traditionally, the mandate to provide space for litigation of environmental issues. As noted above, the courts in East Africa have limited abilities to analyze and provide appropriate legal advice on environmental matters. Therefore, *the courts should be strengthened to start addressing public environmental issues. The strengthening should take the form of training environmental lawyers and deploying them in the main (high) courts. The process should also involve inducing re-orientation of the cognitive structures of the courts so that environmental considerations form part of their various activities.*

However, the prevailing state of poverty, and lack of awareness of public environmental rights in the three countries, make it difficult for the general public to use courts of law as a device through which to take litigation and action for environmental protection. The courts have the disadvantage of costs which deter members of the public from pressing for environmental action. In this regard, *it is appropriate that some alternative forms of environmental ombudsmen or environmental tribunals be established.* Such institutions should be available to members of the public at no expense. They should explicitly recognise public environmental interests.

3.3.3 Acceptability and priority within the government and the general public

3.3.3.1 Lack of adequate acceptability by the government

The three East African countries are confronted with many urgent economic and political problems. Therefore, the conservation of biodiversity, especially as the term is understood by the North and many international institutions, is not a very high priority for the governments. The countries are faced with food insecurity and various economic problems. They are also undertaking major political reforms as a result of pressures from both local and international scenes. Tanzania and Kenya have already begun a process political change and have introduced or re-introduced multiparty political systems. In Uganda, elections were recently conducted to establish an assembly of representatives to discuss a draft constitution.

As a result of the declining economic performance and increasing population, the governments are confronted with demands from the populations to address urgently food insecurity, human health, and shelter problems. Also, given the already-constrained budgets of the governments, and the much greater attention being directed to political and economic reforms, biodiversity and most other environmental issues seem to have low priority at the levels of development planning and political decision-making.

3.3.3.2 Inadequate support by local communities

There is inadequate support for biodiversity conservation and management among local communities in the three countries. First, the local communities are confronted with various economic problems. In many instances, the communities' scarce economic and human resources go to dealing with food, shelter and health problems. Given this situation, and lack of quick alternatives for their livelihoods, they are often forced to compromise long-term concerns of conservation in order to meet their survival needs. Second, the lack of appropriate resource tenure regimes to assure the local peasant households and communities access to biodiversity resources, means that the communities have limited incentives to invest in long-term conservation. Third, at the moment, the local communities do not derive direct benefits from the conservation of biodiversity, particularly under the system of national protected areas. Therefore, they do not see the loss of biodiversity as being associated with those issues that most immediately concern them - poverty, hunger, disease and social and economic security.

3.3.3.3 Pre-requisites for establishing acceptability

In order to solicit and establish government and public acceptability for biodiversity conservation and management, programmes are required which can:

(a) Demonstrate the link between conservation and alleviation of fundamental problems, such as poverty, disease, and social and economic insecurity.

(b) Demonstrate the medium- and long-term economic advantages of conservation. Such demonstration might take the form of establishing programmes on biodiversity prospecting so that the countries generate revenue from their biological resources.

(c) Assure local communities, who are important stakeholders in biodiversity, sustained access to the material and economic benefits of conservation. This could take the form of *sharing revenue generated from tourism and other activities in protected areas with local communities* living near the areas. It could also be through the *establishment of programmes of biodiversity prospecting that are aimed at enabling local communities to "sell" some of their resources and knowledge*. Such programmes may also involve training of the communities in areas such as parataxonomy.

(d) Ensure that the costs of conservation are not primarily incurred by the local poor. This may be undertaken through *programmes that subsidise various production and conservation activities of local households; credit facilities for conservation, and the provision of technical activities for conservation.*

3.3.4 Decentralization to empower local people in decision-making and development

3.3.4.1 Pre-requisites for effective empowerment of local people to participate in decision-making

One of the fundamental pre-requisites for the achievement of sustainable development and better biodiversity management is the empowerment of local people to participate in decision-making. There are a number of ways of effective empowerment of local people to participate in decision-making. These are:

(a) To ensure that the local people have access to information relevant to environment and sustainable development held by central government authorities.

(b) To decentralise the processes of decision-making to grassroots levels.

(c) To establish measures to eliminate illiteracy through assured access to primary and secondary education.

(d) To encourage the development and strengthening of grassroots institutions with effective representation of all groups at the local level.

(e) To ensure transparency in the final processes of decision-making to ensure the views and interest of local people are taken into consideration.

3.3.4.2. Processes of decentralization in the three countries

Each of the three countries has established differing processes of decentralization. These are aimed at devolving the authority of decision-making and development planning in order to ensure democratic participation in determining and managing national affairs. The countries have devised various approaches to decentralization.

Uganda: In Uganda, since coming to power in 1986, the NRM Government has introduced various measures for decentralizing political and administrative authority. The decentralization is organised around the Resistance Council (RC) system of local government introduced in 1987. This system is the largest form of socio-economic and political organizational structure. It has more than 400 000 representatives in all the 34 districts of the country. The lowest level of the RC system is the RC-1 which consists of persons forming a village committee. An average village in Uganda is comprised of ten to fifteen homesteads. The RC-1 is policy-making and development priority-setting organ and has jurisdictional authority for the identification of local problems, the adjudication of land and other resource management disputes, and the formulation of by-laws.

From the RC-1, the hierarchy of the system ascends through parish to county councils to the district level, and then to the NRM which comprises of the state executive and National Assembly. At the district level, there are various officers who deal with environmental issues including amongst others the district forestry officer and the fisheries officers. These officers are expected to provide technical support to district environmental management activities. They will be working in collaboration with District Environmental Officers (DEO) being appointed by the Department of Environmental Protection (DEP).

One of the major limitations of decentralizing through the RC system is that it is established on party framework and has the dangers of a certain level of political bias. It may not allow the evolution of new political institutions and forms of socio-economic governance that oppose the NRM interests. It may not provide for institutional diversity which is essential for competitive governance. In the event of a change of government, or the

introduction of multiparty government, the ability for local participation may be eroded.

Kenya: In Kenya, a policy of decentralization was formulated in the mid-1980s. This policy is articulated through the District Focus Strategy whose focus is to devolve the decision-making and development planning authority. This, in part, is intended to give the districts authority to identify their specific development priorities through the involvement of local community representatives. At the district level, there are District Development Committees (DDC) which comprise of officials from various sectors (fisheries, agriculture, forestry, environment, industry etc.), as well as representatives of divisions and political constituencies. Members of Parliament also sit on the DCCs of their respective districts. In certain districts, Divisional Development Committees have been established that are meant to articulate the development priorities of local people. The DCCs are the main organs for a project proposals based on district development plans.

Tanzania: The decentralization in Tanzania should be understood in the context of the historical processes of 'villagisation' under the Ujamma philosophy which emerged from the Arusha Declaration of 1967. The decentralization programme meant moving some power from the central government to the district and to the ward levels. It was launched in 1972 for two basic reasons:

(a) to give people greater control over priority setting or development planning in their own districts and;

(b) to enhance acceptability and implementation of various development activities by local people.

3.3.4.3 Limitations of current efforts of decentralization

The extent to which the decentralization has devolved power and resources to the local level in the three countries is debatable. The central governments have maintained most of the authority through bureaucratic structures which often favour the ruling party and the government. Furthermore, most power has remained at the district level and has not effectively reached local people at the villages. There are other weaknesses of the current approaches of decentralization as it affects local people:

(a) Local people have limited understanding of their rights and level of involvement in decision-making. They are used to being passive implementors of government policies and laws. As such, they have not yet become active participants in the processes of decision-making.

(b) There are no activities to inform them about the decentralization processes and its advantages to them.

(c) They lack access to information on national environment and sustainable development held by central government authorities.

(d) The district planning level does not accommodate the participation of grassroots institutions.

(e) There is a lack of transparency in decision-making, even at district level.

3.3.4.4 Preconditions for effective decentralization

If the current decentralization processes are to involve local people effectively in decision-making, there is need:

(a) To devolve power from the district levels to the grassroots levels, perhaps through some of the traditional forms of governance, such as the village elders' committees.

(b) To provide local people with information on national resources and educate them on their responsibilities and rights to partake in

decision-making on matters of national development.

(c) To establish and strengthen grassroots institutions and allow effective participation of these in decision-making at district and national levels.

(d) To establish transparency in final decision-making and to provide autonomy to the district and grassroots decision-making committees and to avoid political interference.

3.3.5 People's participation in conservation and management of biodiversity

Critical to the effective biodiversity management in the three countries is the commitment and genuine involvement of all social groups at the central and local levels of governance. Peoples' organizations, women's groups and non-governmental organizations are important sources of innovation and knowledge for biodiversity management. They should be recognized and supported by governments.

3.3.5.1 Pre-requisites for effective people's participation

In order to achieve people's participation in conservation, there are a number of pre-requisites. These are:

(a) To ensure that local social groups have access to information relevant to biodiversity conservation and management held by central and district government institutions, including information on new technologies, on their obligations and rights deposited in international and regional conventions as well as national laws.

(b) To provide a national legal and institutional basis for the recognition and fostering of traditional methods and the knowledge of local people relevant to biodiversity conservation, and ensuring that local communities derive benefits from the use of such traditional methods and knowledge.

(c) To respect the cultural values and the rights of local people and their communities;

(d) To promote or establish grass-roots institutional mechanisms to allow for the sharing of knowledge between communities;

All three countries have made efforts to institute programmes to involve local communities in conservation and management of various components of biodiversity.

Kenya: In Kenya, the Kenya Wildlife Service (KWS) has established a community wildlife conservation programme to promote the involvement of local people living near areas protected for wildlife conservation. Other institutions, such as the Kenya Energy Non-governmental Organizations (KENGO) and the Jomo Kenyatta University of Agriculture and Technology (JKUAT), also have programmes aimed at mobilizing participation in conservation.

Uganda and Tanzania: In Uganda and Tanzania, a number of non-governmental institutions work with local communities in various aspects of conservation. Institutions, such as CARE, are involved in community forestry management activities, GTZ, ODA and AWF are involved with community wildlife projects.

3.3.5.2 Limitations of current efforts

While efforts exist to re-orientate conservation programmes to involve local communities, there is still a lack of adequate people's participation in national programmes and activities on biodiversity conservation. There are a number of a reasons for this in the three countries. First, there is inadequate understanding by local communities of the various policies, laws and international treaties on biodiversity conservation and management. There

are no activities or programmes to inform and sensitise local communities on their rights and obligations in biodiversity conservation. Second, there is a lack of appropriate institutional and policy mechanisms to involve local communities in biodiversity conservation.

Government institutions dealing with biodiversity have inadequate information on the knowledge base and conservation methods of local communities. No national databanks on local biodiversity knowledge and management systems exist. The lack of information may constrain future efforts to enhance people's participation in conservation.

3.3.5.3 Enhancing people's participation

To address the inadequate understanding of national policies, laws and international conventions on biodiversity by local communities, programmes should be designed to inform local communities on their rights and obligations under the policies and laws be instituted. Such programmes should translate the various policies, laws and conventions into national and local languages.

To deal with the inadequate systems of collecting local knowledge programmes should be designed to identify, synthesise and consolidate local traditional knowledge on biodiversity conservation. The efforts might evolve as specific research activities to take inventories and document local conservation knowledge and methods. Such efforts must be supported by specific administrative systems that recognise the values of the traditional methods and knowledge for biodiversity conservation and management. One specific institutional option could be to establish National Indigenous Knowledge Databanks (NIKDs) within suitable agencies for environmental management. The NIKDs would act to facilitate exchange of information between various communities through various mechanisms of information dissemination.

3.3.6 Resource tenure and biodiversity conservation

3.3.6.1 Lack of security of tenure

One of the major constraints to effective biodiversity management in local communities is the lack of security of tenure of resources. The existing resource tenure and land-use policies in the three countries do little to support biodiversity conservation and management. They fail to provide security of tenure to local people and, therefore, local communities have no incentives for investing in long-term conservation. Resource tenure has not been provided with adequate legal and administrative consideration in development planning. The lack of appropriate resource tenure regimes has led to conflicts between communities, and between people and the imperatives of conservation.

3.3.6.2 Wildlife conservation and resource tenure

Such conflicts have become well-exemplified in wildlife conservation and management. Wildlife conservation institutions have tended to conduct their activities with an emphasis on boundaries including fencing to create isolated game reserves and parks. They have often regarded people as a threat to wildlife and have established management systems that alienate local people from their traditional resources. Because of this, local communities in various parts of East Africa have tended to regard wildlife, either as a threat, or as a competitor for water and agricultural land. Furthermore, wildlife management (as traditionally practised in East Africa) has been established on the imperatives of creating a tourist industry for foreigners. Local communities that have given their land (or who have been alienated from their land) for wildlife conservation have not been rewarded, and as yet they see no real socio-economic benefits of wildlife conservation.

3.3.6.3 Current efforts to address resource use conflicts

There are efforts to reform the approaches of wildlife conservation in East Africa. Institutions, such as the Kenya Wildlife Service and the National

Parks Departments of Tanzania and Uganda, are beginning to experiment with new approaches which emphasis the role and interest of local communities in conservation. The new approaches treat wildlife management as an integral part of local socio-economic life, and not something which is in conflict with local interests. The approaches involve the promotion of sharing revenue from tourism, conservation education and wildlife extension.

However, these efforts are still in their infancy and have not been provided legal and public policy backing to establish resource tenure systems that allow local communities to have access to biological resources in protected areas and unprotected public lands. The main land tenure reform initiatives have been in order to provide security of land ownership and to re-distribute land.

Kenya: In Kenya, the government has been promising, since the 1980s, to set up an "Independent Land Use Commission .... to review questions relating to land and advise on optimal land use patterns for present and future generations in various agro-ecological zones" (Republic of Kenya, 1988). However, until now, no such Commission has been established. Currently, there appears to be a lack of genuine political will and administrative abilities to formulate and implement a land tenure regime that takes into consideration the interests of local people.

Uganda: In Uganda, committees have been established to review the existing four main forms of land tenure (*mailo*, leasehold, freehold, and customary). The *mailo* tenure system grants authority of ownership of land to the king. The customary land tenure, which is the most common, provides legal ownership of land and its resource to the community. However, it does not support conservation of biodiversity (Moyini, J. 1994) nor does it create incentives for conservation and management of natural resources particularly in circumstances where each household has different socio-economic demands. The government has established various committees through the RCs to review land tenure in various parts of the country. The process of review is still underway in Uganda and it is unclear whether it will address natural resource tenure issues and the rights over plant and animal resources.

Tanzania: In Tanzania, a Presidential Commission to review land tenure was established in 1991 which submitted its draft report in 1993 which has not yet been publicly discussed. A new land tenure policy is being discussed through a National Steering Committee appointed by the Minister for Lands, Housing and Development. A Draft is being discussed as a Cabinet White Paper.

Prior to the establishment of the Committee, new legislation was enacted - *The Regulation of Land Tenure Act No. 22 of 1992* - which terminated customary land ownership. This has resulted in some forms of abuse, including "land grabbing" by individuals with economic and political power, because of the lack of an administrative machinery to protect the land interests and needs of local poor persons.

This privatization of land, and the considerable acquisition of land once held by local poor people, is likely to disrupt the traditional forms of social organization, and erode the security of tenure that local communities may have over land. Insecurity over land ownership has major implications for land management and biodiversity conservation. It is not clear whether the Committee will be able to review the Act and effect reforms.

Given the social and cultural ties that local communities have to land, and the fact that security of land ownership provides the basis or incentive for local households to invest in conservation, it is unlikely that efforts of biodiversity conservation in the countries will be successful, unless the imbalances in land ownership are addressed. *To provide a strong basis for local conservation, existing land tenure systems should be reviewed to effect equitable distribution of land, and ensure security of land ownership by local communities.* A related issue is that of access and tenure over natural resources within protected conservation areas.

3.3.6.4 Reviewing resource tenure regimes

To address the imbalances in access by local people, particularly the poor, to land and natural resources, *there is need for the governments to establish consultative mechanisms for resource tenure review and provide political support to the formulation of tenure regimes appropriate for long-term conservation*. This may be one area where NGOs and donor agencies need to provide financial and intellectual support to the governments. Where there is political will, NGOs and donors may also be a source of pressure on the governments to institute resource reform processes. The donors and NGOs can invoke Chapter 26 of Agenda 21 (a non-binding document, but endorsed by the governments), and the Convention on Biological Diversity, to lobby governments to institute tenure reforms.

The resource tenure review processes need to be decentralized such that public consultations are held from village level through the use of already-established land boards and chiefs' 'barazas'. *In the case of Uganda where land tenure review is being undertaken through the RCs, the issues of natural resource (forests, wildlife) tenure should be addressed. In all three countries, the resource tenure review processes should take into consideration the roles and interests of women, as well as the appropriate customary patterns of resource use and ownership.*

3.3.6.5 The role of the lead agencies in resource tenure review

The three environmental agencies have a role to play in resource tenure reform. Since their main mandate is to formulate environmental policy and advise their governments on appropriate measures for environmental management, *these agencies should incorporate resource tenure reforms as part of their policy research activities. The agencies may also be avenues for establishing consultative groups to review various forms of resource tenure.*

The policy research programme on resource tenure should identify specific policy options and tenure regimes that can promote sustainable land use, provide security of ownership to local communities and allow the communities to have access to natural resources in protected conservation areas. It should also put emphasis on strengthening local community-based tenure and decision-making systems related to biodiversity management. The environmental agencies and their consultative groups may act as sources for policy information through studies which focus on the interplay between resource tenure and land use patterns; the impact of different tenure regimes on biodiversity management; and the impact of changing land use patterns and practices on biodiversity in various socio-ecological zones. The resource tenure review processes should start with addressing the imbalances in ecological sensitive areas, such as wetlands, forests and protected conservation areas.

The research programme may generate ideas through the application of PRA and PGAs. These allow all levels of policy-making to play a positive role in promoting tenure reform and sustainable land use. But, the establishment of a research programme on tenure reforms within the lead agencies may require human capacity building to ensure that the agencies have competent/trained persons to deal with tenure issues from the policy and legal standpoints.

3.3.6.6 Donor support for resource tenure review

Resource tenure and land use policy research receive little support and attention from government environmental institutions. Most of the national environmental institutions have not integrated resource tenure issues within their programmes. It has often been presumed that the policy options for resource tenure reform exist and the problem is how to implement them (Njuguna, S. and Ojwang, J.B, pers. comm., 1994).

Donor agencies have not often provided support to resource tenure and land use policy research. *Resource tenure and land use policy is one area which donors and governments should support by training specialists in land policy*

and law. Training in land use and land tenure policy should be part of the package for institutional capacity building for biodiversity management. Support should also go to the lead agencies and policy research institutions to undertake research and generate information and advise the appropriate organs of government on suitable forms of resource tenure in various socio-ecological areas.

3.3.7 Donor approaches and policies

More than 75 percent of funding for biodiversity conservation and management in the three countries is provided by bilateral and multilateral donors under specific technical and economic cooperation arrangements. Government funding to biodiversity-related activities is low. In addition, most of the conservation programmes have provided for little or no involvement of the governments and the general public, either in the programme initiation or development phases. There is also a tendency for donors to push their interests, often ignoring the participation of indigenous institutions in the preparatory processes of project development.

3.3.7.1 Donor pressures

The governments of the three countries seem to be driven by donor pressures, and lack abilities to make decisions about priorities and strategies relevant to the conservation of biodiversity independent of donor influence. This is because the countries largely depend on the donors for various forms of development assistance, including the seminars and workshops to develop strategies. Donors tie much of their assistance to conditionalities that articulate their interests which may not necessarily be those of the governments and general public. Furthermore, the individual donor institutions are institutionally better-organized and more able to push for their interests than are most governments. Many of the government institutions themselves are functioning on the basis of donor funding! Often the governments do not provide adequate and continuous financial support to the local institutions and conservation projects.

3.3.7.2 Centralization of donor activities

A common characteristic of donor funding and programmes in East Africa seems to be the high level of centralization of project administration and implementation mechanisms within central levels of government. For most donor-funded projects, local learning is limited. At the moment, most donor funding goes to state institutions and formalized NGOs. There is little funding specifically directed to supporting activities of local cooperative groups (such as village self-help associations) in activities of conservation.

3.3.7.3 Reforming donor approaches

The effectiveness of donor activities depends to a great extent on how the donors (and governments) reform their approaches to allow effective and adequate participation by the governments in the tasks of priority setting and project conception. Donors should avoid promoting their self-interests and designing the content of programmes without adequate involvement of government and local institutions. They should incorporate measures to enable the government and local people to participate effectively in setting priorities, as well as the taking of more significant responsibility for implementing the projects. *National Donor Consultative Groups (NDCGs) involving representatives of donor agencies, various sectoral ministries of government, and NGOs, should be established to establish priorities for conservation, identify collective mechanisms for funding and ensure adequate local participation in project implementation.*

Donor agencies need to commit financial and technical resources to training of local people to develop their capacities to deal with new environmental problems. Such training should focus on new methods of conservation -through home gardens, botanic gardens, etc. and incorporate these in traditional practices. These activities could be offered to grassroots institutions working with local communities on conservation issues (e.g. farmers'

associations), NGOs and church groups. Financial and technical support should be given to the training of women's groups.

4. STRENGTHENING INSTITUTIONAL CAPACITIES FOR BIODIVERSITY CONSERVATION AND MANAGEMENT

4.1 INTRODUCTION

This chapter develops recommendations for strengthening institutional capacities, bearing in mind the main thrusts of this biodiversity support project, and the broader context of biodiversity, sustainable development and socio-political processes which have been described in **Chapters 2 and 3.**

The chapter is in three parts:

The first part provides a conceptual framework within which to assess the strengthening of institutions to conserve and manage biodiversity.

The second part discusses features which would develop a strategy for such strengthening. This also considers perceptions on the role of the environmental agency and the Biodiversity Units within it.

The third part presents the main recommendations to improve institutional coordination, integration and linkages for biodiversity issues. This includes the roles and responsibilities of district level officers, and terms of reference for the government agency for the environment and, if developed, a National Biodiversity Unit.

Additional proposals deal with the means for a more comprehensive approach to biodiversity conservation and management including fiscal measures, improved people's participation, extended research and means to improve the general acceptability of environmental considerations.

4.1.1 The conceptual framework for institutional strengthening

Strengthening institutional capacities involves, essentially, four types of activities:

(a) Strengthening existing institutional structures and instruments.

(b) Creating new institutional structures and instruments to fill gaps in the present institutional structures and instruments in terms of their ability to perform all the tasks required for biodiversity conservation.

(c) Strengthening existing links between the different institutional structures and instruments.

(d) Establishing new links, wherever required, between structures and instruments.

Institutional structures within the government are ministries, departments, divisions manned by people and having functions, responsibilities and, usually, some power. Outside of the government they are usually in the form of organisations, societies, clubs or groups with a membership and objectives.

Institutional instruments include policies, laws, plans and programmes which provide a context within which governmental institutional structures exist, and from which they get their basic mandate and means for fulfilling their responsibilities. Institutions outside the government often work to further the government policies, laws, plans and programmes that they support, and mobilize against those that they disagree with. They also have their own plans and programmes appropriate to their own objectives.

4.1.2 Strengthening of institutional structures

The strengthening of institutional structures mainly involves the provision

of personnel, the upgrading of existing human abilities and the provision of required equipment. This is done by providing additional posts, arranging for specialized consultancy inputs, training the existing staff, by external or in-service training either formally or on the job, and providing computers, furniture, phones, faxes, photocopying machines and vehicles etc. There are also socio-political pre-requisites to strong institutional structures and instruments. These are dealt with in **Chapter 3** and summarized later in **section 4.1.4.**

The strengthening of institutional structures is, logically, the first step in the process of strengthening institutional capacities, as a strong institutional structure can then contribute to the strengthening of institutional instruments. However, in some cases, appropriate changes have to be made first in the policies, laws, plans or programmes of the government, to accommodate the strengthening of existing institutions or the creation of new ones. For example, institutional structures for granting environmental clearance to projects, can only be created and become functional if laws are enacted to make environmental clearance mandatory for projects.

4.1.3 Strengthening and establishing linkages

Linking of institutions assumes that there are two or more institutional structures, instruments or processes that could individually or collectively benefit by being linked together in an appropriate manner. The linking of institutions can be for one or more different purposes. The easiest start point is to link institutions through an information exchange network. The most challenging is to form a linkage where one or more institutions facilitate, coordinate and even regulate the functioning of others. Some of the types of links are described below:

(a) **Information exchange between institutions** in one or more of the following three ways:

Passively - general reports and publications being circulated.

Actively - special reports/ abstracts being prepared addressing perceived interests and needs of other institutions/ sectors (interface documents).

Interactively - responding to the expressed information needs of other institutions and sectors.

There might initially be a need for an agency within or outside the government to catalyse the process of linkage formation, but this would endure only if the capacity was built up in each of the linking institutions.

(b) **Providing mutual advice** in one or more of the following three ways:

Non-institutionalized and unsolicited - where advice is given by one institution to another without being asked, but perhaps on the basis of information received as a result of the earlier described information exchange.

Non-institutionalized but solicited - where an institution asks another for advice, on an informal or ad hoc basis.

Institutionalized and solicited - where representatives of the various institutions meet periodically, within an institutional structure like a consultative committee or group, to exchange information and consult each other.

Again, a catalytic agency might initially be needed, but to be sustainable, the function has to be internalized in each institution.

(c) **Facilitation or co-ordination** (by one or more institutions) of the functions and activities of the various institutions in a manner that is:

Mutually beneficial - where all the concerned institutions/sectors benefit. For example, where the surplus or waste products of one sector can be cheaply procured and utilized by another, thereby benefitting both; where the experience and expertise of one can be used to enhance efficiency and cut costs of another, on a paid consultancy basis; where the agency damaging the natural resources managed by another can be supported by the latter to prevent the damage in a manner so that both will benefit.

Collectively beneficial - where none of the concerned institutions benefit or lose out, but there is a collective benefit. For example, where the site of a proposed project is shifted, based on expert inputs from various agencies, without any loss or gain to the project proponent, but with advantages to the environment and to the nation. Similarly, where alternative technologies, processes or raw materials are used which might cost more initially, but the costs even out in the saving of energy, and can be more environmental friendly.

Selectively beneficial - where some of the institutions benefit while others are constrained, but there is overall benefit to the environment and to the nation. For example, where the activities of one sector or department, though advantageous to the specific, narrow, interests of that sector, damage the natural resources managed by one or more of the other sectors and institutions, and thereby, in totality, do more harm than good.

For the first type of facilitation, it is enough to be able to demonstrate the benefits that will accrue to each party. For the second type, some persuasion might also be required. The third type would usually require legal or administrative authority, i.e. an "instrument" to back up this type of co-ordination or regulation.

4.1.4 Pre-requisites to institutional strengthening initiatives

Some pre-requisites to the processes of strengthening institutional capacities are listed below:

(a) A systematic identification of the tasks and the strategies required is needed.

Considering that almost all efforts at conserving the environment in general are also efforts at conserving biodiversity, the tasks and strategies identified must also include those that are aimed at environmental conservation in general. Many systematic lists already exist and only have to be adapted to local conditions. Lists developed for India have been adapted (Singh, 1993) and are completed in **Appendix 7**.

(b) An assessment is needed, in relation to the tasks and strategies identified above, of the strengths and weaknesses of the existing institutional capabilities.

This study attempted a preliminary compilation for the three countries using similarly adapted tables. These were completed with the help of the national consultants, discussions with experts and government officials, discussions in the seminars and workshops of this consultancy, and through a literature survey. Details are given in **section 4.2.3**. However, in view of the limited level of institutional analysis possible more-detailed analysis would be desirable in the future. This should assess the structures and capabilities of all the agencies involved in environment and biodiversity conservation and management, their position, role and interactions within the larger governmental structure, as well as the potential that could be tapped within and outside of the government.

(c) A strategy for strengthening institutional capacities needs to be developed by each government, which incorporates the existing institutional strengths and weaknesses of the institutions and the socio-political situation in each country and within the region.

Such a strategy must address the requirements of institutions at the central, district and village level whether these be governmental institutions or NGO, donor or people's institutions. Early formulation and implementation of such a strategy would significantly benefit improved biodiversity conservation and management. This study recommends elements of such a strategy, and specifically the role that the designated agency for environment, and its biodiversity unit, can play in formulating and implementing this strategy (see section 4.3).

(d) Various socio-political pre-requisites exist as discussed in **Chapter 3** and which, in summary, are:

- The existence of strong and active people's institutions.
- The existence of institutional capabilities and the political will to provide sustainable alternatives.
- The institutional ability to ensure flow of benefits to the poor of benefits of conservation and management of biodiversity resources.
- The institutional capability and political will to involve the people in decision-making and management.
- The establishment of a "moral right" to conserve.
- An ability to ensure that conservation is appropriate to the tradition, culture and needs of the country.
- A national ability to develop collaborative efforts to confront issues rather than to avoid them.
- A national ability to support and promote diversity of cultures, institutions and viewpoints.
- A resolve to make government functioning more transparent and to promote free access of information.

4.2 TOWARDS A STRATEGY FOR STRENGTHENING INSTITUTIONAL CAPACITIES FOR BIODIVERSITY CONSERVATION

4.2.1 Preamble

While looking at institutional structures for biodiversity conservation and management, it is often difficult to distinguish between structures for environmental conservation in general, and those specific to just biodiversity conservation. This is partly due to the fact that explicit concern for biodiversity, even the term itself, is recent, whereas, many of the concerned institutional structures and processes have been in position much longer. Also, almost all activities for conserving the environment also conserve biodiversity; the converse being universally true.

The blurring of boundaries between environmental conservation and biodiversity conservation is not necessarily a bad thing. Administratively it makes little sense to isolate biodiversity conservation efforts from other environmental conservation efforts, or for that matter efforts at managing and conserving forests, wildlife, marine and aquatic resources. Preferably, biodiversity concerns should be integrated into all environmental conservation, management and resource use activities, as much as environmental concerns must be integrated into all other activities of government and society. Thus, in this report, there has been little attempt to separate the two, except where the context specifically demands it.

All three countries are currently rationalising the number of civil servants, reducing unnecessary structures, and effecting economies in governmental expenditure. Despite this, the creation of new bureaucratic

structures for biodiversity conservation might be inevitable as, in all three countries, the institutional structures for many aspects of biodiversity conservation and management have been, and continue to be, relatively weak. However, the team's recommendations do not envisage creating large institutional structures. Rather the team considers it more appropriate, in most cases, to set up, perhaps by re-deployment, a networking capability and institutional structure within the government. Their responsibility would be to tap the talent and abilities available, both within and outside of the government, for performing its designated functions. This would keep the permanent bureaucratic structures small and so save on costs. It would also mean that the best talent becomes available to give independent and objective inputs.

4.2.2 Sectoral roles in biodiversity conservation

The tasks of environmental and biodiversity conservation must be inter-sectoral and involve all the concerned ministries, departments and agencies. One way of classifying institutions concerned with biodiversity conservation is to view them in terms of the type of functions they perform. Obviously, each of these categories need to be strengthened in different ways, relevant to the roles that they have to play in the conservation and management of biodiversity. Their possible roles are summarised in **Table 4.1** and can be classified as:

(a) Those involved in biodiversity research, education and training: e.g. universities, research and training organizations, museums, data banks and research divisions within ministries.

(b) Those involved in co-ordinating biodiversity management: e.g. Departments of Environment, National Environment Management Council (NEMC in Tanzania), National Environment Secretariat (NES in Kenya), Department of Environment Protection (DEP in Uganda), Biodiversity Units and Commissions or Councils of Science and Technology.

(c) Those involved in managing biological resources for direct utilization: and conservation, e.g. Forest Departments, Fisheries Departments, National Parks, Wildlife Services, Game Departments, Agriculture Departments and Water Departments.

(d) Those whose activities have a significant impact on biological resources: e.g. Industries Departments, Mining Departments, Tourism Departments, Transport Departments, Public Works Departments, Finance Departments and Planning Departments, and in cases, Departments of Agriculture and Forestry.

Table 4.1 **INSTITUTIONAL ROLES IN BIODIVERSITY CONSERVATION**

Type of agency	Role in biodiversity conservation
Research, education and training	- Data collection - Monitoring - Assessment of impacts - Development of scientific understanding - Raising awareness - Development of human resources - Debate and discussion
Co-ordination Facilitation	- Linking - Networking - Advising - Regulating - Planning
Managerial	- Regulating sustainable use and extraction - Regeneration - Maintenance and conservation of gene pools

Impacting	- Minimizing of impacts - Integration of biodiversity concerns

4.2.3 The national lead agency for environment

A description of each of the designated agencies is given in **Appendix 6**. These lead agencies are typically government departments within ministries, or parastatals attached to ministries. Strengths and weaknesses common to the lead agencies in each of the three countries are summarized below.

4.2.3.1 Strengths

The following strengths were identified:

(a) The agencies are in position and functioning, and have some assured financial support, at least during the life of the current GEF project.

(b) With support from the GEF project, the agencies are gradually making their presence felt within the government and amongst the general public.

(c) The project is also enabling personnel within these agencies to gain experience in handling complex environmental issues involving a multiplicity of agencies.

(d) These agencies, especially with the available project support, represent a basic capability to design projects and, thereby, attract additional donor funds for biodiversity management and conservation.

4.2.3.2 Weaknesses

The following weaknesses were identified:

(a) A lack of legal (and administrative) authority to facilitate and/or co-ordinate environmental activities of various other departments.

(b) A weak in-house professional ability to address the various environmental issues in the country (in this regard NES in Kenya had perhaps the largest complement of technical personnel of all the lead agencies, but this too was seen as inadequate due to district transfer).

(c) A lack of clarity about what their role and position in the government is, especially as, in all the three countries, the process of administrative reorganisation is currently underway.

(d) More specifically, a lack of clarity concerning the respective mandates in terms of specific biodiversity function of each environmental agency vis a vis another "competing" agency (Department of Environment in Tanzania, the National Museum of Kenya and the National Environment Management Agency in Uganda).

(e) Perhaps consequently, a seeming lack of self-confidence in performing the required role of environmental and biodiversity conservation and management.

(f) A paucity of financial and other critical resources to perform the required functions of environmental and biodiversity conservation and management.

4.2.3.3 Perceptions regarding the role of the environmental lead agency

In order to determine the role that the lead agency and the biodiversity unit within it should play, a questionnaire was developed to solicit the views of individuals within and outside the government **(see Appendix 7.)**
The completed questionnaires have been analyzed and the findings are given below. The various roles of the lead agency suggested by the government representatives and experts through questionnaire or interview were one or more of the following:

- Advisory
- Regulatory
- Co-ordination
- Implementation
- Funding

The team further examined these possible roles and identified some critical questions concerning each one as summarised below:

(a) Advisory

Whom does it advise: Conservation agencies? Agencies impacting on the environment? All agencies?

At what level: Central? Region? District? Village?

At whose behest: Voluntarily? Government requirement? Donor requirement? Legal requirement?

Based on what expertise: In house? From other departments or agencies? From donor agencies or other countries?

On what issues: All? Interdisciplinary? Where expertise does not exist elsewhere?

(b) Regulatory

Whom should it regulate: All agencies, departments, ministries? Those that directly impact on the environment? Those that are involved in environmental conservation?

At what level should it regulate: Central? Region? District? Village?

What should it regulate: Projects? Programmes? Policies? Plans? Laws?

(c) Co-ordination

Whom should it co-ordinate: All agencies, departments, ministries? Those that directly impact on the environment? Those that are involved in environmental conservation?

What levels should it co-ordinate: Central? Region? District? Village?
What should it co-ordinate: All activities? Activities directly affecting the environment?

How should it co-ordinate: Through setting up committees? Through representation in existing committees?

On what authority: Legal? Administrative? Moral?

(d) Implementation

Should it be an implementing agency? If so:

What should it implement: Protection programmes? Regeneration programmes? Education and awareness programmes? Research programmes? Information gathering and dissemination programmes?

How should it implement: Through its own staff? Through other government departments? Through parastatals? Through professional institutions/NGOs? Through community groups?

(e) Funding

Should it be a funding agency? If so:

Who should it fund: Government departments? Parastatals? Professional institutions/NGOs? Community groups?

With what should it fund: Government funds? Donor funds? Self-generated funds?

Keeping these questions in mind, the preferences expressed through the questionnaire survey in each country are shown in summary are shown in **Table 4.2:**

Table 4.2

SUMMARY OF PREFERRED ROLES FOR THE LEAD AGENCY

ROLE	% AS FIRST PRIORITY	% AS FIRST AND SECOND PRIORITY
COORDINATION	61	89
ADVISORY	37	77
REGULATORY	21	30
IMPLEMENT	0	9
FUNDING	0	12

Source: Consultant's questionnaire (see **Appendix 7**).

4.2.4 Issues regarding national institutional capabilities

In order to determine the optimal role for the environmental agency and the biodiversity unit within it, and also to determine how best donor support can strengthen their institutional capabilities, it was necessary to assess the overall institutional capabilities for conservation and management of biodiversity in each of the three countries. The assessment was designed to show who was doing what, why, how, and to what effect. Thereby, it also helps to identify gaps, if any, in the coverage of functions critical for the conservation and management of biodiversity.

The timing of this assessment coincides with a period when all the three countries are in the process of reorganizing their institutional structures and redefining the roles of their various environmental agencies.

Tanzania: In Tanzania, the government is actively considering an amendment of the legislation which defines the role and functions of the National Environmental Management Council (NEMC), and considering the enactment of an Environmental Protection Act which would perhaps give more "teeth" to environmental protection. The GOT is also in the process of demarcating more clearly the functions of NEMC and the Division on Environment in the Ministry of Natural Resources, and of reviewing environmental laws and the general administrative setup.

Kenya: In Kenya, consequent to the National Environmental Action Plan (NEAP) process, the GOK is considering demarcating the roles and responsibilities of the various agencies involved with environmental and biodiversity conservation, specifically NES and a new possible agency -KEMA. They are also considering a recommendation to reorganize the legal structure, to give greater "teeth" to environment regulation and develop, or to set up, an institution for looking after, in a comprehensive and integrated manner, issues of environmental and biodiversity conservation and management.

Uganda: In Uganda, the government has already decided to set up a National Environment Management Agency (NEMA), with wide powers and functions, supported by appropriate legal and administrative structures in the Ministry of Natural Resources. However, the role of the Department of Environment Protection (DEP), subsequent to the creation of NEMA, has not yet been made clear.

Though the process of institutional re-organisation is well on its way, recommendations from this consultancy might influence the decisions the governments finally make. Keeping this in mind, a set of detailed questionnaires were developed and completed (**See Appendix 7**). The questionnaires for Kenya could not be completed. Questions related to institutional capabilities were also discussed with various experts, and reviewed through reports and documents.

Based on these questionnaires, the major institutional strengths and the major weaknesses in terms of issues contributing to or inhibiting institutional capabilities for biodiversity conservation and management were analysed. Many aspects are both strengths and weaknesses (for example, multiplicity of agencies, existence of international institutional and donor presence and interest). Whether, ultimately, they do more good than harm, depends on how they conduct themselves and, indeed, on the ability of the governments to control and channel them in the interests of the nation.

4.2.4.1 Major institutional strengths

The following strengths have been identified:

(a) Institutional diversity

A rudimentary institutional framework for biodiversity conservation and management has been established in each of the three countries. There are various institutions with considerable capabilities in certain aspects of conservation and management. The multiplicity of institutions, if inter-agency conflicts are not allowed to become antagonistic, can be a strength by ensuring a diversity of approaches and viewpoints and, thus, providing for a broader perspective on the conservation and management of biodiversity.

(b) Availability of expertise

There are already a number of professionals trained in various aspects of conservation and management. The basic institutional framework for local training in various areas related to biodiversity management exists.

(c) Availability of laws and policies

A wide range of policy and legal measures that may be applied to promote, either directly or indirectly, biodiversity conservation have been provided in various policy documents and statutes of the Laws. The existing institutions may invoke these policies and laws for biodiversity management.

(d) Availability of basic data

Some components of an environmental database, including linkages to biodiversity information have been developed by monitoring and GIS

techniques.

(e) Availability of international institutional and individual expertise

The location of various international agencies and projects in the region make it possible to have access to a large amount of international expertise who are familiar with the region and its issues.

(f) Existing momentum within the government

In all three countries initiatives exist for establishing institutions to address the conservation and management of biodiversity. This is especially due to the processes surrounding NEAP, National Conservation Strategies for Sustainable Development (NCSSD), UNCED and international conventions.

(g) Significant global interest

There is significant global interest in the biodiversity of East Africa. This is leading to continued support for strengthening institutional structures in the region.

4.2.4.2 Major institutional weaknesses

The team's extensive discussions in the three countries identified major weaknesses in the existing institutional structures. These are:

(a) Weaknesses relating to conservation and management agencies, including:

Multiplicity of agencies: There are a multiplicity of agencies dealing with natural resources and biodiversity conservation and management in each of the three countries. This can lead to operational difficulties for reasons listed below :

Lack of effective co-ordination: The problem of having a multiplicity of agencies is aggravated by not having an effective co-ordination or even networking mechanism.

Overlaps: The multiplicity of agencies and the lack of effective co-ordination and networking, among other reasons, has led to an overlap in the mandate and functioning of various agencies, resulting in some wastage of resources.

Gaps: Despite this multiplicity, there are issues not adequately covered by any agency. For example, bio-technology, field conservation of lower animals, and *ex-situ* conservation in general.

Inter-agency conflicts: The multiplicity of agencies and the overlaps and uncertainties in their mandates and functioning often leads to friction and conflict between these agencies.

Lack of legal authority: In all three countries no agency has been vested with legal authority to regulate all aspects of biodiversity conservation and management.

Uncertainty over their role: Many of these agencies are not yet clear as to what their own or other agencies roles are, thus inhibiting effective networking.

Inexperience: There is limited experience in formally managing and conserving biodiversity (as compared to standard conservation of sectoral natural resources) through governmental mechanisms. As such, anticipation of problems and capabilities for pre-emptive planning against environment hazards is poor.

(b) Weaknesses relating to policies, including:

Poor integration of policies: Though the government has policy statements regarding various sectors, these policy statements are not integrated.

Poor integration of biodiversity concerns: The policies of different sector do not integrate concerns on biodiversity conservation.

Inadequate policy coverage: Many critical areas relating to biodiversity conservation are not covered by adequate policy statements (eg. *ex-situ* conservation).

Unfavourable policies: Certain policies, or practices in absence of policies, especially economic and fiscal policies, inhibit the conservation and management of biodiversity by supporting wasteful and destructive lifestyles and practices, and by making the destruction of biodiversity resources economically attractive.

(c) Weaknesses relating to laws, including:

Multiplicity of laws: There appear to be many laws dealing directly, or indirectly, with various aspects of the conservation and management of biodiversity. Consequently, there are a multiplicity of agencies enforcing these laws. This makes it difficult, especially because of a lack of adequate co-ordination between these institutions, to enforce these laws effectively. It also makes it difficult for common people to understand the legal framework.

Gaps in laws: Despite there being a multiplicity of laws, many critical areas of biodiversity conservation and management do not have legal cover. For example, there are no laws insisting on an environmental impact assessment of programmes and activities, or laws relating to many of the issues raised in the Convention on Biological Diversity, e.g. the access to, and exchange of, genetic material.

Lack of an integrated law: There is a lack of an umbrella legislation dealing with biodiversity or even environmental issues in an integrated manner. This results in biodiversity issues being dealt with in a piecemeal manner.

Generality of the laws: Most of these laws are too general to be appropriately applied to specific situations concerning biodiversity conservation. For example, many laws, though listing prohibited activities, do not specify who will enforce the law, what would be the procedure for prosecution, and what would be the penalty.

Inability to enforce: There are problems in enforcing the laws, partly because of the multiplicity of laws, and partly because of inadequate enforcement capabilities.

Legal ambiguity: Many laws, especially those under which some of the environmental agencies have been created, are vague and ambiguous. They do not clearly demarcate responsibilities and functions. Nor do they specifically empower the agencies to do many of the things listed as their responsibilities.

(d) Weaknesses relating to financial resources, including:

Inadequate financial resources: There is inadequate commitment of financial resources for environment in general, including biodiversity.

Inability to attract or keep qualified personnel: One implication of the inadequacy of funds is the inability to pay the level of salaries (where adequate donor funding is not available) that would enable the government and other institutions to attract or keep many of the people qualified for conserving and managing biological diversity.

Primarily donor funding: A large proportion of the funds available for biodiversity conservation and management comes from international agencies.

Much comes in the form of short- or medium-term projects. It is, therefore, difficult to set up a sustainable system of conservation and management that is dependent on short-term funding mechanisms which are themselves essentially unsustainable. These issues are discussed further in **Chapter 5**.

(e) Weaknesses relating to acceptability of conservation and management imperatives, including:

Lack of acceptability within the government in general: The countries are confronted with many urgent economic and political problems and challenges. Therefore, the conservation of biodiversity, especially as this is understood by the 'North' and many international institutions, is not a very high priority for the governments.

Lack of acceptability within different sectors: Governments in the three countries function sectorally and it is difficult for any one sector to network with or co-ordinate another. Controls related to environmental and biodiversity conservation are seen as sectoral concerns. Therefore, there is a reluctance in accepting such controls. Besides, such controls are often seen as inhibiting the achievement of sectoral targets.

(f) Weaknesses relating to people's participation, as discussed in **Chapter 3** and including:

Lack of local community support: There is inadequate support for biodiversity conservation and management among local communities. First, this is due to the economic predicament communities find themselves in. This predicament often forces them to compromise medium- and long-term interests in order to meet their survival needs. Second, the lack of assured access (due to insecure tenure rights) to these biodiversity resources removes the stake that local communities have in their sustainability. This leads to over-utilization and destruction of these resources. Third, local communities do not always see the implications of biodiversity loss on poverty, hunger, disease and social and economic security; these being the issues that most immediately concern them.

Insufficient public participation: There is insufficient public participation in the planning for, and management of, biodiversity. This might be due to the inability of the system to invoke and accommodate such public participation.

(g) Other socio-political weaknesses discussed in **Chapter 3**, include:

- the lack of environmental leadership.
- the lack of transparency.
- political interference.
- the lack of political support
- the lack of independent decision-making capabilities
- donor driven confusions, and
- inappropriate donor support.

4.3 DISCUSSION AND RECOMMENDATIONS

Based on the foregoing analysis the final discussion and recommendations follow. The specific recommendations that follow are numbered in square brackets for ease of cross referencing.

4.3.1 Co-ordination

Co-ordination is a key concept in any institutional structure, and especially so when dealing with environmental issues. Unfortunately, in all the three countries of the region coordinating structures and processes for environmental and biodiversity conservation are still weak. In each country, there is confusion about the role of co-ordination and which agency will co-ordinate whom, how and why. Perhaps Uganda is the furthest along in settling this ambiguity. Though the issue of co-ordination has been extensively debated in Uganda, there still are issues to be solved between NEMA and DEP. Other countries have not given this subject equal importance. The most recent situation at the completion of the consultancy in each country was as follows:

Uganda: The GOU has taken a decision to form the NEMA, which will have co-ordinating functions. The current environmental lead agency (DEP) reportedly would assist the Ministry of Natural Resources in policy formulation and other governmental functions, including liaison to District Environmental Officers. The relevant government orders setting up NEMA have still to be passed.

Tanzania: In Tanzania, there is some confusion between the functioning of NEMC and the Division of Environment. This can be resolved once the powers and functions of NEMC are redefined through a new law. However, as the proposed amendment act giving greater powers to NEMC has not yet been passed, nor any clear demarcation of responsibilities announced, the confusion persists. This is accentuated by the anticipation of probable major changes in the number and structure of government Ministries. These are expected in late 1994.

Kenya: In Kenya an initial NEAP process and document has been finalised. This recommends the creation of a new authoritative environmental authority provisionally called the KEMA. However, the status of NES, in forming such a new authority, is still unclear.

Regarding the co-ordination of biodiversity conservation related activities, there has been some measure of conflict between the National Museums of Kenya (NMK) and the NES about the respective roles of each organisation. NES has a broad historical mandate for co-ordination in the field of environment, and so, by implication, in biodiversity issues. (Details are given in Annexure 6). Little effective coordination has been achieved todate. The Director of NES is the Chairman of the Inter-Ministerial Committee on the Environment. However these roles are neither backed up with legal or administrative authority. Nor are these roles recognized and accepted by other organizations, which perhaps should be co-ordinated and facilitated.

The NMK, on the other hand, has a long history as a technical centre of excellence in the biological aspects of biodiversity. The NMK played a major role in the preparation of the Country Study on Biodiversity in the preparations for UNCED.

This confusion between respective Agency roles in the specific activities connected to biodiversity, has caused considerable institutional friction. There has been some effort towards solving this friction through a greater understanding of the various roles needed for effective biodiversity management.

In summary there are three main circles of activity. These are :

The Resource Management and Conservation Agencies
(Wildlife, Forests, Fisheries, Plant Genetic Resources)

The Research Networks
(Universities, Museums, Sectoral Institutes Science Commissions)

The Government Functions
(Environmental Agencies to Treasury and Planning, Impacting Agencies linked through awareness, EIA and economic appraisal)

These separate circles of influence are shown diagrammatically in Figure 1.

It would seem all agencies have an equal sectoral role in Circle 1.
The NMK has a central role for biodiversity issues in Circle 2.
NES has a central role for biodiversity issues in Circle 3.

The circles should come together perhaps through the auspices of the Inter-Ministerial Committee for Environment, or the Planning Commission etc.

The Uganda coordination case seems to be decided already and the newly created NEMA will be the co-ordinating agency. Consequently the team concludes that:

[1]. *In Tanzania, NEMC should be helped to undertake the overall co-ordinating role, and the Division on Environment, in the Ministry of Natural Resources should assist that Ministry in its governmental functions of policy formulation, supervision and servicing the cabinet and the parliament. This seems in keeping with both the existing NEMC mandate, as per their Act (see Appendix 6), and also with the proposed amendment. Besides, it is desirable that a co-ordinating agency is not itself an implementing agency.*

[2]. *In Kenya the role of co-ordinating activity aimed at the circle 3 activities for biodiversity seems rightly to be that of the NES (or its successor the KEMA), which needs to be given the relevant authority and mandate. In fact, the Director of NES, as the Chairman of the Inter-Ministerial Committee in the Environment, is already performing some of these tasks of co-ordination.*

However, the role of co-ordinating research in the more biological aspects of biodiversity, seems rightly to be that of NMK. NMK should also be supported in its growth as a centre of excellence in biological sciences, and in the practical implementation of those strengths in information delivery, specialist EIA etc..

[3]. *However, for each of the environmental agencies (NEMA, NEMC and NES), it is recommended that they perform primarily the first two types of facilitation or co-ordination (namely the mutually- and collectively-beneficial types - see section 4.1.3 for details). The agency that should co-ordinate in situations of selective beneficiality should have much greater acceptability and authority than would be possible to give to the identified lead agencies. For Uganda, care has to be taken to ensure that NEMA is given the requisite characteristics that would allow it to co-ordinate effectively.*

Essentially, any agency which is to regulate the work of another agency must have, and be seen to have:

- Objectivity, in terms of independence from any sectoral interests.
- An overview of the whole gamut of economic and social issues and priorities.
- The moral authority to regulate others.

[4]. *Consequently, the third type of co-ordination (namely selectively beneficial), and regulation, should be done through something like the proposed NEMA committee in Uganda, but comprising of Permanent/Principal Secretaries (PSs) from the Ministries of Natural Resources, Finance, Planning, Science, and other concerned ministries. The committee should be chaired by the Secretary to the Cabinet or, in his absence, the Secretary, Natural Resources.*

All three countries have mechanisms by which governmental co-ordination at the Permanent/Principal Secretary's level takes place. However it is thought that these mechanisms, as they deal with all the various issues in government, could not make available the attention and time required to deal with contentious environmental issues. Also, in the past, this mechanism has not been very successful in resolving environment-related disputes. Therefore we propose this sub-grouping of PSs specifically for environmental issues.

There is also the need to develop a process for bringing matters up to this level, and to make available to the concerned PSs the information and advice they require for coming to a decision. The environment agency of government would have the responsibility of providing the secretariat.

[5]. This committee should be serviced by the designated lead agencies, whose responsibility and right it would be to put up to this committee all matters that cannot be mutually settled at their level. This committee would meet at least once every three months. Procedurally, once a matter has been referred by the lead agency to this committee, it would be considered on hold and no action could be taken on it until the committee had given its decision. This proposed committee could be known as the Special Standing Committee on the Environment.

[6]. The lead agency should not only be involved in co-ordinating specific activities, but also in ensuring that policies, laws, plans and programmes, across sectors, are environmentally acceptable. For these also, where issues cannot be mutually resolved, the lead agency would have the right to put up the matter to the Standing Committee on the Environment. (see [Recomm. 13] below for possible mechanism).

4.3.2 Linkages

Apart from co-ordination, various other types of linkages have been described involving exchange of information and expertise between institutions. In order to be sustainable, such linkages should become internalized within each institution but, initially, there might be a need for a catalytic agent. Accordingly:

[7]. Lead agencies within each circle of responsibility should function as catalytic agents to form the types of linkages described above.

[8]. Inter-actional, conflict resolution, information collection and dissemination skills, among others, are required to link and network institutions and organizations. Training programmes should be organized to develop these skills amongst individuals and organisations.

4.3.3 Integration

Another important concept in institutional dynamics is the concept of integration. Integration is desirable across sectors (horizontally) and between levels (vertically - centre to district to village) through the government. Integration, in this context, means the introduction and location of environment and biodiversity concerns and capabilities within various sectors and levels of the government. Though some effort has been made to integrate district administration into environmental management activities, very little seems to have been done to integrate environmental concerns in various sectoral plans and activities.

4.3.3.1 Sectoral (horizontal) integration at national level

Sectoral integration cannot be easily achieved at district and sub-district levels unless some amount of integration has taken place at the national level, and until the plans and programmes emanating from different line departments reflect a consideration for the environment. Consequently, there

has to be a national level institutional capability to integrate and internalize environmental concerns into all sectoral plans. This task is best done by an institution which has the authority and the mandate to scrutinise all programmes and schemes.

In Tanzania, this is clearly the Planning Commission. In Kenya and Uganda, the best institution for this seems to be the Planning Ministry or Planning Sections of the Finance Ministry, in co-operation with environmental agencies.

[9]. An integration function for the Environment (a committee) needs to be set up in the respective Planning Commission/Ministries, supported by the lead environmental agency, to feed environmental and biodiversity concerns into the planning process. The sectoral ministries should be encouraged to get inputs on what sorts of considerations are relevant to their sectors. This Integration Committee on Environment should also be an advisory body to the proposed PS level Special Standing Committee on the Environment, described earlier.

[10]. This Integration Committee should also be involved in natural resource accounting and budgeting activities and in developing and implementing fiscal strategies for environmental conservation, these are described in section 4.3.5 below.

[11]. The lead agency should also develop, guidelines for all the concerned ministries, identifying environmental issues of relevance to each Ministry and suggesting some of the approaches that can be adopted for dealing with the issue.

[12]. For those sectors which manage and conserve various natural resources, integration of biodiversity concerns into their planning and implementation is critical. Some effort towards this has already started in Uganda, where the Forest Department has set up a section to integrate biodiversity concerns into forestry practices. Similar efforts need to be made in the Forest Departments of the other two countries, and in the Departments of Fisheries, Agriculture, Wildlife, National Parks, and those dealing with water and energy resources, in all the three countries.

[13]. Within each sectoral Ministry/Department there should be an "Integrated Environmental Section", with an Advisor and other support staff depending on the size and requirements of each Ministry/Department. The function of this section would be to:

(a) Scrutinise all proposed activities and projects of the concerned Ministry/Department for their environmental and biodiversity implications, and advise the Ministry/Department accordingly.

(b) Advise the Ministry/ Department on how to mitigate negative impacts on the environment and biodiversity deriving from any proposed activities and projects. This can be done with technical support from environmental agencies.

(c) Be responsible for giving initial internal environmental clearances to proposed activities and projects,

(d) Be involved in project, policy and plan formulation within the Ministry/ Department, thereby integrating environmental concerns into the initial stages of the Ministry/Department's work.

4.3.3.2 Vertical integration

Vertical integration, in this context, involves introducing and locating environment and biodiversity concerns and capabilities at the level of district administration, and even below. Such integration has various advantages. It can bring environmental capabilities closer to the implementation level. It can allow environmental planning to take place close

to where local level knowledge is available. It can also create the possibility of integrating environmental concerns into the activities of other sectors at the local level.

Uganda: The GOU is in the process of appointing 29 District Environment Officers (DEO). In Uganda, the linkages between the national level DEP and/or the NEMA, and the soon to be appointed DEOs have been laid out in detail, but are still to be tested.

Kenya: In Kenya, some districts already have a DEO and some districts a District Environment Protection Officer (DEPO). The DEOs, who are senior general administrators, are under the technical guidance of the Presidents Office. The DEPOs, who are relatively junior technical officers, are under NES. However, the relationship between the DEOs and the DEPOs, and between them and the other district level officers and authorities, varies from district to district.

Tanzania: In Tanzania, each district has a District Natural Resources Officer (DNRO), though he/she yet has no environmental function distinct from sectoral functions related to forestry, fisheries or wildlife. The most senior of the district officers for forest, or wildlife, or fisheries is usually designated the DNRO, though, at present, he/she is not performing any environmental functions. The DNRO and the other district officers are under the administrative control of the District Council. However, each receives technical support from their line departments. In addition, a recent Ministerial Seminar has directed that Regional Natural Resources Officers should act as focal points for environmental issues.

All three countries also have various other district officers managing natural resources like forests, water and fisheries. However, the lines of communication and control are very complicated. Only in Uganda have the functions of the district environment officers been specified in detail. Consequently, for Kenya and Tanzania:

[14]. The district level 'environment officer' should function both individually and within a district level environment committee. In Tanzania, the DNRO should be asked to function also as a DEO, until such time as the government decides to appoint or re-deploy another officer to perform that function.

[15]. Individually, the officer should:

(a) Prepare, through a participatory process, a district 'State of the Environment' report identifying critical areas and issues.

(b) Set up and operate an environmental monitoring system, with the involvement of the local people, for the identified critical areas and issues.

(c) Issue periodic (annual) updates on the state of the critical areas and issues.

(d) Be catalytic in linking the various district agencies in terms of information and expertise exchange.

(e) Be a clearing house for information and advice on environmental matters requested by other agencies and requiring access to institutions and expertise outside the district.

(f) Facilitate the preparation of environmental impact statements, prior to the initiation of projects and activities, and arrange expertise and inputs from outside the district, whenever required for the purpose.

(g) Process and forward, with recommendations, to the lead agency, requests for environmental clearances.

(h) Report (with a statutory obligation to do so) to the district and national government all major (to be defined) cases of violation of environmental laws, policies and guidelines.

(i) Organise environmental awareness and education programmes on a regular basis and maintain a district environment information centre with, perhaps, the capability for mobility within the district.

[16]. As member or convener of the District Environment Committee, and through it, the officer should:

(a) Prepare, through a participatory process, a district master plan for sustainable development, which is flexible and periodically reviewed, and has sections on specific resources like land, water, rangelands, and bio-mass, and contains clear links with district plans and strategies of other related sectors like agriculture, forestry, fisheries, etc. In the medium and long run, this planning process must transform itself into when where instead of there being separate plans and sectors, all sectors must get integrated and produce a single, integrated plan.

(b) Integrate environment concerns and considerations into the activities and plans of all sectors.

(c) Attempt mutually and collectively beneficial co-ordination, in environmental matters, of the various agencies, with the obligation of referring matters that could not be resolved at district level to the national lead agency.

[17]. Appropriate training programmes are needed to strengthen district level capacities, especially in environment and biodiversity conservation.

[18]. Once district level Master Plans and, later, Integrated Plans become available, they must become the basis of developing regional and national plans. Only then would the process of bottom-up planning be initiated, and the value of the decentralized planning processes be fully recognized.

[19]. The tasks of planning, monitoring and implementing programmes for the environment are more appropriate at the community level. These should be supervised by district level officials. However, the task of ensuring that environment standards are followed, and that activities damaging to the environment are regulated, needs a national perspective. Consequently, the national lead agencies must retain basic responsibility for assessing environmental impacts and granting environmental clearances.

4.3.4 Environmental impact assessments and environmental standards

Much of the destruction of biodiversity resources, and of the environment in general, takes place as a result of unplanned, or badly planned and executed, or poorly integrated, activities and projects. Inappropriate and non-integrated policies, laws and taxes, as well as social and cultural practices, can lead to unnecessary and preventable destruction of the environment. Over the years, and in many countries of both North and South, various strategies have been developed to minimize the impact of human activities on the environment.

These include:

- conducting various forms of impact assessments on proposed activities, projects, policies, laws and programmes in order to determine which of them, and in which form, are acceptable from the environmental perspective. The most common term used to cover these assessments is environmental impact assessment (EIA). The term environment, in this context, is used in a sense that includes all

BIODIVERSITY ROLES AND FUNCTIONS IN EAST AFRICAN GOVERNMENTS

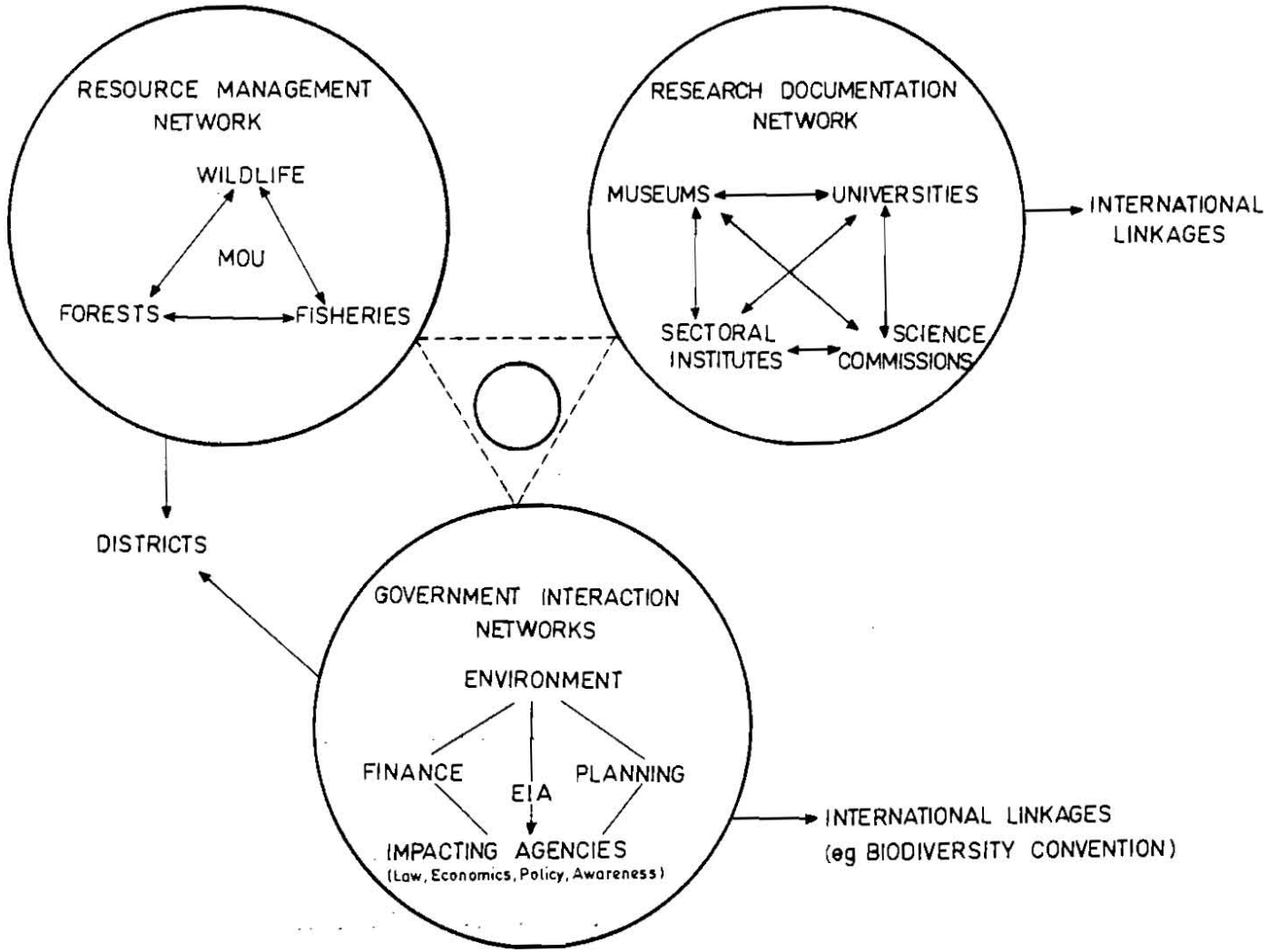


Figure 1. Circles of Responsibility for Biodiversity Activity

ecological, socio-economic and political processes, and the relationships between them.

- developing environmental standards representing the carrying capacity limits of the ecosystem in relation to various inputs (eg toxic chemicals) and disturbances.

4.3.4.1 Environmental impact assessment

In many countries, EIA is already a major strategy for preventing waste and unacceptable levels of destruction of natural resources and ecosystems. In none of the three countries of East Africa has EIA been made legally mandatory. Nor have institutional capacities been developed for the purpose. Donor agencies are increasingly requiring EIAs before supporting a project. However, much of this continues to be ad hoc and implemented through foreign consulting agencies. Initiatives are now beginning to develop.

An EIA can only highlight the impacts the proposed activity, project, policy or programme, among others, would have on the environment, on peoples lives and on the resultant socio-economic and political processes. The final decision on whether these impacts are acceptable has to be taken by the government. Unfortunately, it is not always easy to decide on what types, and how much, of environmental costs are acceptable, and under what conditions.

The process of decision-making is made all the more difficult by the fact that invariably, there is great political and social pressure on the decision-making authority, both supporting and opposing the project or policy. Consequently, whatever the decision, there usually are some who do not agree with it. When projects or activities of other government departments, or of powerful corporate groups, are at stake, there is also a tendency to not accept the decision based on environmental considerations without putting up a fight.

Consequently, experiences in other countries suggest that the process of making-decisions on the environmental viability of projects and policies must be such that it is, and is seen to be:

(a) Independent of sectoral interests.

(b) Capable of having an overview of the society and economy.

(c) Having access to the required expertise.

(d) Transparent and open.

(e) Having the moral, legal and administrative authority to ensure that its decision is adhered to.

An institutional structure independent of the government, with respected independent experts, and working in an open manner with the authority of the government, would fit the requirement most closely. However, considering the importance of the decisions to be made, which involve not only large amounts of money, but also involving decisions on the development strategies and options of the nation, governments across the world have been unwilling to give such a function to a body outside the control of the government. On the other hand, a process which is totally within the government might not be seen to be open, objective or independent of sectoral interests.

As a compromise, certain countries (notably India) have adopted a method which involves the final decision being taken by the Government lead environmental agency, based on the recommendations of a mandatory advisory committee of independent experts. The government is, in every case, bound to seek and consider the committee advice. This committee contains experts, independent of the sectors involved, in the relevant disciplines and areas. They are provided with the environmental impact statements (EIS) and other relevant information on the project, activity, policy etc. to be assessed. They are also provided with the opportunity and resources to discuss the issue

with the proponents, with the people likely to be affected by the proposed project or activity, with other experts and with whomever else they consider to be important. They can also visit the proposed sites of projects and activities. They must advise the lead agency on whether the project is to be rejected, accepted with modifications, or accepted as it is. The lead agency is free to reject the advice of this committee, but must record its detailed reasons for doing this.

Once the lead agencies have made a decision, they then communicate it to the proposer of the project, policy or activity. If there is disagreement between the lead agency and the proposing institution, this can be referred to the Special Standing Committee on the Environment, described earlier. In order to operationalise this system:

[20]. There should be an urgent assessment of the nature and quantum of EIAs required in the next three to five years. Accordingly, specialized teams of natural, physical and social scientists, from Universities and Institutions in the region, should be trained in the general and the specialized EIA techniques. These teams should be supported in ongoing, EIA related, research and monitoring, within their parent institution, and should be contractually available to develop EISs, as and when required.

[21]. Separate institutions, independent of potential or actual project proponents, should be strengthened to collect and collate base data on parameters relevant for EIA. This should be an ongoing exercise, independent of the assessment of any particular project or activity, so that time scale data from a disinterested source can be used for the assessments.

[22]. Appropriate institutional structures need to be built up within the lead environmental institutions in each of the national governments, supported by mandatory advisory committees, to receive these EISs and to decide on what basis which projects and activities are going to be permitted, where, and how. The process must be linked up to an institutional capacity to advise project proponents on how to design projects which are the least destructive and which can also mitigate any adverse residual impacts. The lead agency must prepare guidelines for EIA and, based on these guidelines, project proponents should prepare EISs and submit them to the lead agency.

4.3.4.2 Standards

The setting up of environmental standards is critical to the protection of the environment in general, and biodiversity in particular. Unfortunately, in none of the three countries is there a comprehensive set of environment standards. Even those that are there, tend to be uniform for all parts of the country without taking into consideration the requirements of fragile ecosystems. EIA processes become largely irrelevant if comprehensive and locally appropriate standards are not prescribed. Though each country has an institutional structure charged with the prescribing of standards, these institutions have paid little attention to developing appropriate systems. Consequently:

[23]. The existing Standards bureaus/organizations should be strengthened and, perhaps through a short-term project, be encouraged to develop appropriate national standards which are sensitive to the requirements of biodiversity conservation. Once the standards have been developed, their specially trained staff can continue to update and refine these standards as a part of their normal work.

4.3.5 Fiscal measures

It is well-recognized that in a market economy especially, fiscal incentives and disincentives are very important methods of conserving the environment. This is especially true in a situation where the regulatory

mechanisms of the government, or of the citizens, are not strong or adequate. Unfortunately, despite the countries in the region being prime candidates for adopting fiscal measures for environmental conservation, nothing seems to have been done in this direction.

It is, therefore, proposed that:

[24]. A unit be established in the Finance and Planning Secretariats of Kenya, Uganda, and Tanzania, to develop and implement fiscal measures for biodiversity conservation. These could involve tax rebates for green industries and processes, eco-friendly labelling, environmental audits and special environmental taxes. This unit could be advised by the existing lead agencies in each country, in technical matters.

[25]. The success of these measures will depend, at least partly, on their acceptability among the people, and among the traders, industrialists and other business men and women. For this purpose, there should be an institutional structure, perhaps a council, which involves the business community, the media, and citizens and consumer groups, and attempts to get their cooperation in these efforts. Such a council should be serviced by the lead agency.

4.3.6 People's participation in biodiversity conservation

The involvement of the people, in the conservation and management of the environment and of biodiversity resources, is critical. Detailed recommendations regarding people's participation have been developed in **Chapter 4**. Here the involvement of people in the management of protected areas (PA) is discussed.

Though PAs contribute significantly to the conservation of biodiversity, there remain some certain unresolved aspects in their management. One such aspect is the participation of the local people in the management of them. Another is their involvement in the development of alternative, sustainable, sources to provide local people with those basic necessities that were earlier being satisfied from within the PAs. Unless local communities are involved in the management of the PAs, and thereby feel a sense of collective ownership towards them and, unless they are provided alternatives to their basic needs, the protection of PAs will become increasingly difficult and with little social justification. There are various donor-supported initiatives around forests and wildlife PAs which are attempting to promote such an approach. However, the importance of such strategies is not adequately reflected in the functioning of national level institutions, especially the designated lead agencies for biodiversity conservation. For this purpose it is important to:

[26]. Sensitize lead agency personnel and other national experts to the viability, desirability and, often, the critical necessity of a participatory approach for biodiversity conservation and management.

[27]. Set up an Integrated Community Development Programme (ICDP) or ecodevelopment cell in the national agencies which could energize, and give a momentum to, such an approach, especially ensuring that national level policies, laws and plans are supportive. These cells could be involved in developing project proposals to attract funds for ICDP/ecodevelopment projects from various donor agencies.

4.3.7 Other institutional gaps

4.3.7.1 Conservation of wetlands, rangelands and coastal ecosystems

There are almost no institutional structures within the governments of the three countries for the conservation of wetlands (except Uganda) and rangelands, if these fall outside the network of gazetted forest or wildlife

PAs. Similarly, in Kenya and Tanzania, there are no institutional structures to protect coastal ecosystems that are not within the protected area network.

As such:

[28]. An assessment needs to be done of those wetlands, rangelands and coastal ecosystems that are outside the protected area or gazetted forest network. Those of them that by virtue of their ecological value, are judged to be warranting special protection should be included within the forest or wildlife protected area network, as appropriate.

4.3.7.2 Captive breeding

There is no capacity in the three countries for captive breeding of animals, and little for plants. Though this might, at present, not be seen as a high priority in the region, as it takes time to develop facilities and expertise:

[29]. Some captive breeding facilities need to be set up, with a co-ordinating mechanism. Such a network can involve existing institutions (universities, research institutions, NGOs, departments, etc.) and strengthen them appropriately.

4.3.7.3 Research

Though various institutions are involved in research activities relating to biodiversity and its conservation, there is little coordinated and integrated biodiversity research planning in the region. As a result, research areas and topics are chosen in an arbitrary manner and do not necessarily reflect the national and regional priorities. Of especial concern is the almost total absence of social science research in biodiversity use and conservation. The fact that countries of the region boast of among the highest concentrations of endemic species in the world is not reflected in the type or quantum of research currently underway. As such:

[30]. A detailed and systematic plan for scientific research in biodiversity conservation needs to be drawn up. Institutions like the National Museums of Kenya, along with comparable institutions in Uganda and Tanzania, can take a lead in developing the plan, in setting up appropriate institutional structures to co-ordinate research efforts and to raise support for them.

[31]. Similarly, appropriate Social Science Departments in universities and elsewhere in the three countries should be involved in building up research interest in the various social science aspects of biodiversity use and conservation, including the study of traditional and contemporary methods of use and conservation.

[32]. There needs to be a greater stress given to assessing the institutional and political mechanisms involved in biodiversity conservation and management. This issue is either missing, or very sketchily dealt with, in the various reports discussing environmental issues in the region. Even where it finds mention, it has not been looked at professionally by political scientists and public administration specialists, but mentioned in passing by natural scientists. The various national institutions charged with training and research in public administration should be strengthened to handle these aspects.

4.3.8 Acceptability of environmental considerations in the government

It seems unlikely that any of the measures outlined above will actually be achieved, or lead to better conservation and management of biodiversity, unless, as a first precondition, such conservation and management is seen as desirable by the people and the government. As long as ministries and

departments within the government see conservation imperatives as one more imposition from the donors and to be paid lip service to, biodiversity is unlikely to be conserved. Similarly, as long as the common man and woman, especially the rural communities, see conservation as one more legal or administrative imposition from an uncaring bureaucracy, they will not only be un-cooperative, but they will also devise ways and means to frustrate all governmental efforts.

Therefore, perhaps the first task before each nation is to ensure the acceptability of biodiversity conservation is seen as an imperative by all levels of the society. But how is this to be achieved? Is it enough to just "raise public awareness"? Summarized below are some of the critical elements of a strategy for developing public acceptance and support for conservation. Public support for conservation can be raised by:

(a) Demonstrating the link between conservation and alleviation of fundamental problems like hunger, poverty, disease, and social and economic insecurity.

(b) Ensuring increasing public control over biodiversity resources.

(c) Assuring that the public (through mechanisms such as tenure or memoranda of understanding) have sustained access to the direct material and economic benefits of conservation.

(d) Establishing the link between conservation and the sustainability of the flow of material and economic benefits.

(e) Ensuring that the costs of conservation are not wholly or primarily on the heads of the poor.

Acceptance, within the government, of the desirability of conservation can be developed by:

(a) Increasing the political support for conservation by raising its acceptability among the people.

(b) Increasing the levels of awareness within the government by persistent education, awareness and training efforts.

(c) Ensuring regulatory institutions have <u>not only</u> legal authority, but are seen within the government to have moral authority to regulate.

(d) Establishing a mechanism by which sectoral departments and ministries are helped to develop environmentally friendly strategies and projects to achieve their sectoral objectives, rather than being allowed to feel that environmental concerns are impediments to development.

(e) Demonstrating the medium- and long-term (and often even short-term) economic advantages of strategies and projects which are environmentally friendly.

(f) Helping access mechanisms and facilities (like GEF) designed to subsidize the short-term (transitional) costs of adopting environmentally friendly strategies, processes and technologies.

To further these ideals, various recommendations have been listed in **Chapter 3**. In addition, it is also necessary to:

[33]. Organize regular training and orientation programmes for government officials, at all levels, and perhaps for Ministers and Members of Parliament, in environmental issues and concerns. Experiences from other countries have shown that, as the bureaucracy becomes more exposed to environmental concern and thinking, their willingness to support environmental planning and regulation also increases. Perhaps one of the Institutes of Public Administration in the region could

be developed as a centre of excellence for this, based on some "training of trainer" exercises in advance.

[34]. Such training should be followed up by preparing and distributing information packs and other reference material, printed and on computer discs, to all levels of officers and policy makers.

4.3.9 Institutional instruments

Each country is variously developing and finalising their National Environmental Action Plans, their National Conservation Strategy for Sustainable Development, or their National Environment Policy (Tanzania). All three countries have a National Biodiversity Unit in position and biodiversity studies are being sponsored through project and donor funds. However, most of these policy documents contain inadequate, and sometimes inappropriate, focus on biodiversity issues. Also, most policy documents of sectors other than environment continue to ignore environmental and biodiversity issues.

Similarly, although there are some strong laws protecting forests and other protected areas, many of the ecologically valuable ecosystems (mangroves, wetlands, rangelands, coral reefs, coasts) have little or no legal protection. Most important, in none of the countries has EIA been made legally mandatory, or has locus standi been granted to individuals in environmental matters. All three countries are in the process of reviewing their environmental laws. The review of environmental legislation should involve, if it already does not:

[35]. A review of laws pertaining to other sectors which have an impact on the environment and on biodiversity. Also, there needs to be much more biodiversity inputs into the environment sector laws.

[36]. An appropriate legal framework for making EIAs mandatory.

[37]. Make provision for all laws pertaining to the environment to be amended to give locus standi to individual citizens and citizen groups, even if they are not directly affected parties.

4.3.10 Role of the lead agency for environment and the terms of reference of the biodiversity unit within it.

The terms of reference required this consultancy to develop the terms of reference for the lead agency and the biodiversity unit within it. Most of the tasks outlined above concern the lead agency in one way or another. The biodiversity unit within the lead agency is seen to be giving focused biodiversity inputs to the agency in all that it does.

[38] Essentially the lead agency needs to play the following types of roles:

(a) To act as a co-ordinating and facilitating agency, for other sectors and institutions managing or impacting on the environment. In this capacity the lead agency would co-ordinate in relation to mutually beneficial and collectively beneficial issues. [Recommendation No. 1 and 2.]

(b) To service the proposed Special Standing Committee on the Environment, of Principal/Permanent Secretaries, and to ensure that all matters that cannot be resolved at the lead agency level are referred to this proposed Standing Committee. [Recommendations No. 3, 4, 5 and 6.]

(c) To ensure that existing and new policies, laws, plans and programmes of all sectors are environment friendly. [Recommendation No. 6, 9, and 11.]

(d) To act as a catalytic agency for linking various institutions and sectors and to act as a technical support agency to other sectors and institutions. [Recommendations No. 7, 8, 9 and 11.]

(e) To have the basic responsibility of assisting district level environmental functionaries and to be responsible for environmental regulation. [Recommendations No. 11, 14, 15, 16 17, 19 and 22.]

(f) To support the proposed standing committees in the Finance and Planning secretariats in their task of integrating environmental concerns into various sectors. [Recommendations No. 9, 11 and 12.]

(g) To receive EIA reports, service the proposed Mandatory Advisory Committees, and grant environmental clearances. [Recommendation No. 22]

(h) To service the proposed unit and council on fiscal measures of environmental control. [Recommendations No. 24 and 25]

(i) To set up a unit on ICDP/Ecodevelopment and to further this approach in multi-sectoral government thinking and action. [Recommendation No. 27]

(j) To devise immediate mechanisms through which the recommendations of this consultancy assignment can be considered by government and be carried forward and implemented as appropriate.

The lead agencies can achieve much, even during the interim period, while laws and policies are being accepted and implemented to give them greater powers and wider functions. In the present circumstances, the lead agencies cannot depend only on legal authority for their functioning, but must acquire moral authority and acceptability. This could start most easily if they provided useful and relevant inputs and information to other departments for their work. In short, these agencies must reach out and gain acceptability by doing things on their own.

5. SUSTAINABILITY ANALYSIS

5.1 INTRODUCTION

Sustainability issues are described in the terms of reference as being of crucial importance. Sustainability issues also underpin the notions of sustainable development and biodiversity discussed in **Chapter 2.** Sustainability issues are further highlighted by the socio-political and institutional analysis of **Chapter 3** and **Chapter 4** respectively. This chapter considers these issues in more detail. The discussion addresses the spirit of the terms of reference which were not specific regarding the approach to the sustainability analysis.

5.2 THE GENERAL APPROACH TO SUSTAINABILITY ANALYSIS

Sustainability analysis is a young, but rapidly evolving field of study. Ultimately, it has the objective of assessing how effective a process is in reaching or progressing towards a state of sustainable development. There is, as yet, no commonly agreed form that it takes. Various studies and research are being carried out by organisations that are evolving ideas and methodologies. This includes the WRI, IIED and FAO (see **Appendix 8, section A8.2.6**). Recognising this status of the subject, the team have maintained a broad view of sustainability analysis. At the same time, the team focuses in this chapter on the immediate needs of practical management, evaluation and adaptation of the project. This project, like other GEF programmes and projects, has not yet developed a coherent framework of sustainability analysis.

The specific focus suggested by the terms of reference is on the sustainability of institutional strengthening inputs being provided by the project. However, sustainability analysis could be more widely applied within the project and by the institutions it is strengthening. At a global level (the level GEF as a whole is working at) and at the macro-level (i.e. the national and regional levels that the institutions are working at), it can be an analysis which is directly complementary to the sustainable development process which this project and its output ought to be contributing to. At a project level, it can be applied to specific situations, including institutional strengthening initiatives. It can even be applied at a micro-level, where it can be used for industries, farms, businesses, households and even individuals. At all these levels of analysis biodiversity linkages and issues are crucial.

However, in its wider context, a comprehensive and integrated sustainability analysis would need to address questions which go beyond what was believed to be immediately relevant to the institutional analysis focus of this study. Yet, even the indicators suggested in this chapter need a framework in which they can be developed, both theoretically and operationally. It makes little sense to develop indicators, unless they can be used practically, and in a framework that is appropriate to the GEF programmes and projects and appropriate to the national institutions involved. **Appendix 8** considers such a framework for sustainability analysis in more detail. This framework would be applicable not only to this project, but potentially to other GEF programmes and projects. Important points to be drawn from the appendix are noted briefly here.

The appendix should be of use to the lead agencies, since responsibilities for coordinating how sustainability analysis is to be developed in the three countries may fall eventually to them (amongst other institutions) in each of the three countries.

For this regional project, the funding agency will most likely call initially upon standard UNDP/FAO procedures when the next evaluation of the project takes place. These procedures have tended to concentrate on quantitative measurement of achievements, such as measuring the attainment of various project objectives, project targets, delivery of inputs and the

creation of outputs. The original Project Document for this regional GEF project calls for an early evaluation after two years. This evaluation study is being planned for October 1994. The appendix review should assist the agencies and institutions concerned with GEF projects and programmes to develop evaluation systems which include a framework of sustainability analysis.

The team recommends that:

[1] *The forthcoming evaluation study should help develop an improved framework of evaluation mechanisms that incorporate meaningful sustainability analysis for use on this, and potentially other GEF-financed programmes and projects.*

[2] *To develop a sustainability analysis perspective, more attention will need to be given to assessing the processes of project design, operations and management. This will create a better understanding of how things are done, as well as shedding more light on who is involved in the various activities and outputs. Both these issues are generally ignored in current evaluation exercises. This prevents them from embracing the full gamut of issues upon which the sustainability of a project or a programme depends.*

5.3 THE DERIVATION AND USE OF INDICATORS

The task of this consultancy mission is seen to be the development of parameters (or indicators) that can be used to determine the answers to certain key questions that are raised in **section 5.4** immediately below. An indicator is a issue, variable or factor which, when measured or assessed, would facilitate the verification of changes, or the occurrence of results, expected by a programme/project. Indicators should also provide a scale against which a change can be measured.

Indicators can be developed for any stage in the planning cycle from pre-design, though design, into operation and for after the project is completed. Indicators can be assessed at a variety of levels from the very general, higher levels, to the very specific and detailed measurement at lower levels.

Examples of higher level indicators would include the general status of processes and issues pertinent to project objectives, such as have been used by GEF already to select projects for funding (see **Appendix 8, section A8.2.6**). These are indicators relevant for the design phase. Lower level indicators need detailed measurement and monitoring. For example, the garage testing of the emission levels of the project vehicles would assess the progress of the project in contributing to improved environmental standards. This is an example of an internal project indicator in the operational phase. An example of a lower level, output indicator would be the monitoring of the examination results of students passing through the educational systems that now included biodiversity issues in the curriculum.

Only some of the more critical indicators are discussed in this chapter. These are generally high or medium-level indicators. Efforts have been made to make these levels of indicators as simple and easy to use as possible. **Appendix 9** provides a more comprehensive checklist of issues that have been noted from the various workshop papers and wider discussions of the consultancy.

The system of indicators developed by the team in this report should be possible to incorporate into the next evaluation mission. For this to become a practical operational reality, the methods necessary to develop the next lower level of more detailed indicators have to be outlined. Simple examples and methods are discussed in **Appendix 8**. However, it must be recognised that, most often, the easier the indicator is to use, the less accurately it describes what it is supposed to indicate. For example, perhaps the simplest indicator to evaluate levels of project inputs is the money spent on the project but, for all its simplicity, it is also a very poor indicator of the

impact on the real world.

5.4 THE ANALYSIS

The terms of reference noted the importance to the project of the sustainability of institutional development. They asked for parameters (indicators) by which donors could evaluate the institutional strengthening inputs being provided by the GEF programme. They also asked whether institutional strengths and weaknesses could be monitored.

The following questions on sustainability have been asked:

1. In what ways, if any, does the project and the institutional development it is encouraging, contribute to the process of sustainable development in the region.

2. Should the project, and the institutional development it is encouraging, contribute to the process of sustainable development?

3. Are the critical project inputs sustainable after the project is over?

4. Are the project outputs (achievements) sustainable (likely to endure) after the project is over?

5.4.1 Contribution to Sustainable Development

At least one set of the critical indicators for assessing the contribution of the project to sustainable development can be developed. This can only be done once national objectives and strategies to be adopted to work towards sustainable development have been clarified and understood. For example, the countries might identify enhancement of land productivity, including the putting of a larger area under agriculture and production forestry, as a major priority in the process of sustainable development. The project, then, must be evaluated in terms of its contribution to the conservation and management of biodiversity in a manner that contributes to the furtherance of this objective. Does the project develop abilities to plan and manage protected areas, for example, in a way in which they are increasingly representative of the biodiversity of the country? Is this biodiversity better protected, even though the area available is less than before?

In other words, the indicator required is basically to measure the contribution of the project to developing those specific institutional capacities that are relevant to the identified national sustainable development strategies and tasks. However, there are certain elements of the process of sustainable development which are currently considered essential. Some of these are:

* Economic, socio-cultural, political and technological self-reliance.

* Democratic decentralisation.

* Sectoral integration.

* Regional and global co-operation.

* Cultural and institutional diversity.

* Social and economic equity.

* Promotion of sustainable lifestyles at all levels.

The contribution of the project to sustainable development can, therefore, at least partly be judged by how much, and in what way, has it contributed to

the achievement of any of the pre-requisites of sustainable development. There are many other basic pre-requisites listed throughout the report which are distilled in **Appendix 9**.

5.4.2 Sustainability of critical project inputs

A critical project input is one which is necessary, but not necessarily sufficient, for the achievement of the project outputs. To judge which project inputs were critical, the team asked many experts what factors inhibit the strengthening of institutions for biodiversity conservation on their own (without intervention from the project).

The consensus on the critical issues was:

* Lack of financial resources.
* Lack of trained personnel.
* Lack of access to relevant data and understanding.
* Lack of acceptability of the imperatives of biodiversity conservation and management and, consequently, a lack of acceptability of the role of the institution involved.

As the project involves financial inputs, training, developing an access to data and developing clarity and acceptability within the government of the role of the selected lead agency (this consultancy assignment being one of the inputs in this regard), all these can be considered to be critical inputs.

The sustainability questions, then, are:

(a) Which of these would still remain (and to what extent) critical inputs, in the sense that they are necessary for the desired types and level of outputs, even at the end of the project?

(b) Of these, which of them would continue to be available after the project closes?

For the wider questions as to how the project design process identified these factors and used them as a basis to select and design the project see **Appendix A8.4.3.**

5.4.2.1 Financial resources

It could be argued that the financial resources required after the finish of the project would be less than what the project is already providing. The initial capital investment would be over and only the incremental capital expenditure would be required along with the requirement of incremental recurring expenditure generated by the project activities. These expenditures would be at national (rather than international and donor) levels and could be expected to be less than that required during the project. The critical question is, what is the ability of the system to provide even this reduced level of financial support?

Some of the pertinent indicators for this are:

1. *Is there greater acceptability of the need for biodiversity conservation among the administrators and political leadership, making greater commitment to national (internal) financial support a possibility?*

This can be judged through a number of ways: by discussions; by gauging the understanding by officials of biodiversity issues; assessing the integration of biodiversity concerns into plans and policies of different sectors; gauging the support among the citizens (and voters) for biodiversity issues and;

assessing the institutional importance that the administration is willing to accord to the agency co-ordinating biodiversity issues. Another important indicator is the whether the economic value of biodiversity conservation and management is being established in national planning mechanisms.

Factors external to the project, and beyond its control, can inhibit the growth of acceptability to a level where it is adequate for sustainability of the project inputs. Therefore, it is preferable to conduct baseline studies prior to a project starting such that assessment of changes in the level of acceptability, or for that matter any other indicator, begins as soon as a project starts and measurement can continue consistently through until the end of the project period and after. This would help assess whether the project was at least moving towards making its inputs sustainable, even if it did not succeed. Clearly, this indicator issue may need a longer time-scale to develop than the time scale of this particular GEF project.

2. *Have institutions that conserve and manage biodiversity developed the ability to raise their own funds, both by generating revenue, and by attracting donor and project funds, through developing abilities to write project proposals and to execute projects?*

The development of the lower levels of more detailed indicators to measure these changing abilities could be developed relatively easily. In the present context, donor funds might continue to be an important source of project funding for such institutions. However, in the medium- and long-term, it is impossible to build nationally sustainable institutions if they remain reliant on donor funding which, due to its fickleness, is arguably essentially non-sustainable.

3. *Have the institutions which conserve and manage biodiversity developed the ability to do so frugally and sustainably, in the only manner that is, in the ultimate analysis, sustainable in countries which have little money and many pressing issues of poverty and social justice?*

4. *Have national institutions developed the ability to secure transfer of funds and appropriate technology from countries of the North, in keeping with the principles laid down in the Convention on Biological Diversity, Agenda 21, the GEF mechanism and other relevant international instruments.*

Lower levels of indicators for these issues would need a whole range of more detailed indicators to assess how the project and institutions operate, and also how wider processes of sustainable development are developing in the three countries.

5.4.2.2 Trained personnel

The most critical element of any institution is human expertise. The project, recognising this, has a major focus on training. However, human expertise is not a static but a dynamic thing. It has to be constantly used, upgraded, refreshed and well-utilised. It also has to be located where it is required. The critical questions are: can this expertise be updated and refreshed, and can it be communicated to other people and kept where it is required after the project ends?

Some of the pertinent indicators are:

1. *Has the project managed to train a sufficient number of trainers, in a sufficient number of areas, to keep the training activities going within the region, even after the project and, consequently, reduced or stopped the need for scarce resources to send people out of the region for training?*

2. *Has the project managed to develop appropriate and adequate*

institutions within the region that can host the training of new people and periodic refresher courses?

3. *Are there enough resources in the system (see section 5.4.2.1 above) after the end of the project to ensure that the expertise developed can be appropriately used (access to equipment and operational funds) and kept within the national and regional institutions, and are not lost from the region?*

Lower level indicators would be easy to develop for these issues. However, they would be less pragmatic or cost-effective to collect and monitor since for longer-term assessment every single person trained would have to be tracked through their future careers.

5.4.2.3 Access to data

For effective biodiversity conservation and management, access to accurate and recent data is critical. The project recognises this and is assisting in developing information centres and in strengthening GIS capabilities, among others. The question is, would these survive the withdrawal of project assistance?

Some of the pertinent indicators are:

1. *Has the value of, and need for, biodiversity data and information been internalised among the biodiversity managing and conserving institutions. Is this such that they would be willing to make the effort required to continue maintaining the information system and a data base, and allocating resources for it?*

This can be judged by assessing the pattern and quantum of use of the existing data bases and information systems, by assessing the nature and extent of requests for data and information, and by assessing the development of interest and effort within the various agencies dealing with (or impacting on) biodiversity to start developing their own data bases and start exchanging information.

5.4.2.4 Acceptability within the system

For institutions dealing with biodiversity conservation and management to function and grow, they need to be accepted within the governmental system. Their legitimacy, and the value of what they have been charged with, must be recognised, independent of the project and even after it. Indicators to establish whether this has happened have already been described in section 5.4.2.1 above. In addition indicators could be developed to assess:

1. *The growing awareness and concern among local people about their environment and biodiversity resources, as this change would itself force the system to give adequate importance to these issues.*

5.4.3 Sustainability of critical project outputs

The project task of strengthening institutional capabilities for biodiversity conservation and management has been analyzed into three inter-related tasks, and for each of which there is a set of sustainability questions:

(a) Strengthening and creating institutional structures and instruments.

(b) Strengthening and creating institutional linkages.

(c) Facilitating the creation of a socio-political environment supportive of biodiversity conservation and management.

5.4.3.1 Institutional structures and instruments

The critical sustainability questions are whether the institutional structures strengthened will remain strong after the completion of the project, and whether the new ones created will continue to function? The components of strengthened and created institutional structures are essentially: personnel, equipment, and processes involved in their delivery, management and utilisation.

Whether the strengthened (or newly created) institutions retain the personnel required for their effective functioning, or whether they can continue to have the necessary equipment and vehicles, depends on whether the necessary resources are available to support these personnel and inputs. Therefore, continued financial support after the completion of the project is a critical input to ensure that the project's benefits, in terms of strengthened institutional structures, can be sustained and endure. Indicators assessing sustainability of financial resources are described in **section 5.4.2.1** and are not repeated here.

The strengths of institutions also depend on the expertise of the personnel and on their ability to have access to data and information relevant to their work. As the development of expertise and of information systems and data-bases is also a proposed output of the project, their sustainability needs to be assessed. Indicators for this have been described already in **sections 5.4.2.2 and 5.4.2.3** and can be used here also.

Another important element of institutional strengthening is the appropriateness of the processes and systems followed within each institution. Some of the pertinent indicators for assessing these are:

1. *Whether the institutions and the project employ systems where there is internal democratic functioning.*

2. *Whether the institutions and the project employ systems which promote the free exchange of information.*

3. *Whether the institutions and the project employ systems that promote the just use of institutional resources.*

There are, however, other factors which would determine whether institutional structures remain strong and, more particularly, whether institutional instruments, like policies, laws, plans and programmes continue to be supportive and relevant. Some of these issues which can be used as additional indicators to measure the sustainability of institutional structures and instruments strengthened or created under the project and where more detailed indicators could be developed are the changes in:

4. *The participation of the people in the functioning of the structures and in the formulation and implementation of the instruments.*

5. *The integration of biodiversity concerns into all sectors of governance and social action, and at all levels of the government and society.*

6. *The linking of actions aimed at biodiversity conservation and management with fundamental national concerns like hunger, poverty, disease, and physical and social security.*

7. *The establishing of strong mechanisms by which the conservation and management of biodiversity promotes, rather than detracts from, social justice.*

8. *The establishing of a capacity to accommodate and promote socio-cultural and institutional diversity.*

9. *The ensuring of transparency in dealings and accountability to the people.*

10 *The ensuring that local learning occurs within any relevant institution or activity.*

5.4.3.2 Institutional linkages

The links strengthened or formed under the project could be of various types. Those links that are primarily for exchange of information and expertise will endure if:

1. *The ability to generate, exchange, receive and effectively utilise information and expertise has been internalised within each of the linked institutions.*

2. *The need and value of such a linkage, and of information and expertise exchange itself (see section 5.4.2.3 above), has also been recognised within each of the linked institutions.*

3. *If the resources required to continue the links can be found within the linking organisations.*

These, then, can be seen as one set of indicators for determining the sustainability of one type of linkages. Measuring these changes would require a relatively systematic form of participative survey repeated, say, every three years. The second type of linkage involves co-ordinating for mutually or collectively beneficial activities. This type of linkage would endure if:

1. *If the linked institutions are convinced about the mutual and collective benefits of the arrangement.*

2. *If they recognised that the co-ordinating agency is the one best suited for the purpose.*

These, then, are one set of indicators for determining the sustainability of the second type of linkages and would again require a participative forms of inter-active survey. The third type of linkage involves regulation in the form of co-ordinating selectively beneficial activities. This would be sustainable if the co-ordinating mechanism is seen, among the government and the people, to comply with various objectives that are themselves potential indicators. These are whether the co-ordinating mechanisms are seen to be:

1. *Fair and objective.*

2. *Efficient and competent.*

3. *Having the legal and political mandate to regulate.*

4. *Contributing to the overall national priorities.*

However, the final sustainability of institutional linkages is also dependent on the socio-political relevance of the linkages made and the institutions linked. This can be assessed by using indicators similar to those described at the end of section 5.4.2.1 and are:

1. *Participation of the people in the formulation and functioning of the linking processes.*

2. *Ensuring that these linkages accommodate and promote socio-cultural and institutional diversity, rather than a single point of view or a way of acting.*

3. *Using these linkages to promote, rather than detract from, social justice.*

4. *Using such links to integrate biodiversity concerns into all sectors of activities and thought.*

5. *Using linkages to address fundamental issues of relevance to the nation.*

6. *Ensuring that the linking systems work openly and transparently, with an accountability to the people.*

5.4.3.3 Socio-political environment

The sustainability of a socio-political environment conducive to biodiversity conservation and management is dependent on the political processes present in each of the countries and in the region. Some of the main indicators of its sustainability have been listed at the end of **section 5.4.2.1 and 5.4.2.2** and need not be repeated here. However, if a single indicator was to be sought after, perhaps the existence of political, cultural, social and institutional diversity would be it.

5.5 MONITORING STRENGTHS AND WEAKNESSES

The terms of reference also ask whether institutional strengths and weaknesses could be monitored. The answer to this is yes, but not without effort, not without adopting new approaches to evaluation, and not without a cost. The high to medium-level of indicator issues given above, plus those others included in **Appendix 9**, when measured over a relevant time period, would show a direction of change. This direction will indicate whether an particular issue area is becoming strengthened or weakened. Many issues (e.g. multiplicity of agencies) can from one perspective be seen as a strength, but can equally-well develop as an area of weakness.

6. REGIONAL COOPERATION

6.1 INTRODUCTION

One aspect of potential institutional strengthening which the team were asked to consider was that of institutional arrangements and capabilities for biodiversity conservation and management at a regional level. This might involve two or more of the three countries. These regional issues were discussed at the national and regional workshops held under the consultancy. This chapter discusses the various issues which relate to a regional focus for project support to institutional strengthening.

6.2 PROJECT DESIGN

This GEF project has a regional basis because of GEF rules developed during the initial pilot phase (1991-93). The situation within GEF allowed UNDP to initiate a regional project, but not national projects. This was because there were already World Bank projects operational both in Kenya and Uganda.

The initial project design suggested the present pattern of integrated activity across the region.

In mid-1992 the GEF "rules" were relaxed, and questions were asked in UNDP New York as to whether the design for a regional project should be changed to reduce to three national ones. At a stage then so close to the project becoming operational, it was not thought timely or advisable to start redesigning the project and rewriting the project documents.

Donor assessments of the project in its initial stages of design commented that the regional emphasis was relatively weak and needed strengthening. The later designs gave more focus to areas where regional cooperation could be followed. For example, mechanisms were included to foster technical linkages between sectors, develop regional databases and support wetland initiatives.

The fact does remain however, that all biodiversity activities at present are nationally based - national parks, national universities, national lead agencies.

6.3 BRIEF BACKGROUND TO REGIONAL COOPERATION

There are a series of historical ties which have formed the rationale for the East African grouping of Kenya, Tanzania and Uganda. The East African Community came into being in the mid-1960s from the prior East African Common Services Organization which built on common interests for the three countries from a legacy of anglophone colonial administration.

In 1977 the East African Community collapsed due to differences in political leadership. This led to the various shared resources and institutions being nationalised and split up. This reduced the level of regional cooperation in conservation, science and technology to informal networking levels. This activity has remained at a low ebb until recently.

In the last two years interest in regional cooperation has been re-established. At a political level the Presidents of three countries met formally in 1993. At a technical level meetings and joint activities have begun to re-emerge between various technical departments and within research and training activities. This GEF project has enhanced this approach.

In the meantime, there has also been the development of many other common interest groupings of countries around a variety of issues, e.g. the Southern African Development Coordination Conference (SADCC), Inter-governmental Authority on Drought and Desertification (IGADD), Preferential Trade Areas (PTA). Some East African ventures have been disappointing, such as attempts to have joint cooperation for the planning and development of the Kagera Basin

and Lake Victoria.

6.4 POTENTIAL ADVANTAGES OF REGIONAL COOPERATION

The potential merits of an East African regional approach derive from the joint and complementary use of resources. For example, there appear to be a number of areas where duplication of effort or overlap could arise and where regional coordination could rationalise finances and technology transfers. Other issues, which are already perceived benefits of the regional project approach include:

* Sharing of resources - e.g. this consultancy, training and databases.
* Sharing of experiences - many issues and problems are common, and learning with others, and about their innovations, can be synergistic.
* The ability to focus on and stimulate activity around several trans-boundary, regional and international issues of biodiversity.
* One regional CTA office, rather than three (cost reduction).

6.5 FUTURE REGIONAL APPROACHES

As East African initiative and protocols are starting to emerge, this makes it much easier to plan other more technical forms of regional cooperation than was the case in 1991/1992.

The regional fora of workshops, seminars, training courses, data and information exchange being developed by this project, provides a diversity of activities that furthers future contact and discussion. Growing familiarity and a solidarity around common issues of interest lay the foundation stones of future institution building. Good examples around which interaction is already formed include:

* East African database activities
* Regional wetlands interaction
* Regional forestry interaction

The workshops hosted in this consultancy identified a number of areas where project components could develop common ground in their approach. These include:

* Developing a combined position and political strengths with respect to presenting a regional block on the world scene in the era beyond the Earth Summit
* CITES - e.g. ivory, maintaining a common front.
* Implementation of the requirements of the Biodiversity Convention and addressing the issues raised by the Convention.
* Developing a cartel approach for biodiversity prospecting.
* Cataloguing, surveying and prioritising bilateral, and multilateral issues of biodiversity.

The potential institutional linkages and commitments to biodiversity which might be reviewed for the future include:

* The relevance and need for an East African biodiversity institutional mechanism?

* Should an East African Inter-Ministerial Committee for the Environment be a forum through which biodiversity issues could be addressed? If so, how and where will they get their advice and information from, and what mechanisms are there for collating and presenting this in a coherent and balanced form? How does such a Committee evolve?

* Taking the examples of the South East Asian States and their responses to common problems of environmental degradation, should protocols and commitments be designed and sealed at the level of Presidents and Prime Ministers, as part of the follow up to Rio and the UNEP, NEAP and GEF initiatives

The consultants see a need to focus immediately on the following:

* A continuation of existing efforts to bring technical people together; allowing people to see benefit in such participative networking;

* to evolve more permanent linkages from within these groupings. (There are major advantages of acceptability if this is not driven by the project directly).

It should be recognised that the GEF programme is not building any sustainable form of regional institution through its own institutional management system. Whether this is appropriate or not could be influenced by the extent to which regional priorities might develop in the future.

It is of note that there are no indigenous regional institutions at present which address issues of biodiversity. Is it necessary, and would it be advantageous to have one? Answers to these questions should evolve from within the region at both the level of technical rationality, collaborative interest and political will. The project is a potential vehicle for creating the fora in which this issue can be kept under review. The workshops held in each of three countries and the final regional workshop of this consultancy mission concluded that political leadership and commitment was a prerequisite, but that informal networking would greatly assist and benefit both this process and the preparations for more formal ties at any future stage. At the final Tripartite Review meeting of this project in December, opinions from the three countries concluded that development of stronger East African linkages should move slowly and in line with political developments.

As an immediate starting point for the elaboration of closer regional linkages, the final consultancy workshop recommended that :

Each country should commission a consultancy to consider the cross-cutting trans-boundary issues on biodiversity, which affect or could affect that country. These separate consultancies should then feed into a regional workshop on regional cooperation.

APPENDIX 1.

OVERVIEW OF PROJECT INSTITUTIONAL LINKAGES

A.1.1 INSTITUTIONS LINKAGES UNDER THE GEF PROGRAMME

INTERNATIONAL

- FAO as executing agency, implementation via cooperating institutions and national organisations including governments and via Contractual Services Agreements (CSAs).

Contractual Services Agreements - Regional

- UNEP GEMS PAC in Nairobi, for implementing Databases.
- IUCN Eastern Africa Office, for Wetlands Coordination.
- IUCN Eastern Africa Office, for Education/Awareness.
- African Wildlife Foundation, on 'Environmental Economics'.
- World Conservation Monitoring Centre, for collation of biodiversity information as a 'meta-database'.

Contractual Services Agreements - National

Kenya

- Royal Botanic Gardens Kew, for support to East African Herbarium.
- National Museums of Kenya.
- Kenya Wildlife / Forests Departments.

Tanzania

- University of Dar es Salaam, Depts of Botany, Zoology.
- University of Dar es Salaam, Institute of Resource Assessment.
- Pasiansi Wildlife School.

Uganda

- Wetlands Programme.
- Makerere University Institute Environment.
- Uganda Forest Department.

NATIONAL ACTIVITIES

Tanzania

Lead Counterpart Environmental Agency

- National Environment Management Council (NEMC) in Tanzania,
  * Biodiversity Unit
  * Database Unit
  * Wetlands Unit
  * Awareness Unit

Other Cooperating Organs of Government

- Department of Environment
- Government Forest Division
- Treasury
- Planning Commission
- Lindi Region
- Coast Region
- Commission for Lands and Environment, Zanzibar (COLE)
- Commission of Natural Resources (CNR) (promotion of Conservation Agency in Zanzibar)

Cooperating Academic Institutions

- University of Dar es Salaam (CSAs between FAO and three component Departments/Institutes)
  * Department of Zoology (CSA)
  * Department of Botany (CSA)
  * Institute of Resource Assessment (CSA)
  * University Library
- SUA Forestry Faculty
- Pasiansi Wildlife School (CSA) and links to College for African Wildlife Management (CAWM) at Mweka, Tanzania.

Cooperating NGOs
- Wildlife Conservation Society of Tanzania
- Malihai Clubs
- Zanzibar Conservation Trust (Being created in Zanzibar with support from the project)

National Integration Involving Conservation Activity
Coastal Forests Conservation: Cooperating Institutions:
- Coastal and Lindi Regional Governments
- NGOS (WCST/WWF/JET)
- Research and land use planning teams (IRA, Univ DSM, SUA)
- Awareness and education organisations (NEMC, WCST, JET)

(Funding support to the Wildlife Conservation Society of Tanzania, and the Coast Region Natural Resources Office, and Lindi Region Natural Resources Office)

Uganda
Lead Counterpart Environmental Agency
- Department of Environmental Protection (DEP)
  * Biodiversity Unit
  * Database - NEIC
  * Wetlands Programme
  * Awareness Programme

Other Cooperating Organs of Government
- Forest Department
- Entebbe Botanic Gardens
- Ministry of Finance and Planning
- Rakai District

Cooperating Academic Institutions
- Makerere University Institute for Environment & Natural Resources
- Uganda Institute of Ecology
- University Forestry Department

Cooperating NGOs
- Uganda Wildlife Clubs

National Integration Involving Conservation Activity

Southern Sango Bay wetlands/forests area: Cooperating Institutions:
- MUIENR (Coordinating)
- Forest Dept
- Wetlands Programme
- NEIC
- Rakai District.

Review of protected area network in Uganda:Cooperating Institutions:
- MUIENR (Coordinating)
- Wildlife Department
- Forest Department
- National Parks
- Fisheries Department.

Kenya
Lead Counterpart Environmental Agency
- National Environmental Secretariat (NES)
  * Biodiversity Unit
  * Database Unit
  * Wetlands Unit
  * Education Unit

Other Cooperating Organs of Government
- Kenya Forest Department
- Kenya Wildlife Services
- National Museums of Kenya

* Herbarium (links to Royal Botanic Gardens - Kew, publications, technician training and equipment)
* Database support including hardware, training and consultancy.
* Departments of Mammalogy/Herpetology (operational support with training, consultancy and equipment)
* Biodiversity Unit (broad training, research and consultancy inputs)

- Treasury
- Nakuru District

Cooperating Academic Institutions
- Forestry
- Moi University

Cooperating NGOs
- Wildlife Clubs of Kenya
- Kenya Wetlands Working Group

National Integration Involving Conservation Activity

Nakuru District - Lakes Naivasha and Nakuru, and their catchments. District Biodiversity Profile and Strategy: Cooperating Institutions:
- NES (Biodiversity, Wetlands, Database)
- National Museums
- Nakuru District
- KWS
- Wildlife Clubs.

Regional Integration Involving Conservation Activity

Uganda And Tanzania Wetlands: Sango Bay and Minziro swamp forests. Wetlands Programmes, Districts.

Kenya And Tanzania Wetlands: Lakes Jipe and Natron Wetlands Programmes, Districts, Development Authorities, Environmental Agencies.

Kenya And Tanzania : Joint flamingo survey in Rift Valley, monitoring.

KTU: Collaboration on Lake Victoria water hyacinth awareness.

A.1.2 PROJECT THEME AREAS

1. The Forest Training Sector.

University Forestry Department to improve biodiversity teaching and awareness through greater inputs to training the trainers, curriculum development and training course and study tours.

- SUA in Tanzania
- Moi University in Kenya
- Makerere in Uganda

2. Biodiversity Awareness

Support via capacity building in national awareness units to:

- decision makers in Government, business and local administration;
- secondary schools and teacher training colleges.

3. Schools Awareness - The Wildlife Clubs

- Programmes development and equipment

4. Database development

UNEP-GEMS

Uganda: Collaboration with three interacting organisations: National Environment Information Centre, Forestry Department and Makerere University.

Tanzania: Support to database facility in NEMC and links to the databases in IRA and the University technical departments.

Kenya: Creation of database activity in NES, and developing capacity to interact with other technical centres, i.e. via the National Museums and support to their biological databases.

There are also linkages to the awareness packages.

5. Wetlands programmes.

There are ongoing programmes where FAO assists biodiversity components.

- Creation of inter-sectoral wetland management capability. All three countries have Wetlands Steering Committees allied to the Inter-Ministerial Committees for the Environment which set policy. This project is represented on the committees.
- Seminars, developing awareness and the need to cooperate.
- Inventory and documentation of wetland values.

6 Biodiversity programmes

Uganda/Kenya: Infrastructure and training to support Biodiversity Units
* UNEP-led Country Biodiversity Profiles.
* Development of Biodiversity Strategies.

Tanzania : Support to create the coordination capacity in the lead agency for a Country Biodiversity Profile.

7 Integration

National

- Establishment of National Biodiversity Units in the designated Lead Agencies.
- Establishment of mechanisms for national integration i.e. - the National Steering Committees.

Regional

- Series of regional workshops/seminars
- Database activities - the East African Biodiversity Working Group.
- Wetlands technical training activity
- Conservation education workshops
- Forest training manual preparation workshops

APPENDIX 2.

TERMS OF REFERENCE

General Design

Three international consultants are proposed, to work concurrently as a team for some 7 weeks. They would be joined by a national consultant from each country, who would help bring local experience into the deliberations. The period would be broken into two components so as to allow an initial scoping mission and a later analysis period.

The consultant fields of expertise are as follows:

Environmental Development and Sustainability, and Team Leader.

Central Planning, and Administration of Conservation Activity.

Socio-political issues, and Biodiversity Institutions.

Their individual terms of reference are detailed below.

The consultants would spend time in each of the three countries, with a mandate to consult widely, both with available reports and literature, and with persons and institutions involved in conservation and development planning. The teams would spend most time in the capital cities, but would also visit district planning initiatives, universities and research organizations as appropriate.

Phasing

Each country would be visited twice, once in each phase :

- First for a short initial period to make contacts, outline ideas, and collect background information. This would end with the production of a brief working document outlining the scope of the problem and broad options for their solution. The document would be left with the CTA to disseminate in the region.

- Secondly a longer mission, to follow up these options in more detail with national institutions. The team would recommend the optimum solution and discuss this in national seminars to gain broad acceptance before finalizing reports.

Workshops

The project would arrange a series of workshops/seminars, nationally and regionally, to ensure adequate debate. Funds would be available to provide additional resource persons to these workshops. The CTA would be responsible for the planning of these workshops. Schedules would be :

Nationally: a brief seminar during the first mission.
a day seminar towards the end of the second mission

Regionally: a one day workshop at the end of the second mission.

Reporting

There would be a single final report, written jointly by all consultants. Each consultant would have responsibility for his individual chapter. The team leader would have responsibility for the overall report, and an extra two weeks consulting time is recommended (part in East Africa, part in Rome and part at home).

TERMS OF REFERENCE

Under the overall supervision of the Director, Forest Operations, FAO Rome, and with the guidance of the designated technical and operations officers at FAO HQS, and under the direct supervision of the Project CTA in Dar es Salaam; the consultancy team will undertake the following schedule of duties, in close collaboration with the lead agency for the environment in each country in the region:

Joint Terms of Reference:

a Assess the institutional strengths and weaknesses of the lead agencies for environment in each country, in regards to biodiversity in its broadest sense. Analyze the causes of these strengths and weaknesses, and identify where donor support can best address these weaknesses.

b Develop parameters by which donor support can evaluate institution strengthening inputs - can levels of strength/weakness be monitored?

c Examine the present institutional plans for the biodiversity unit, both within the agency itself, and between the agency and other sectoral organizations which address the conservation, management, documentation and training needs for biodiversity. Linkages at Central Government level,and from Central to District levels, should be explored. Suggest ways in which institutional linkages can be improved.

d After consideration of the results from a - c above, draw up detailed terms of reference for the biodiversity unit in the central environmental agency of government.

e With the Project CTA, host a series of national and regional workshops to ensure that a full cross-section of viewpoints are consulted on these problems, and that the initial findings of the consultancy reach as wide an audience as possible. The final regional workshop should cover the larger issue of institutional sustainability in detail. Write a detailed report which sets out the findings of the consultancy and the recommendations arising from the consultancy.

The issue of sustainability is of such importance that the project and FAO Head-Quarters will bring further short-term expertise to the start of this consultancy - from FAO's Environment Division.

Individual Terms of Reference:

1 **Environmental Development (& Team Leader):** To work within, and lead a multi-disciplinary consultancy team. To organize the production of reports, including collating inputs from other team members.

To have especial responsibility for the issues of sustainability in institutional development.

2 **Conservation Planning and Administration:** To have especial responsibility for the functions and terms of reference for the proposed Biodiversity Units in the agencies, and for proposing institutional mechanisms linking these units to other organizations.

3 **Socio-political Implications of Biodiversity:** To have especial responsibility for assessing institutional strengths and weaknesses. The incorporation of social and political issues into biodiversity activities.

4 **National Consultants, (three, one from each country):** To provide local knowledge and experience to the international consultancy team. To facilitate meetings, discussion, access to literature and data.

APPENDIX 3

WORK PROGRAMME

PHASE I MISSION
TANZANIA

Saturday, 5th March
Mr Singh departs for Tanzania.
Sunday, 6 March
Mr Singh arrives Dar es Salaam. Mr Spooner departs for Tanzania.
Monday, 7th - 10th March
Meetings and discussion in Dar es Salaam.
Friday, 11th March
National Seminar at Project Office.
Saturday, 12th March
Coordination meeting with CTA. Depart for Kenya. Arrive Nairobi.
Sunday, 13th - 16th March
Meetings and discussions in Nairobi.
Thursday, 17th March
Mr John Mugabe arrives Nairobi.
Friday, 18th March
Lunchtime seminar at Pan Afric Hotel.
Saturday, 19th March
Data analysis, tabulations and report drafting.
Sunday, 20th
Depart for Uganda.
Monday, 21st- 24th March
Meetings and discussions in Kampala and Entebbe.
Friday, 25th March
Seminar at Department of Environment Protection.
Saturday, 26th March
Data analysis, tabulations and report drafting. Depart to Nairobi.
Sunday, 27th March
Mr Singh to New Delhi, Mr Spooner to Rome and Mr Mugabe to Nairobi.
Monday, 28th March
Mr Spooner debriefing FAO Rome and return to UK.
Tuesday, 29th - 31st March
Mr Mugabe meetings in Nairobi.
Wednesday, 6th - 7th April
Mr. Mugabe meetings in Nairobi.

PHASE II

Monday, 25th - 29th April
Mr Spooner research and drafting of sustainability analysis

UGANDA

Monday, 2nd May
Mr Spooner and Mr Singh depart for Uganda.
Tuesday, 3rd May
Mr Spooner and Mr Singh arrive Kampala. Coordination meetings with CTA and project staff.
Wednesday, 4th May
Mr Mugabe departs for Uganda.
Thursday, 5th May
Mr Mugabe arrives Kampala.
Friday, 6th May
National Workshop at Mpigi District Headquarters.
Saturday, 7th May
Coordination with CTA, data analysis and report drafting.
Sunday, 8th May
Depart to Nairobi.

KENYA

Monday, 9th - 11th May

Workshop coordination, data analysis and report drafting.

Thursday, 12th May
National Workshop at Silver Springs Hotel.

Friday, 13th May
Team discussions and data analysis.

Saturday, 14th May
Depart to Dar es Salaam.

TANZANIA

Sunday, 15th - 16th May
Team discussions, workshop preparation and report drafting.

Tuesday, 17 May
National Workshop at Embassy Hotel

Wednesday, 18 May
Coordination meeting with CTA for Regional Workshop. Report planning and scheduling. Discussion group on social policy and environment.

Thursday, 19th - 21nd May
Report drafting. Drafting of recommendations. Data analysis. Meeting with PRA team. Discussions with CTA and preparation for Regional Workshop

Sunday, 22nd May
Ugandan and Kenyan representatives arrive Dar es Salaam.

Monday 23rd May
Regional Workshop at Embassy Hotel

Tuesday, 24th May
Team discussions with national consultants and NPOs, data analysis and report drafting

Wednesday, 25th - 27th May
Team discussions, data analysis and report drafting

Saturday, 28th May
Mr Mugabe and Mr Spooner depart Tanzania.

Sunday, 29th May
Mr Spooner arrives Rome. Mr Singh departs Tanzania.

Monday 30th May
Mr Spooner debriefing in Rome and return to UK. Mr Singh arrives India.

Tuesday, 31st May - 10th June
Mr Spooner preparation and production of final report and delivery to Rome.

APPENDIX 4

PERSONS MET

FAO ROME

Forestry Department:

Mr. M. Muthoo	Director, Operations Service.
Mr. J. Lanly	Director, Forestry Resources Division.
Mr. C. De Greiling	Technical Officer, Forest & Wildlife.
Mr. E. Sene	Chief Of Technical Branch, Forest and Wildlife.
Ms. D. Rousseau	Projects Operation Officer, Forest Department.
Mr. G. Tschirley	Environmental Officer, AGRE.

TANZANIA

Dr. W. A. Rodgers	Chief Technical Advisor (CTA)
Mr. R. Muheto	National Project Coordinator.
Mr. J. Salehe	National Project Officer.
Mr. B. Kamara	National Consultant.
Mr. R. Fuller	FAO Resident Representative.
Mr. G. Kamukala	Director General, National Environment Management Council (NEMC).
Mr. F. Rugiga	Biodiversity Officer, NEMC.
Mr. B. Bakobi	Principal Education Officer, (NEMC).
Mr. P. Lyimo	Director, Nat Res & Agric, Planning Commission.
Mrs. Kamuzora	Asst Dir, Nat Res & Agric, Planning Commission.
Mr. P. Mkanga	Principal Secretary, Ministry of Tourism Natural Resources and Environment (MTNRE).
Mr. A. Mwaheleja	Director for Admin and Personnel (MTNRE).
Mr. E. Mugurusi	Director for Environment (MTNRE).
Mr. S. Mbwana	Department of Environment.
Mr. T. Maembe	Director for Fisheries (MTNRE).
Mr. C. Rumisha	Fisheries Officer - Environment and Research,
Mr. W. Haule	S. Fisheries Officer - Environment & Research,
Mr. G. Mbonde	Senior Forestry Officer, Forestry Division.
Dr. S. Mohamed	Senior Research Fellow, Institute of Resource Assessment, University of Dar es Salaam
Proj. K. Howell	Department of Zoology (UDSM).
Prof. R. Mwalyosi	Senior Research Fellow, (IRA/UDSM).
Prof. A. Nikundiwe	Head of Zoology Department, (USDM).
Dr. Z. Rulangalanga	Head of Botany Department, (USDM).
Ms. M. Cueller	National Conservation Strategy for Sustainable Development (NCSSD) Secretariat, NEMC.
Dr. Z. Kohi	Director, Commission for Science and Technology (COSTECH).
Mr. T. Mlaki	Director of Information and Documentation.
Mr. Asman	Actg. Director of Research Coordination and Documentation, (COSTECH).
Mr. I. Munishi	Principal Scientific Officer, Information and Documentation (COSTECH).
Mr. D. Ntukamazina	Executive Chairman, Civil Service Reform.
Mr. L. Nshubemuki	Director of Forest Production Research, Tanzania Forest Research Institute (TAFORI).
Mr. L. Nhwani	Actg. Director of Research, Tanzania Fisheries Research Institute (TAFIRI).
Mr. L. Hassan	Ag. Director Njiro Research Centre, Wildlife Research Institute (SWRI).
Mrs M. Mbilinyi	Lecturer at Institute of Development Studies Coordinator, Gender Networking Programme.
Mr. B. Mongola	IDS/UDSM.
Ms. S. Suleman (ex-NES)	Howard Humphreys Environmentalist.

KENYA

Mr. G. Ondenge	National Project Officer.
Mr. D. Kinyanjui	National Consultant.
Mr. P. Mureithi	Administative Officer, FAO Project
Mr. R. Mugo	Director, National Environment Secretariat (NES).
Mr. B. K'Omudho	Deputy Director (NES).
Mr. L. Linnemann	Programme Officer, United Nations Development Programme (UNDP).
Mr. G. Gathaara	Co-ordinator, Kenya Wildlife Service (KWS).
Mr. D. Mukii	KWS.
Ms. M. Virtue	Programme Officer, United Nations Environment Programme (UNEP).
Ms. C. Shendasonga	Biodiversity Unit (UNEP).
Mr. M. Sanwal	Senior Policy Adviser to the Executive Director (UNEP).
Mr. H. Drammeh	Senior Environmental Affair Officer, Regional Office for Africa (UNEP).
Mr. P. Chabeda	UNEP Consultant. Biodiversity Unit.
Mr. F. Duff	Fund and Administration Officer, Biodiversity Unit (UNEP).
Prof. R. Olembo	Deputy Assistant Executive Director, (UNEP).
Prof S. Njuguna	Coordinator, E.A. Biodiversity Conservation Programme, World Conservation Union (IUCN).
Mr B. Kigomo	Principal Forest Ecologist, Kenya Forestry Research Institute, Mugaga
Mr. J. Otieno	Chief Economist, Ministry of Planning and National Development.
Mr J. Harvey	Senior Natural Resources Advisors, ODA Development Division, Nairobi.
Dr M. Isahakhia	Director, National Museums of Kenya (NMK).
Dr. G. Davies	Forest Ecologist, Kenya Indigenous Forest Conservation Project/NMK.
Mrs C. Kumabara	PRA specialist.
Mr. F. Smiet	Dutch Embassy, Environment Officer.
Ms. A. Kiss	World Bank, Environment Officer, Nairobi.
Dr. P. Bagine	Coordinator for Centre for Biodiversity, (NMK).
Mr. S. Mwamba	Assistant Director, East Africa Wildlife Society.
Mr. C. Juma	Executive Director, ACTS.

UGANDA

Mr. J. Moyini	National Consultant.
Mr. R. Nabanyumya	National Project Officer.
Mr. F. Bagoora	National Project Coordinator.
Mrs J. Kavuma	Acting Commissioner, Department for Environment Protection (DEP).
Mr N. Lexander	FAO Representative.
Mr. B. Reufels	FAO Senior Programme Officer.
Mr B. Dramadri	Permanent Secretary, Ministry of Natural Resources.
Prof. D. Pomeroy	Deputy Director, Makerere University, Institute of Environment and Natural Resources.
Dr J. Kaboggoza	Head of Forestry Department, Makerere University.
Mr B. Nekby	World Bank Consultant (NEMA project preparation study).
Dr H. Aryamanya-Mugisha	Coordinator - National Environment Action Plan And Director of Environment (DEP).
Mr. J. Siler	Chief Technical Advisor (USAID), National Environment Action Plan.
Mr. M. Okua	Commissioner, Game Department, Entebbe.
Mr. C. Dhatemma	Deputy Commissioner, Fisheries Department, Entebbe.

Mr. F. Kigenyi	Dy Commissioner, Forestry (Liaison Officer, GEF Support to Forest Department).
Dr P. Howard	National Forestry Conservation Advisor, Uganda Forest Department.
Dr. J. Otekat	Deputy Director, Uganda National Parks.
Mr. J. Lwamafa	Under Secretary, and Mr Martin Odwedo, Principal Assistant Secretary, Ministry of Local Government.
Mr. R. Ekodeu	Administrator, Wildlife Clubs of Uganda.
Mr. L. Sylvan	Deputy Resident Representative, UNDP
Ms. A. Karekaho	Programme Officer - Environment, UNDP.

APPENDIX 5

WORKSHOP PROGRAMMES

UNDP/FAO/GEF PROJECT: DEPARTMENT OF ENVIRONMENT PROTECTION.

"INSTITUTIONAL LINKAGES FOR BIODIVERSITY"
FRIDAY 6TH MAY 1994.
MPIGI DISTRICT, DISTRICT HALL.

MORNING SESSION.

Chairman: Festus Bagoora NPC

9:30 am Official opening: D.E.S. Mpigi.

Introduction to the Consultancy: W.A. Rodgers
Introduction to the Workshop: B. Spooner

9:45 am Paper I: Sustainability issues. H.J Tumwebaze

10:30 am Paper 2: Participation issues. Prof. E. Tukahirwa.

11:15 am COFFEE

11:45 am Paper 3: Socio-political pre-conditions for conservation of resources. J. Moyini.

12:30 am Paper 4: Coordination for biodiversity. H. Aryamanya Mugisha.

1:15 pm LUNCH

2:15 pm Afternoon Session Discussion

Moderator: W.A. Rodgers. C.T.A.

Topic 1: Sustainability.

Topic 2: Biodiversity Linkages in Uganda.

Topic 3: East African Interaction.

3.00 pm TEA/COFFEE

4:30 pm Workshop Closing: Permanent Secretary - Ministry of Natural Resources, B. Dramadri.

FAO/NATIONAL ENVIRONMENT SECRETARIAT (NES)

"INSTITUTIONAL LINKAGES FOR BIODIVERSITY"
THURSDAY 12TH MAY 1994.
SILVER SPRINGS HOTEL, NAIROBI

MORNING SESSION.

Chairman: David Kinyanjui NES National Consultant.

9:00 am Official Opening Address: Mr R.V. Mugo, Director NES.

9.15 am Introduction to Workshop: B. Spooner, IIED/FAO Consultant.

9:30 am Topic 1:"Issues of Sustainability"
Paper: J. Otieno, Ministry of Finance.

10:15 am Topic 2: "Participation Issues"
Discussant: John Mugabe, ACTS/FAO Consultant.

11:00 am COFFEE

Moderator: Shekhar Singh, FAO Consultant.

11:30 am Topic 3: "Coordination and Linkages for Biodiversity Management."

12.15 am Topic 4 "Donor Roles and Support for Biodiversity Management - Lead Agency, Donors and NGOs."

1:00 pm L U N C H

AFTERNOON SESSION

Moderator: J. Mugabe - ACTS/FAO Consultant

2:15 pm Topic 5 "Socio-political Pre-conditions for Effective Biodiversity Management."

3.00 pm TEA/COFFEE

Moderator: Bryan Spooner, IIED/FAO Consultant.

3.30 Topic 6 "East African Regional Interaction."

4.15 pm Workshop Summary and Closing Address: Dr. T. Mmela, First Secretary, Kenya Mission to UNEP.

FAO/NATIONAL ENVIRONMENT MANAGEMENT COUNCIL
"REGIONAL CONSULTANCY ON
INSTITUTIONAL LINKAGES FOR BIODIVERSITY"
TUESDAY, 17TH MAY 1994
EMBASSY HOTEL (EMBASSY ROOM)

MORNING SESSION

Chairman: Mr. R. Muheto (National Project Coordinator)

9.30 am Official opening: Mr. B. Bakobi, Acting Director General, NEMC

* Overview - Dr A. Rodgers, CTA
* Introduction to the Workshop - Mr. B. Spooner, IIED/FAO Consultant

10.00 am Paper I: "Indicators for Determining Sustainability of Biodiversity Project Inputs."
1st Speaker: Mr. Lyimo, Planning Commission.
2nd Speaker: Prof. R. Mwalyosi, IRA, Univ. DSM.
Principal Discussant: B. Spooner IIED/FAO Consultant.

11:00 am COFFEE

11.30 am Paper 2: Coordination Between Levels, Disciplines and Sectors for Effective Biodiversity Conservation and Management."
Speaker: Dr. Kohi, Director, Commission for Science and Technology (COSTECH).
Principal Discussant: Shekhar Singh, FAO Consultant.

1.00 pm LUNCH

AFTERNOON SESSION

2:00 pm Paper 3: Social and Political Pre-conditions for the Effective Establishment and Functioning of Institutional Structures for Biodiversity Conservation and Management."
1st Speaker: Mr P. Frederiksen
Principal Discussant: John Mugabe, ACTS/FAO Consultant.

2:45 pm Paper 4: People's Participation in Biodiversity Conservation and Management."
1st Speaker: Dr. Koppers, Cooperative College, Moshi.
3.00 pm 2nd Speaker: I. Mwasha, DANIDA advisor, Hima-Iringa project

3.15 pm PRA Report: Eva. Lagerstedt and Johann Frossling, (WCST)

3.30 pm PGA Report: J. Salehe/D. Kamara, FAO Biodiversity project

3.45 pm TEA

4.00 pm Summary and Recommendations: Dr. A. Rodgers

4.30 pm Close of Workshop

APPENDIX 6.

RESPONSIBILITIES OF THE LEAD AGENCIES

THE NATIONAL ENVIRONMENT MANAGEMENT COUNCIL (NEMC) - TANZANIA

The Act to provide for the establishment of the National Environment Management Council (NEMC) got Presidential assent in September, 1983. The NEMC was set up in 1986 and stipulates that NEMC shall:

1. Formulate policy on environmental management;
2. Recommend its implementation by the Government;
3. Coordinate the activities of all bodies concerned with environmental matters;
4. Serve as a channel of communication between these bodies and the Government;
5. Evaluate existing and proposed policies;
6. Evaluate the activities of the Government 'directed to control of pollution and the enhancement of the environment and to the accomplishment of other objectives which affect the quality of the environment';
7. Formulate policies and programmes (on the basis of 3.5 and 3.6 above) 'which will achieve more effective management and enhancement environmental quality';
8. Recommend measures to ensure that Government policies 'take adequate account of environmental effects';
9. Foster 'co-operation between the Government, local authorities, and other bodies engaged in environmental programmes';
10. Stimulate public and private participation 'in programmes and activities for the national beneficial use of natural resources';
11. Seek 'advancement of scientific knowledge of changes in the environment';
12. Encourage 'the development of technology to prevent or minimise adverse effects that endanger man's health and well being';
13. Specify environmental standards, norms and criteria;
14. Establish and operate an environmental information system;
15. Formulate proposals for environmental legislation;
16. Recommend 'their implementation by the Government;
17. Liaise with other national and international organisations on matters related to the environment;
18. Undertake or promote environmental awareness and education;
19. Other functions assigned by the Minister or 'incidental or conducive to the exercise' of the functions listed above. [Section 4]

Further, the Director General has, under the Act, the duty to:

1. Initiate steps for the protection of the environment;

2. Investigate problems of environmental management;

3. Consult experts;

4. Review progress under the Act;

5. Inform the public of this progress, through information and reports;

6. Carry out (promote, encourage, co-ordinate) plans and projects in environmental management, singly or jointly;

7. Administer the Act [Section 7]

Specifically, the NEMC has powers, under the Act, to seek and get information relating to research or activities affecting or relating to the environment within Tanzania. Withholding such information is a crime and the withholder is liable to a fine not exceeding 5000 shillings. [Section 11]

The Minister also has, under this Act, the power to impose a duty, payable to the NEMC, by 'any person or body of persons benefiting from the activities of the council or whose activities affect the activities of the council' [Section 14 (1)].

The NEMC also has the ability [Section 15] to charge fees for any services rendered by it or its committees and use this fees for 'better and proper performance of its functions' [Section 15].

NATIONAL ENVIRONMENT SECRETARIAT (NES) - KENYA

The National Environment Secretariat (NES) was created to specifically respond to a number of challenges in the field of the human environment. In this regard the Secretariat's functions include:-

1. the promotion of inter-disciplinarity and integration of environmental policies, plans, programmes and projects with the view to ensuring proper management and rational utilisation of resources on a sustainable yield basis for the improvement of the equality of life the people;

2. performing a catalytic co-ordinating role in the initiation, formulation and development of policies related to conservation, protection, enhancement and management of the natural and man-made environment and in harmonisation of those policies and other activities of Government ministries, departments and other institutions as they relate to the environment so that functional conflicts and wasteful duplication of effort and resources are avoided;

3. developing strategies and methodologies for the achievement and evaluation of accepted environmental and human settlements policies, goals and objectives and the integration of such policies, goals and objectives in development planning and decision-making at all levels;

4. assessing and evaluating the impact of development activities on the environment and conversely the constraints and opportunities posed development activities by the environment and advising on appropriate measures to be taken in this regard;

5. providing advice and accurate information on matters related to the natural and man-made environment to Government ministries and departments, other institutions and individuals;

6. monitoring and assessment of the current state and the foreseeable trends in the quantity and quality of the natural

resource abase in the country and the preparation of periodic reports on the state of the environment;

7. proposing and advising on proper land use practices as an essential and critical component of resource management and environment protection;

8. lending appropriate support to initiatives, resolutions and programmes designed to promote regional and inter-regional co-operation in the management of the environment;

9. preparation and subsequent follow-up of Kenya participation in UNEP governing Council, Commission on Human Settlements and other inter-governmental and non-governmental organisations dealing with the environment; and

10. collection and co-ordination of available research findings on the environment; encouragement of further research in selected critical areas; and conducing research, investigations and surveys in the field of environment.

In order to enable the Secretariat to effectively discharge its mandate it is structured into a number of divisions and units as follows:

- Office of the Director (OD).
- Planning and Environmental Impact Assessment Unit (PA).
- Environmental Law Unit (EL).
- Natural Resources Management Division (RM).
- Human Settlements (Habitat) Division (HS).
- Pollution Control and Environmental Health Division (PH).
- Environmental Education and Information Division (EI).
- Administration and Support Services Division (SS).

DEPARTMENT OF ENVIRONMENT (DEP) - UGANDA

The Mandate of the Department of Environment include:

1. the conservation of the natural resources;

2. the harmonisation of the interest of the various users.

3. the coordination of all developmental activities which have a bearing on the physical environment to avoid disruption of the necessary life supporting systems;

4. the prevention of degradation, misuse, destruction and pollution of the entire environment;

5. education of the public on the best methods of sustainable development to achieve individual, societal and national development goals without destruction;

6. enforcement of Legislative measures and ensuring multi-disciplinary and inter-sectoral planning of development projects on an integral basis.

7. protection of the life supporting systems (vegetation, soils, air, water, animals, and the ecological process and cycles which maintain human life.

The Department has four divisions at the moment through which environmental problems are being addressed.

- Natural Resources
- Environment Education
- Environmental Monitoring and Control.
- Environmental Information and Research.

APPENDIX 7. QUESTIONNAIRE SURVEYS

As part of the consultancy exercise a detailed overview of institutional functions and responsibilities with respect to biodiversity activity was undertaken. This was modelled on the successful review of similar functions in India, modified for the local situation.

There were six parts to this overview, each part consisting of a detailed table which relates needed activity to actual inputs. An example would be :

> legislation to control water pollution - which institution has a mandate to introduce legislation, to implement it, and to monitor it?

These tables were to :

> Assess institutional capacity to perform needed biodiversity functions,
> Assess institutional capacity to monitor needed biodiversity functions,
> The legal basis for the biodiversity tasks,
> An analysis of action points from the International Biodiversity Convention.

Finally most people interacting with the consultancy team were asked to comment on the roles they thought that a lead agency for biodiversity should play in each country. Their responses were via a detailed questionnaire.

The results of these surveys will be published in a separate report. They are available now, in each national project office for anybody who wishes to obtain an immediate copy.

APPENDIX 8

A FRAMEWORK FOR SUSTAINABILITY ANALYSIS

A8.1 INTRODUCTION

Sustainability analysis is a young, but rapidly evolving field of study. It ultimately has the objective to assess how effective a process is in reaching or progressing towards a state of sustainable development. As such there is, as yet, no commonly agreed form that it takes. This appendix, together with **Chapter 5**, sets out to develop an initial framework and provide examples of where simple indicators might be developed for specific purposes.

The notion of sustainability has gained importance over the last thirty years. But defining what it involves has not proved easy, as the factors involved are many. Global and local systems of resource use and their transformation into industrial and consumer products have led to many accumulating problems. There are concerns over the depletion of resource stocks, pollution and degradation of the life-supporting processes raise questions of resource and eco-system sustainability. This is directly influenced by the global financial, political and trade systems which nurture modern lifestyles. These have developed over decades in ways that are essentially socially inequitable, ecologically exploitive and wasteful of both human and natural resources.

There are virtually no development projects today which have approached an operational state which might be regarded as being sustainable. As a result, many aspects of the design, financing, operation and management of programmes and projects have been brought into serious question. One of the most important issues noted for over two decades is the sustainability of the institutional arrangements, abilities and inter-faces between donors, national governments at all levels, local people and the commercial and industrial sectors.

To bring about a more sustainable global society will require many changes of individual lifestyles. It will also require institutional abilities in society to direct such change towards a path of sustainable development. The pressures for such change mean many traditional values and priorities are being re-assessed in regard to various political, institutional, social, economic and ecological issues. Attitudes on how to value the future and the state and conditions of resources and life-supporting processes to be bequeathed to future generations are also being re-assessed. These re-appraisals mostly concern issues which have been either inequitably valued, or ignored, by the economists, short-term political expediency and technological consumerism.

A8.2 SUSTAINABLE DEVELOPMENT AND ITS ANALYSIS

Building consensus in society, and energising a society to address and act on the sorts of issues discussed above, is the process of sustainable development. Sustainability is itself closely connected with the successful outcome of a process of approaching sustainable development. Therefore, the methods of sustainability analysis must obviously match closely with those processes which guide how sustainable development strategies and actions plans are actually being developed.

Many attempts have been made to define sustainable development, yet, it remains an illusive idea, and means many things to many people. This is because, in practice, processes of sustainable development can only be defined locally. This presents a challenge to traditional institutional approaches as they will now have to adopt a more participative and flexible approach. The following describes one level of understanding:

> "Sustainable development is about balancing the trade-offs within and between the present and future social, ecological and economic

objectives and needs. In doing so, it has to acknowledge and reflect local differences and allow for uncertainties. Thus, to achieve a quality of life that can be maintained for many generations, the outcomes have to be seen widely to be 'socially desirable', by them fulfilling people's cultural, spiritual and material needs in equitable ways; 'economically viable', by individual and joint activities paying for themselves; and 'ecologically sustainable' whereby the long-term viability of the supporting eco-systems is maintained (Dalal-Clayton, B, 1993).

Developing National Sustainable Development Strategies has been defined as being:

"a participatory and cyclical process of planning and action to achieve economic, environmental and social objectives in a balanced and integrated manner." (IIED/IUCN, 1993).

A8.2.1 Approaching an integrated and holistic approach

But achieving the type of approach developed above requires a new manner of thinking about how to approach development and institutional management. This can be illustrated visually using the diagram in **Figure A8.1.**

The various points where the three circles merge represent various approaches to the problem of 'what to integrate and how?'. At the points where two circles merges, broader-based specialities (socio-economics, environmental-economics, social-ecology/indigenous knowledge) develop.

The point of complete integration appears to be where all three circles overlap. This indicates the point of an approach that integrates all social, economic and ecological features and the relationships between them. However, the circles have been quite deliberately placed partially apart.

A truly holistic perspective would regard all the specialist approaches and their combinations as being as important as the multi-disciplinary perspective which draws them all into an integrated system view. In society at large, it is the juxtaposition and polarity of ideas, and all the realms of specialisation and overlap, which provide the diversity of elements that are essential to a dynamic system which can evolve successfully and maintain a balance.

A8.2.2 A preliminary framework for sustainability analysis

Sustainability analysis is ultimately a complete framework of analysis of these evolutionary processes at work in society. Its analytical structure and content cannot be reduced to a singular methodology, but will need to be far more flexible and adaptable. This is because the analysis may need to be applied at any level in society, and for any range of situations. **Sustainability analysis can be applied to situations involving individuals, households, villages, towns, cities, farms, businesses, industries, policies, programmes and projects.**

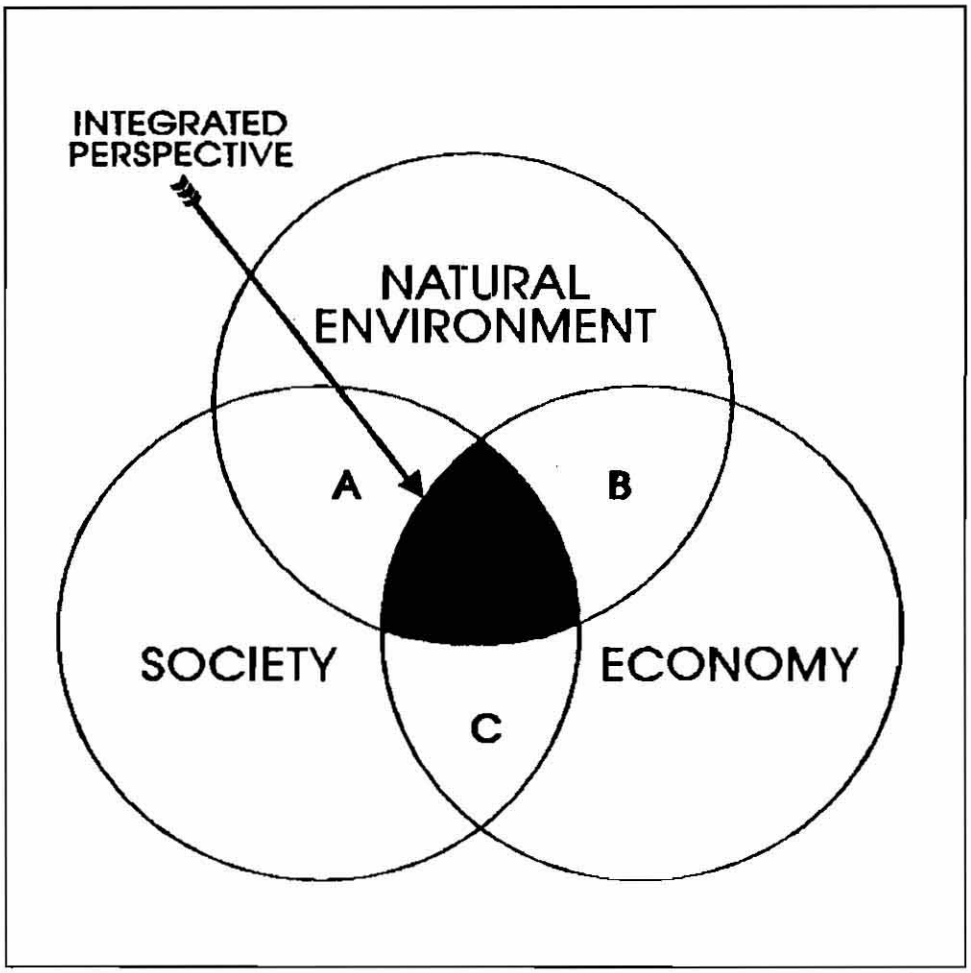
Sustainability analysis is only relevant if it is an on-going process. It can only evolve if it can compare information that can show detectable changes over time. As sustainability analysis is about measuring change it has to be operating at all stages in the planning cycle and in the various mechanisms of operation and management of development. **Thus, monitoring of specific variables to appraise sustainability must be available from before, as well as during and after programmes and projects are initiated.**

Sustainability analysis will need to be both specific and searching on particular issues while, at the same time, drawing widely on many subject areas and many differing perspectives. This type of analytical approach will demand a wider framework of participation than has been the case in traditional monitoring and evaluation procedures.

Sustainability analysis should aim to provide a balanced overview. To do so will require that mechanisms be drawn up to enable a consensus to be reached on the meaning and significance of the various variable it is assessing at any particular time. It will have to develop the means to integrate many diverse sources of ideas and have a capability to use a variety of analytical tools and assessment methods. **By concentrating on the study of processes, bringing a holistic overview to bear and promoting greater participation,** sustainability analysis will provide a more transparent and meaningful context in which the assessments and value judgements on specific issues can be articulated.

Figure A8.1

THE DIVERSE REALITIES AND PERSPECTIVES UNDER HOLISTIC VIEW OF SUSTAINABLE DEVELOPMENT



A = e.g.
- LOCAL KNOWLEDGE
- ETHNO-BIOLOGY
- RESOURCE USE SYSTEMS

B = e.g
- ECOLOGICAL ECONOMICS
- ENVIRONMENTAL ECONOMICS
- RESOURCE VALUES

INTEGRATED PERSPECTIVES AND SURVIVAL STRATEGIES

-

INVOLVES PARTICIPATION,
LOCAL LEARNING AND CONSENSUS BUILDING
ON HOW TO BALANCE OBJECTIVES AND VALUES,
FOR THIS AND FUTURE GENERATION, ON HOW TO
LIVE WITH OTHERS AND NATURE IN SUSTAINABLE WAYS

C = e.g
- SOCIO-ECONOMICS
- ECONOMIC/POLITICAL HISTORY
- POLITICS/POLITICAL ECONOMY

A8.2.3 Tools and methods for sustainability analysis

Sustainability analysis should utilise a range of analytical tools and data from a variety of sources (see **Box A8.1**). The information and perspectives this provides needs to be interwoven in a intelligible way. The approach should focus on data that is practical to collect and easy to use. It should incorporate quantitative, as well as qualitative, indicators. As the process of sustainability analysis itself needs to build consensus on the approach and its conclusions, it should encourage iterative and participative inquiry and action research involving any range of stakeholders relevant to the level of analysis in question. As the analysis must address a range of cross-cutting issues (see **Box A8.2**) it has to have a capacity to be multi-dimensional and inter-disciplinary.

Such a framework will not be straight-forward for donor or national institutions to adopt. The changes involved are not ones of simple administrative adaptation. A major response to issues raised under sustainable development involves fundamental behavioural change by both individuals and institutions. It will involve changes in thinking, changes in values, changes in lifestyles, changes in attitudes on how to deal with other people, changes to address the need to build consensus, and changes to develop conflict resolution and consensus building capabilities.

BOX A8.1

A Range of Tools for Sustainability Analysis

Analytical:

* Environmental economics
* Multi-criteria analysis
* Resource accounting
* Land and eco-system evaluation and capability classification

Database, Monitoring and Awareness

* Natural resource surveys
* Geographical Information Systems and Remote Sensing
* State of the Environment reporting
* Management Information Systems
* Action-centred networks
* Environmental auditing
* Sustainable development indicators

Integrative Policy, Impact Assessment and Consensus Building

* National Sustainable Development Strategies
* Various forms of Conservation Strategies, Environmental Plans
* Participative methodologies
* Integrating various inter-disciplinary and participative forms of project and strategic impact assessment
* Cross sectoral policy and institutional analysis
* Land use and resource tenure planning
* Stakeholder analysis

BOX A8.2

Cross Cutting Issues to be Addressed by Sustainability Analysis

* Diverse paradigms and belief systems (many issues that impact on social, cultural, religious and economic equity
* Implementing agenda 21
* Trade-offs between strategic and tactical options
* Capacity building for institutional coordination and networking
* Inter-disciplinarity
* Cross-sectoral management and impacts
* Cross-border resource use and conflicts
* Multiple use and users of resources
* Research/planning for multiple connections and linkages across geographical space in landscapes/waterscapes
* Inter-generational equity and valuation of resources for multiple users across time
* Power sharing and conflict resolution
* Sharing with nature and living with natural dynamic systems
* Designing commitments to enabling and non-destructive technologies and lifestyles

A8.2.4 Uses of sustainability analysis

Sustainability analysis should have an ability to:

* identify and collect selected baseline data for future monitoring and indicators in the pre-design phase.

* influence the principles and criteria from which programmes and projects would be designed.

* guide and provide feedback to managers and policy makers during implementation.

* provide longer term feedback after a programme or project is completed to allow ex-post evaluation of programmes and projects and thereby improve the design and operations of other strategies, programmes and projects.

A8.2.5 Difficulties of sustainability analysis

Numerous problems will be faced in developing a pragmatic approach to sustainability analysis. It has the potential to provide an important feedback mechanism for successful evolution, both within projects and society. One immediate problem is how to translate the fashionable adoption of sustainability jargon and rhetorical planning into more purposeful behavioural change and capacity building.

The need to define sustainability only by reference to local situations and local views will necessitate that scientific objectivity and closed management systems start to blend with more subjective and open approaches that involve participatory dialogue and consensus building. This approach has to confront the fact that there will be many often dis-interested and diverse stakeholders at various levels to deal with; each having their own perception of what constitutes key issues. They will also have different perceptions of where the boundaries of these issues are in space and time.

Understanding, measuring and accounting for project or biodiversity relationships will have to tackle many diverse issues influenced by dynamic and complex systems, multi-dimensional interactions and linkages, unpredictability, critical thresholds, insecurity, conflicting interests and

technological change.

Thus, many sustainability issues involve processes that cannot be understood or analyzed by numerical means. For instance, assessing the acceptability of a project design from a local cultural or a political perspective will involve approaches that cannot be reduced numerical and can only be worked out through dialogue. This raises many questions about how things are done and who is involved. Thus, a major new focus that sustainability analysis will promote is the more systematic analysis of processes.

A8.2.6 Current progress and use of sustainability analysis

i. General

A few institutions have begun to undertake environmental auditing of their operations. The most common management systems for public and private projects still monitor the quantitative parameters of the delivery of inputs (money spent, vehicles and equipment bought, people appointed, etc.) and outputs (number of people trained, in-situ availability of development packages, new policy/institutional arrangements activated, etc). These are all measures which, using objectively verifiable indicators, gauge effectiveness and efficiency and usually focus on short-term processes only. The systematic evaluation of issues affecting the sustainability of project inputs, achievement and outputs after projects are finished is not well-developed.

There are various new resource and impact assessment approaches which are being developed. These are evolving into a toolbox which, as they become more integrated, will provide the tools needed for future systems of sustainability analysis.

FAO is also undertaking research of sustainability analysis as part of their response to Agenda 21 (Tschirley, J, 1993) and have commissioned studies to develop this response (Carley, M. FAO/IIED, 1993). FAO is also evolving older systems. The FAO's Computerised System for Agriculture and Population Planning Assistance and Training (CAPPA) created in the 1980s is developing a new generation of inter-active modules under a system known as "K2". This system incorporates a variety of impact and sustainability indicators intended for use in food and agricultural policy analysis and planning. The software aims to provide countries with a toolbox for analysing alternative scenarios for agricultural development in a multi-disciplinary and inter-active framework. The system will generate and project a number of indicators related to the environmental, technological, economic, and social aspects of sustainability as this is defined by FAO (Henninger, N, 1993, M. Maetz, 1994).

Other institutions, such as IIED and IUCN, are developing and testing techniques and methods for sustainability analysis (Dalal-Clayton, B. 1993). These are closely linked to the wider processes involved in evolving National Sustainable Development Strategies; guidelines for which have been issued based on participatory action research and reviews of 60 national policies, strategies, programmes and plans from 50 countries (IIED, IUCN, 1993).

ii. Use of sustainability analysis by the GEF

Within the overall GEF programme, highly generalised sustainability criteria were developed by the STAP and have been loosely applied to help select projects for GEF financing. Criteria that have been applied include the potential for institution building, involvement of affected groups, NGO participation and technology transfer. Other mechanisms, such as the use of trust funds and the application of mandatory evaluation guidelines and project performance implementation review reflect the importance being given to sustainability issues.

At the level of detailed design and operation for GEF programmes in general, and specifically for activities within this GEF Regional Biodiversity

Project, no coherent framework of sustainability analysis has been developed and the issues remain at the level of a few selective concerns that do not address some of the more fundamental underlying problems that would be uncovered by a systematic analysis. It makes little sense to develop indicators until a proper framework, setting out role and purpose, has been clearly developed.

As an important GEF project, this project's operations should set an example of a responsible, environmentally friendly project contributing to sustainable development in its own design and methods of operation. One proxy to measure this is whether the project features designs and operations that "think globally and act locally". Internally within the project, indicators could be developed to assess such issues as: how the project decides on transport type and levels; the degree of recycling adopted; the transparency of management and; the degree of participation of various interested parties and employees in decision-making and evaluation of the project.

On the one hand, GEF might give support to the institutional conservation and management of biodiversity. But if, on the other hand, it also promoted unsustainable lifestyles and development approaches, adaptations to design, operation or management would be required. The cumulative impact of GEF projects on vehicle emissions, energy use, lifestyles and management methods were not an issue during the initial design phase. The question comes as whether it should in future evaluation. Eco-audits and impact assessments on the internal design and operations of GEF projects could show the GEF leading the way in the actualities of projects making efforts to encourage the adoption of a path to sustainable development. For this to happen then the projects themselves ought to be able to show that they are becoming less polluting, more energy efficient and less wasteful.

A8.3 THE USE OF INDICATORS

A8.3.1 The value of indicators

Decades of expanding research and technology innovation now provide numerous databases and information systems. These data repositories have enabled many sets of indicators to be used to represent the changing conditions and trends of the world around us. Both singular and composite indicators are commonly employed to facilitate the measurement of changes in variables, and to provide a scale against which changes in the state of the environment can be assessed.

The extensive use of indicators has grown out of an era dominated by reductionist thinking which stressed the value of 'hard', scientifically verifiable measures. The use of any dis-aggregated indicator, or set of indicators, represent one dimension of the process or products they relate to. They cannot easily capture or represent the complexities and uncertainties of real life which is a far more complete and complex set of systems overlapping with other systems. Neither is the selection, measurement and use of indicators easily adapted to provide space for people's opinions and the practical needs of building consensus in the project or society. Indicators can promote a technical bias, but can never replace good judgement or participatory approaches that aim to build consensus. As increasing emphasis is being given now to approaches that are 'integrative', 'holistic' and 'participatory', future frameworks for sustainability analysis should aim for a harmonious blending of these various perspectives.

A particular problem of the use of indicators relates to a dilemma concerning their use in the first place. Planners, politicians and policy makers are ultimately interested in understanding the "whole", but with sufficient technical support to access details whenever necessary. Indicators, by definition, can only represent a "part" of the "whole". As analysts and evaluators seek more precise knowledge about a particular part they try to define where it is, what it does and how it changes in specific ways in space and time. The chain of logic pushes them inevitably towards measurements that have to look in greater and greater depth and detail to find any "objectively

verifiable truth" about one part of a system. In doing so, the greater the detail, the less the information that indicators provides on how the system works a whole. Thus, it is common to find that the ease with which an indicator can be captured in its measurement, is inversely proportional to how good it is as an indicator of the very system it is supposed to represent.

A multiplicity of indicators measures can also confuse and prove difficult for bureaucratic systems to deal with. The capacity for the sustained use of a multiplicity of indicators is also constrained by limited research and monitoring budgets, limited capacities to collect data, poor access to and quality control of data.

Every indicator has an appropriate time scale in which changes can express themselves. These timescales need to be made explicit if their selection and use is to be efficiently managed. Indicators can seldom highlight cause and effect as a variety of impacting variables affect any one indicator.

All these factors discussed above lead to uncertainty over the value of the indicators used. These practical difficulties have led to the search for broad composite indices. These also have conceptual and practical limitations as data for appropriate variables is still required and there are problems of attaching appropriate weightings to each of the variables which are used to derive the composite indicators. There are, thus, relative merits to the use of either single indicators or composite indices.

These basic observations caution against any comprehensive development of detailed indicators and suggests the development of a series of "key issues" that can capture the sense of important details, while not loosing sight of the overview. This is the position which has been adopted by the consultants in the analysis required for this project.

Thus, the main criteria for the constructive use of indicators in daily use should be that they are simple to collect and to present. They should also be simple and meaningful for lay people, managers and policy makers to use. However, their ability to clearly show rates of change is important.

A8.3.2 Types of Indicators at General Levels

At the levels of national monitoring three types of relevant indicators have been suggested by Holmberg (1991):

* Environmental indicators:- measuring changes in the state of the environment.

  Examples would include the annual rate of deforestation or the rate of depletion of species.

* Sustainability indicators:- measuring the distance between that change and a sustainable state of any particular environment.

  This would use changes in environmental or sustainable development indicators. However, it would have to define the boundaries imposed by critical thresholds which would delineate a sustainable state from an unsustainable state, as well as the strength of linkages which bind systems together. As yet, there are no clear definitions of what a sustainable environment is and, thus, no indicators have yet been developed which can be shown, as examples.

* Sustainable development indicators:- measuring progress towards sustainable development in the national context

  Examples would include measures such as whether the appropriate institutions for biodiversity coordination had been established; whether environmental impact legislation had been enacted. Most of the indicators developed in **Chapter 5** of the main text are

sustainable development indicators with respect to institutional capacities for biodiversity conservation and management.

For the more detailed purpose of monitoring biodiversity *per se*, the following macro-indicators have been suggested by the GEF/STAP (1993):

* The biodiversity importance index:- this consists of: species richness and endemism (regressed into species/area curve); keystone species (such as top carnivores, selected invertebrates and micro-organisms); centres of species diversity; ecosystem diversity; species or ecosystem rarity; and genetic diversity of agricultural crops and livestock;

  NB : Data exists for species richness and endemism for most higher vertebrates and plants. The main gap is the almost total lack of data on genetic diversity;

* The Biodiversity Risk Index:- rates of species endangerment and extinction: the proportion of the original ecosystem area remaining and rate of conversion: degradation of ecosystem quality and fragmentation: rates of genetic erosion of agricultural crops and livestock: and, indicators of human population growth and spatial expansion. This index assesses the urgency of the risk of loosing species and ecosystems.

* The Conservation Capacity Index:- this measures the capacity or feasibility of conservation success: the proportion of area already under conservation management, the effectiveness of management or coordination if many agencies are involved, national conservation policy and legislation, the enforcement of legislation, financial investment in national conservation programmes, education and training programmes.

* The Socio-Economic Significance Index:- the national use or non-use of resources, cultural/historical/religious significance, land tenure and rights of access to resources, and intellectual property rights.

A8.4 PROJECT ANALYSIS FRAMEWORK

A8.4.1 Potential uses of sustainability analysis within this GEF Biodiversity Project

The checklist of indicators can allow the analysis of the sustainability of project efforts to strengthen institutional capabilities. However the indicators and sustainability analysis also can be used by management to:

* show the variation and direction of change in institutional capability and thereby any developing areas of strengths and weaknesses
* assess the overall continuity of the programme once the role of the donor inputs ceases
* signal problems in the state of institutional coverage of critical tasks and functions
* signal problems where the diffusion of inputs and outputs no longer serves to improve biodiversity conservation and management
* enable comparisons of the effects of different institutional strengthening policies and methods
* identify the source and impact of externalities
* highlight information requirements where a reasonable and meaningful indicator cannot be measured

A8.4.2 Levels of Assessment

The parameters to assess institution strengthening inputs being provided by the project could be assessed broadly (depending on where the project

wished to focus attention) on the following levels:

Level 1	The project overall
Level 2	The biodiversity unit supported by the project
Level 3	The lead agency in Government
Level 4	The national and regional linkages of the programme
Level 5	The groups of resource managers, users and consumers who impact on biodiversity.
Level 6	The changing status and condition of biodiversity itself

The terms of reference only suggest analysis embracing the first four levels. Sustainability analysis within the GEF programme should go further as international, as well as national, interests should be concerned with the fifth and sixth levels as, ultimately, this is where the success of biodiversity conservation and management should be measured and assessed.

However, for the time scale during which project effects might be measurable, it is doubtful whether direct cause-effect relationships will be detectable for many of activities that the project supports. It is not clear that the analysis would be able to distinguish clearly enough between the effects of the project and the general state of inherent change and externalities affecting institutional development or biodiversity status in the three countries.

Theoretically, these various analyses should not be undertaken independently, if the project were to remain well-focused and if there were to be sufficient feedback to allow successful adaptation and evolution of the institutional capabilities for biodiversity conservation and management.

The sustainability analysis framework would have to attempt to distinguish the effects of any future changes in project design or approach which might affect the measures of sustainability. Similarly, the framework must be designed to identify and account for unplanned or unforeseen factors. Such externalities may be either external or internal to the project. Where indicators measured changes in either biodiversity or institutional development *per se*, the approach would need to distinguish clearly between:

* inherent changes in biodiversity or institutional adaptation
* induced changes without the project
* induced changes with the project

A8.4.3 Sustainability of project design and operational processes

The project represents an international collaborative effort to contribute actively to the conservation of biodiversity and sustainable development. As such, sustainability analysis should ask various pertinent questions on the nature of the design assumptions, the nature of the how inputs and the outputs have been selected, as well as the nature of the processes of project design and management. The following questions can be asked for the project:

1. What factors inhibit the strengthening of the institutions in the three countries on their own (without intervention from the project).

2. How did the project design identify these factors and use these as a basis to select and design the project.

3. What is the coverage of the inputs that the project is providing to overcome these inhibiting factors and thus is the project design well-focused?

4. What are the long-term effects of the project into terms of its incremental costs and incremental benefits for the institutions involved and the impact they are having on biodiversity issues?

5. Can the project's inputs, outputs and processes be assessed in a participative and integrated way that would cover all the various social, economic and ecological issues in meaningful quantitative and qualitative ways.

6. What design or management effort has gone into ensuring that the inputs required to overcome these inhibiting factors will continue, even after the project has finished?

7. Has the project already taken efforts to design for sustainability issues and can the efficacy of this can be measured?

8. If sustainability issues are to be addressed seriously is the project design based on sound assumptions or is it in need of rethinking?

Discussions during the consultancy raised a number of sustainability issues. One important issue was whether the value of biodiversity was clear to politicians and senior national planning and treasury officials. Without adequate planning data addressing biodiversity issue of biodiversity, biodiversity will remain low priority.

[1]. *The governments and institutional network concerned with biodiversity should plan a strategy to integrate research and database development into managed systems that allow biodiversity issues to be better articulated and integrated into national planning and decision-making.*

[2] *The various systems of environmental and sustainability analysis and their indicators being developed for the FAO (K2 and SARD) could be incorporated into the programme to contribute to national and regional biodiversity monitoring, planning and budgeting efforts.*

A8.4.4 Review of indicators to assess the sustainability of the GEF project

By compiling all the various information received during the consultancy it has been possible to distil a checklist of institutional issues where indicators could be develop to measure progress towards a more sustainable form of project design and operation. These are summarised in **Appendix 9**. In any one of these issue areas it would be possible to develop the next level of the hierarchy of more detailed indicators.

Table A8.1 illustrates how this might be done to assess how the issue of participation was being developed by the project for one or more of its design or operational activities. The current status of the project can be completed by either an objective assessment by an independent reviewer or evaluator. The answers could be simple "yes" or "no", or could involve a wider scale of measurement to include categories of "sometimes" for example. The appraisal could be based on an approach that used PRA techniques to elicit the views of the various interested or involved parties.

Table A8.1

EXAMPLE OF INDICATORS TO ASSESS THE STATUS OF PROJECT ACTIVITIES

eg PARTICIPATION IN PROJECT DESIGN OR OPERATIONAL ACTIVITIES

TYPES OF PARTICIPATION		PROJECT STATUS
NONE	No information transmitted	
PASSIVE	People told and no response solicited	
GIVING INFORMATION	People answer preset questions/questionnaires	
CONSULTATION	Experts talk with people and may modify analysis and objectives	
MATERIAL INCENTIVES	People work on activity for payment but have no stake in decisions	
FUNCTIONAL GROUPS	People form groups to meet preset objectives	
INTERACTIVE	People participate in joint analysis, planning and implementation with external groups	
SELF-MOBILISATION	People form own groups for analysis, planning, implementation and monitoring	

APPENDIX 9 CHECKLIST OF SUSTAINABILITY ISSUES AND INDICATORS

A9.1 INTRODUCTION

The following appendix forms a checklist of the issues that were raised in the consultancy. These are all issues which people thought would have an effect on the sustainability of the project activities for strengthening institutional capabilities for biodiversity. The fora include the various discussions in the three countries with experts from within and outside of government, the seminar and workshop discussions, the workshop papers and the conclusions of the consultant's analysis as presented in **Chapters 3 and 4** of the main text.

A9.2 CLASSIFICATION

In compiling the checklist a classification system has been overlaid onto the issues. This classification system draws on the discussion in **Appendix 8** and indicate the position of these sustainability issues with respect to the following criteria:

(a) The general subject category under which the issues fall. The categories used are:

i. Issues and indicators in the institutional framework that inhibit society's ability to manage biodiversity in sustainable ways.

ii. Issues and indicators inhibiting the project to be designed and proceed in a sustainable way including: Management and finance; Trained personnel; Data and understanding; Acceptability and; Participation

(b) The stages in the planning cycle pertinent to addressing the issue abbreviated as:

All = Question or monitoring relevant at any or all stages
Des = Design stage
Opn = Operational stage
Post = Post-project stage

(c) The likely time period over which changes in any measured variable might be detected abbreviated as:

ST = Short-term time frame of rate of change likely
LT = Long-term time frame of rate of change likely

(d) Whether the issues are project specific or more general influences external to the project abbreviated as:

Proj = Project Related
Gen = General Issues

(e) The level of interface where the issue is most relevant abbreviated as:

Int = International
Don = Donor
Natn = National
Proj = Project
Loc = Local community

A9.3 CHECKLIST OF SUSTAINABILITY ISSUES

A9.3.1 Issues and indicators in the existing institutional framework for biodiversity that inhibit ability to manage biodiversity in sustainable ways.

- Is National capacity for decision-making relating to biodiversity based on an understanding of what sustainable development means for the country? Are National Sustainable Development Strategy processes in place?
  (All / LT / Gen / Natn-Loc)

- Does the rationalization and streamlining of the institutional framework for responding to international and national biodiversity needs improvement? Are co-ordination mechanisms between sectors and levels of the government developing? (All / LT / Proj / Natn)

- Are Agencies clear as to their roles in regulation, advice, implementation, coordination and funding activities for Biodiversity? (All / ST / Proj / Natn)

- Has an Environmental Agency been created with authority to regulate and coordinate all aspects of biodiversity conservation and management? (Opn / ST / Proj / Natn)

- Are 'Biodiversity Linkages' established amongst bodies and groups dealing with:
  * Biodiversity research, education and training? (Opn / ST / Proj / Natn)
  * Biodiversity conservation? (Opn / ST / Proj / Natn-Loc)
  * Management of biological resources for direct utilisation? (Opn / LT / Proj / Natn-Loc)
  * Creating impacts on biological resources? (Opn / LT / Proj / Natn-Loc)

- Has the capability for setting up and maintaining an information system and a culture for the appropriate use of this information established. (All / LT / Proj / Natn)

- Are gaps in biodiversity coverage identified and adequately filled? (e.g. micro-organisms). (All / ST / Gen /Natn)

- Does institutional pluralism still enhance or promote inter-agency conflicts?. (All / ST / Gen / Natn)

- Does institutional pluralism promote a diversity of approaches and viewpoints and a broader perspective on the conservation and management of biodiversity? (All / LT / Gen / Natn-Loc)

- Are environmental policies and laws reviewed, consolidated and gaps filled as suggested in **Appendix 7, Table A7.3?**. (All / LT / Gen / Natn)

- Has Environmental regulation been made legally mandatory? (All / ST / Gen / Natn-Loc)

- Is the ability to enforce laws developing through more capable management agencies at various levels? (All / LT / Gen / Natn-Loc)

- Are mechanisms established to avoid or reduce political interference? (All / LT / Gen / Natn-Loc)

- Do Institutions and the project use management systems that are :
  internally democratic in their functioning?
  promote the free exchange of information?
  promote the just use of institutional resources? (All / LT / Gen / Int-Natn-Loc)

- Do the institutional linkages accommodate and promote socio-cultural and institutional diversity, rather than a single point of view or a way of acting. (All / LT / G / Int-Natn-Loc)

A9.3.2 <u>The issues and indicators which may inhibit or have inhibited project design and progress.</u>

1. Management and Finance

- Was the international management and administration (to deliver GEF inputs and transfers of information and technology) designed to reflect national priorities? (Des / ST / Proj / Don-Pro)

- Was the project framework designed to be integrated and consistent with national institutional and management systems after donor withdrawal of support operations? (Des / ST / Proj / Don-Nat)

- Was the role of international staff in management, research, training or consultancy matched to institutional needs and capabilities after the project? (All / ST / Proj / Proj)

- Has long-term financing capacity for the incremental capital and recurrent costs generated by the project been considered, for both national and regional activities? (Des / LT / Proj / Don-Natn)

- Are Donor (eg GEF) commitments moving away from short-term project funding mechanism to long-term programme commitments? (Des / LT / Gen / Don-Nat)

- Is the project management structure, and so the operational decision-making process, localised nationally or regionally as is appropriate? (Opn / ST / Proj /Proj)

- Are there criteria for monitoring the efficacy, efficiency and relevance of use of project inputs? Are they monitored and fed back into design and management decisions? (Opn / ST / Proj /Proj)

- Are GEF criteria for future funding clearly internalised by the responsible planners and agencies of Government so as to prepare future funding proposals? (All / ST / Gen / Natn)

- Has significant and adequate global interest in biodiversity been maintained so as to continue international and donor support? (All / LT / Gen / Natn-Int)

- Are national level funding arrangements designed? (Des / ST / Proj / Proj)

- Are these funding and local commitments operational? (Opn+Pos / ST / Proj / Proj)

- Are there considerations of long-term financial capacities to maintain international linkages for collaborative research and consultancy purposes? (Pos / LT / Proj / Proj)

- Are there incentive structures to attract and retain local experts as indicated by differentials in salary levels inside and outside of government. (Any / LT / Gen / Natn)

2. Training

- Is there appropriate 'training of trainers', with ability to upgrade national expertise in a sustainable manner? (All / ST / Proj / Proj)

- Will there be an on-going availability of trained national expertise to complete critical activities for various aspects of biodiversity

conservation and management? See **Appendix 7. Table A7.1** for list of critical areas. (Opn+Pos / LT / Gen / Natn-Loc)

- Have appropriate and adequate institutions been supported or developed within the region to host the training of new people and periodic refresher courses? (Opn+Pos / LT / Proj / Natn)

- Does training maximise local learning abilities through in-situ interface with community conservation activities? (Opn+Pos / LT / G / Natn-Loc)

- Is there a transfer of knowledge obtained from training and research? Has this created improved capacity to carry out scientific and community-based conservation and management? (Opn + Pos / LT / Gen / Natn-Loc)

- Is there a decreased dependency on international experts at various levels of management and technical operations? Do collaborative ventures reduce self-reliance and indigenous capacity building? (Opn+Pos / LT / Gen / Int-Natn)

- Is there an output of trained bio-systematists, parataxonomists and policy analysts? (Opn+Pos / LT / Gen / Natn)

- Is there an output of trained local personnel who can be employed by organisations involved in biodiversity conservation and management programmes? (Opn+Pos / LT / Gen / Natn)

- Have training courses been established for networking skills? (Opn+Pos / LT / Gen / Natn)

3. Access to Data and Understanding

- Are research and database activities of the project designed to make available well-managed data and information that are necessary for:

  the design and monitoring of national and global policies, strategies and action plans?

  impact assessments?

  awareness and educational programmes in all sectors and at all levels? (All / ST / Gen / Nat-Loc)

- Do research and monitoring priorities include indigenous knowledge? (All / LT / G / Loc)

- Have capacities increased for local research, and local compilation and production of field guides, manuals and books on biodiversity? (All / LT / Gen / Natn-Loc)

- Is there increased involvement of trained and experienced national personnel in developing and carrying out field, laboratory and policy research? (All / LT / Proj / Natn)

- Is there access to relevant collaborative international institutional and specialist expertise? (All / ST / Gen / Int)

- Has the ability to generate, exchange, receive and effectively utilise information and expertise been internalised within each of the linked institutions. (All / LT / Gen / Int-Natn-Loc)

- Has the need and value of institutional and database linkages, and the value of information and expertise exchange itself been recognised within each institution? (All / ST / Gen / Int-Natn-Loc)

- PIs there persistent dissemination of information and raised awareness

on the values of biodiversity amongst: Ministers, MPs, Treasury and senior planners, impacting ministries, media, academic institutions, private sector, district administrations, and local communities? (Opn / ST / Proj / Natn-Loc)

- Is the mandate and role of the executing agency clearly detailed and understood by national governments? (All/ ST / Proj / Natn)

- Are the links between conservation of biodiversity and the alleviation of fundamental problems like hunger, poverty, disease, and social and economic insecurity being demonstrated publicly? (Opn+Pos / ST / Gen / Natn-Loc)

4. Acceptability

- Is there acceptance, within the government, of the desirability of biodiversity conservation? (All / LT / Gen / Nat)

- Has increased political support been noted by issues being placed on political agendas? (All / LT / Gen / Natn-Loc)

- Are the regulatory institutions seen to have moral authority, administrative seniority, sectoral objectivity and overview? (All / LT / Gen / Natn)

- Are efforts and mechanisms in place to increase public control over and sustained access to biodiversity resources (i.e. memoranda of understanding, policy participation, resource tenure, protection of common property resources). (All / LT / Gen / Natn-Loc)

- Is there a mechanism in place to ensure environmental actions and processes are adequately transparent to the public, thereby ensuring public accountability for decisions and actions affecting biodiversity and natural resources? (All / ST / Gen / Natn)

4. Participation

- Have participatory donor coordination mechanisms been established. (Opn / ST / Gen / Don-Natn)

- Have participatory donor decision-making mechanisms been established with respect to project design, funding, implementation and institutional arrangements? (Des+Opn / ST / Proj / Don-Natn)

- Does project design or re-design involve a participatory and consensus building approach to establish relative priorities of global, donor, regional and national priorities towards biodiversity? (Des+Opn / ST / Proj / Don-Natn)

- Does project design or re-design involve a participatory and consensus building approach which collaborates with many levels of government and stakeholders to assess local and national priorities towards biodiversity? (Des+Opn / ST /Proj / Don-Nat)

Is there greater institutional capability and political will to involve the people, especially the rural stakeholders, in the decision-making and management processes which concern biodiversity? (All / LT / Gen / Natn-Loc)

- Is there people's participation in the functioning of institutional linking processes?(All / LT / Gen / Natn-Loc)

A9.3.3 <u>Indicators that derive directly from stated project outputs in the Project Document.</u>

1. Biodiversity coordination

- The leading national environmental agencies established with functional biodiversity units which have the capacity to coordinate national biodiversity issues. (Any/ST/P/Nat)

- The national environmental agencies of government established under the project with a functioning project steering committee. (Opn/ST/P/Pro)

- National environmental agencies contributing to development of National Biodiversity Strategies. (Opn/ST/P/Pro)

- Criteria developed by which project components can be evaluated. (Opn/ST/P/Pro)

- Programme capability for further technical assistance is developed for biodiversity. (Opn/ST/P/Pro)

- Land-use and development agencies in government and private sectors have developed greater understanding and awareness of 'wetland' resources, and developed a commitment to the conservation of wetland biodiversity. (Opn+Pos/LT/G/Nat)

- Coordination of technical research and training activities achieved at regional level, with greater cooperation in dealing with biodiversity matters. (Opn+Pos/ST/P/Int-Nat)

2. Training

- University teaching staff with responsibility for conservation have specialist training and facilities. Curricula and training needs detailed in technical reports. Conservation practices detailed in technical manuals. (Opn/ST/P/Pro)

- A programme of in-service training for forest conservation developed for national government forest departments. (Opn/ST/P/Pro)

- Existing programmes of environmental and biodiversity awareness at school level are strengthened. (Opn/ST/P/Pro)

- Pasiansi Wildlife Training School in Tanzania with adequate field training capability and more complete syllabus of instruction. (Opn/ST/P/Pro)

- Greater use of modern methods of environmental accounting / economic valuation of natural resources in Government planning, EIA activities, economics teaching etc., leading to improved awareness of resource conservation needs at high levels of Government. (Opn+Pos/LT/G/Nat)

- Regional interchange of ideas and staff facilitated in East African Universities. (Opn+Pos/LT/P/Int-Nat)

- Conservation teaching made more responsive to integrating the needs of local people with conservation and protected area design. (Opn+Pos/LT/P/Nat)

- The developing National Parks Authority of Zanzibar with manpower training at planning and management levels. (Opn+Pos/ST/P/Pro)

3. Research

- National databases for biodiversity created, strengthened and operational, within key scientific and policy sections of environmental agencies. (Opn/ST/P/Nat)

- Research and management agencies dealing with biodiversity have

functional resource inventory and research programmes with trained national staff. (Opn+Pos/ST/P/Pro)

- Information on national and regional biodiversity issues produced and disseminated by research institutions. (Opn+Pos/LT/P/Nat)

- Information on biodiversity issues is integrated into national planning and development processes through environmental agencies. (Opn+Pos/LT/P/Nat)

- Technical report published on database development activities in the region. (Opn/ST/P/Pro)

4. Conservation field activity

Kenya: Joint natural forest management initiatives between Forest Department and Wildlife Services have adequate pre-service and operational in-service training activity. (Opn/ST/P/Pro)

Tanzania: Coastal Forest Conservation Project, (Tanzania Forest Action Plan TFAP-EC2) funded via a local NGO for implementation. (Opn/ST/P/Pro)

Uganda: Integrate planning completed for a major joint conservation / community development project in the wetland-forest complex of the Sango Bay area of South Uganda. (Opn/ST/P/Pro)

The remaining areas of forest still un-gazetted and of conservation value in southern Uganda are assessed and given greater protection. (Opn+Pos/ST/P/Pro)

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