
The Implementation of Biodiversity-Related Conventions
A Kenyan case study

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Introduction

The following report consists of a study of the state of national implementation of international obligations under biodiversity conservation and use in Kenya. The study focuses on the legislative and a policy measure adopted in 1995. It also includes some consideration of ground level implementation. The latter has been included as it provides valuable information on difficulties experienced in implementation. The study includes analysis of both the implementation of international obligations and only incidentally addresses questions relating to the state of biodiversity in Kenya.

The study is intended to address a framework of basic points in its analysis:

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- i) special circumstances affecting implementation;
- ii) legislative and policy measures adopted to implement obligations;
- iii) authorities/agencies responsible for implementation;
- iv) legislative/policy measures to co-ordinate this implementation;
- v) regional institutions/mechanisms to co-ordinate the application of regional agreements and/or agreements
- vi) problems identified in co-ordinating national implementation; and,
- vii) best practice drawn from national experience.

This structure has been broadly followed (not necessarily in this order) but in the case of the analysis of the Convention on Biological Diversity (CBD) it has been subdivided according to the articles of the convention on the basis that this provides a clearer context for the issues addressed by the agreement.

Biodiversity policy in Kenya has historically been coordinated by the National Environment Secretariat (NES) under presidential directive and has never been provided with statutory legal status, and as a consequence has no direct legal authority. NES has been consistently under funded and has thus been unable to respond to the breadth of its responsibilities. From dramatic developments such as the results of the United Nations Conference on Environment and Development, a principal result of these shortcomings has been that NES has not been able to adequately coordinate the multiple mandates involving biodiversity issues. This has led to fragmented legislation, policies and implementation. The interests of the major lead agencies such as the Kenya Wildlife Service (KWS), the Kenya Agricultural Research Institute (KARI), the Forestry Research Institute (KEFRI) and the National Museums of Kenya (NMK). Thus, while NES has had responsibility for the national environment action plan (NEAP) and, more recently, a national biodiversity strategy and action plan (NB

NBSAP), it has not used these processes to coordinate and achieve significant impact on the activities of the lead agencies.

The response to the difficulties experienced by NES has been the recent enactment of the National Environment Management and Coordination Act (2000). This Act has created a state of flux in Kenya's environmental management. It represents a watershed that encompasses completely new administrative structures as well as specific standards. It broadens the traditional approach to questions of *locus standi*, or standing, in the Kenyan legal system. This is a recognition of standing without a showing of direct harm or personal loss: any Kenyan citizen now has the right to sue to protect the Kenyan environment. While the Act's establishment of a legally powerful National Environment Management and Coordination Commission represent a solution to the problems experienced by NES this will not be clear until details such as the func

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determined. This is particularly true due to the fact that while the Environment Management and Coordination Act biodiversity policy it leaves the details of many areas to the promulgation of regulations by NEMA. If NEMA is unable to attract the highest quality staff there will inevitably be significant problems and delays in the implementation.

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1. State of Implementation of the Convention on Biological Diversity in Kenya

The Convention on Biological Diversity (CBD) objectives are set forth in Article 1 of the Convention, namely

“the conservation of biological diversity, the sustainable use of its components and the fair and equitable the utilization of genetic resources.”

The CBD is the first global comprehensive agreement to address all aspects of biological diversity¹: genetic resou

Kenya has signed (11.06.1992) and ratified (26.07.94) the CBD. Contracting parties are required to individ implement the Convention according to their own particular circumstances. The following section analyses the ir Biological Diversity (CBD) in Kenya article by article. The theory underlying this approach is that the comple precludes a more thematic structure. Where appropriate linkages between the implementation of various art considering ‘soft’ obligations, such as recommendations or suggestions from Conferences of the Parties (C obligations created by the Convention itself but also those resulting from successive COPs.

Article 5. Cooperation

Kenya is a Party to the majority of environmentally related conventions and agreements and thus clearly ful through competent international organizations both in respect of areas beyond national jurisdiction and in res within its jurisdiction, as mentioned elsewhere in this report. There is also a long history of cooperation on cross in the case of the Serengeti – Maasai Mara migration routes but has frequently involved other cross border ecosys support for the UNDP-GEF East African Cross-Border Biodiversity Conservation Project, involving Kenya

¹ The Convention define “biological diversity” to include “the variability among living organisms from all sources including, among oth aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ec

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commitment to cooperative management. The main weaknesses in cross-border cooperation are in the north of the effective and consistent management strategies.

Article 6. General Measures for Conservation and Sustainable Use

Kenya has developed a National Environment Action Plan (NEAP) and has completed the preparation of a draft Action Plan (NBSAP). A draft summary of the NBSAP has been made public and in particular has been communicated. Additionally Kenya has produced various sectoral strategies, plans and programmes, in particular the Forestry Management Strategy.

In Part IV, Environmental Planning, the Environment Management and Coordination Management Act 2000 provides for environmental planning that seems likely to be significantly concerned with biodiversity. This system is built on the National Environment Action Plan (NEAP) and the committee established to prepare and oversee that plan. It is envisioned that the core information provided in provincial environment action plans. These will, in turn, be based upon district environmental action plans. To what degree the district and provincial environment committees will have access to relevant expertise in the preparation of these plans, NEMA is able to provide this there be some inherent difficulties with implementation.

The NEAP will be prepared every five years and be submitted to Parliament for approval. The effect of this is expressed in section 38(1) where it is stated that the NEAP shall:

“be binding on all persons and all government departments, agencies, state corporations or other organs of the State and the National Assembly.”

The NEAP Committee is established as a fairly inclusive body including a wide range of government ministries for the inclusion of NGOs, the private sector and specialised research institutions. The one sector that is not included in the committee, however, is communities themselves. This is frequently difficult to achieve but it would seem that the provincial committees that has been established could be used for this purpose.

The structure and inclusiveness of the NEAP Committee is indicative of general practice on environmental issues. For example, be the National Advisory Research Committee on Genetic Resources that includes representatives of eight sectors. The Biosafety Committee is similarly broad in its makeup. This inclusiveness maximises the chance that environmental issues are addressed in the various sectoral and cross-sectoral plans, programmes and policies of the Government of Kenya. However,

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ministerial and inter-agency cooperation there are sometimes difficulties in communication between relevant parties resulting from factors such as inadequate staffing levels and, occasionally, institutional rivalries.

Article 7. Identification and Monitoring

Kenya's First National Report to the Conference of the Parties includes a section specifically addressing monitoring. It tends to speak in terms of what should be done rather than what is. This reflects the on the ground approach - comprehensive approach. Different lead agencies look at different areas and issues and act on the basis of the context. The lead agencies do tend to cooperate to varying degrees but this occurs on an ad hoc basis and is further point to be noted is that most monitoring tends to be on the basis of indicator species rather than any comparison and evaluation.

Specific agencies and activities involved with identification and monitoring include:

1. In 1992 Kenya produced its National Biodiversity Country Study. This has formed the basis of a variety of NEAP and NBSAP.
2. The Kenya Wildlife Service has considerable capacity for monitoring and evaluation that is general surrounding 'buffer zones'. In recent years this has expanded with activities aimed at evaluating various such as Ramsar and the WHC. KWS monitoring and evaluation activities are, like many of their other strategies particularly elephants, as indicator species. KWS is also probably the most important agency in monitoring it has large numbers of staff, principally in the form of rangers but also including numerous scientists, in the field. KWS also has capacity to undertake environmental impact assessments and this contributes greatly to the activities.
3. The National Museums of Kenya, through its botanic gardens and herbarium, is extensively involved in and focused on identification and monitoring. While these initiatives have been well planned and executed, at a cross-indexed database with assistance from the Royal Botanic Gardens at Kew (UK), they have been short of skilled manpower. The result of this is that some areas of the country have still never been covered by a collection visited for forty years or more. This is particularly true in the north of the country where the resources focus to the often need for accompanying security.
4. The Government of Kenya also has a well established Department of Resource Surveys and Remote Sensing which suffers from the normal problems of resources but is also frequently not involved in the planning stages of

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5. In the pursuance of their mandates the main research universities (through a variety of departments: management, botany, pharmacology and pharmacognosy etc.) frequently produce information of relevance. Also through the nature of their activities the universities tend to have better connections to lead agencies. The information produced is relatively well distributed and accessible. The research universities almost exclusively conduct research. Only a few relatively numerous private institutions are only recently beginning to conduct substantive research activities.
6. A wide range of NGOs and research institutions conduct significant activities in Kenya. These tend to be able to provide a wealth of data useful for baseline studies and frequently also ongoing monitoring and evaluation. Research tends to be conducted more by research institutions than NGOs while the NGOs are quite effective in assessment. They have great potential as indicators. The level of integration of this information with that produced by other agencies varies. The individual characteristics and mandates of the organisations involved.

Relative to the resources available Kenya conducts a wide range of effective identification and monitoring activities with good coordination and direction. This results mainly from a situation of overlapping mandates with the lack of an agency. Consequently the currently ongoing implementation of the Environment Management and Coordination Act 2002 has two articles of particular relevance:

Article 38 "*The national environment action plan shall –*

- a) *contain an analysis of the natural resources of Kenya with an indication as to any pattern of change in their quality or quantity over time; "*

Article 69(1) "*The Authority shall, in consultation with the relevant lead agencies, monitor: -*

- a) *all environmental phenomena with a view to making an assessment of any possible changes and their possible impacts; .."*

Article 69 could be interpreted as providing the mandate for NEMA to act as the umbrella agency for identification and monitoring.

Article 8. In-situ Conservation (excluding Article 8(j))

The core of Kenya's implementation of Article 8 of the CBD, can be found in the provisions of the Wildlife Conservation (Amendment) Act, 1989. This Act establishes the Kenya Wildlife Service and contains its mandate. The main objective is set out in Article 3A – Functions of the Service. In brief these cover all issues relating to protected areas, terrestrial and marine wildlife and the management of wildlife in general. KWS has traditionally taken a broad view of the term 'wildlife' and, while its

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always had considerable interest in flora and other types of fauna. A substantial part of the reasoning here has been maintained then this will automatically protect the habitat of flora and other fauna. A good example of this broad protected areas, such as Saiwa Swamps National Park, have been established for reasons other than those involved in the mandate, commitment from the Government and significant donor support KWS has consistently been able to manage protected areas in an effective manner with substantial breadth and depth to their activities.

The Forest Department is the other agency that manages a system of protected areas that are critical for *in-situ* conservation initiatives here have included the Kenya Forestry Master Plan, the Kenya Indigenous Forest Conservation and Management Project. Forest Department activities include an extension service for on-farm conservation arrangements with KWS in the management of specific areas such as the Guineo-Congolian Kakamega Forest and Arabuko-Sokoke Forest. The Forest Department is also extensively supported by the work of the Kenya Forestry Research Institute which conducts a wide range of activities but particularly significant in the context of *in-situ* conservation are its research on communities living in and around key forest areas and also its efforts at supporting the propagation and cultivation of native species.

The National Museums of Kenya also has an active role in *in situ* conservation activities. This principally consists of the Plant Conservation and Propagation Unit (PCPU). The PCPU targets vulnerable areas and conducts research on rare, endangered and endemic species. Where necessary seed germplasm and replicate plant stocks can be stored for future use.

Kenya hosts several hundred NGOs, many with an environmental focus. A large number of these organisations conduct conservation activities whether targeted at specific geographic areas or particular species. However, NGO activities are not generally coordinated with government agencies. Kenya also acts as host for several specialised research centres, including the headquarters of three International Agricultural Research Centres (IARCs). The IARCs all have programs tying *in situ* conservation into their agricultural development goals. Environmental coordination in either the planning or implementation of such activities.

Kenya's participation in the development of the Cartagena Protocol was led by the National Council for Science and Technology which continued to operate as the lead agency subsequent to the completion of the Protocol and plays host to a National Biosafety Committee which is inter-ministerial and cross-sectoral in nature and is aimed at ensuring effective planning as regards biosafety. The Plant Health Inspectorate Services (KEPHIS) and the Kenya Agricultural Research Institute (KARI) have both been active in this field. The main difficulties in the field of biosafety in Kenya have been questions of resources and capacity. Kenya has a relatively impressive capacity in biotechnology, in both scientific and policy terms, for a sub-Saharan African country. A major limit when addressing biosafety concerns. This problem becomes particularly acute when conflict of interest arises. Several biotechnology multinationals have major interests in some of the research centres. There are various initiatives to address this deficit, including the Biotechnology East African Regional Network (BioEARN) led by the Stockholm Environment Institute.

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indigenous regional initiative, coordinated by an IARC, involving most of the research universities. These initiatives guaranteeing the future viability of biosafety capacity but are highly vulnerable due to donor dependency.

The monitoring and control of the introduction of alien species falls under the mandate of a number of agencies. acute problems experienced with invasions such as that of the Water Hyacinth in Lake Victoria. There is a history well, as demonstrated by the introduction of the Nile Perch that also had major negative impacts on indigenous result most agencies, from the fisheries department to KWS have some actively engaged capacity in the field. institutions have also shown themselves to be innovative in addressing the impacts of invasive species. Although available would seem to indicate a successful strategy there is once again a problem of coordination, poor implementation. Examples of the impact of this can be seen in the numerous, often independent, strategies employed. This state of affairs can often be problematic as expertise is frequently highly sectoral and thus impact assessments impacts, can be flawed. The legislative picture as regards alien species reflects this general situation. There is species issue is also covered by the mandates of almost all lead agencies without any overall coordinating agency possibility that this problem will be addressed by the establishment of NEMA as the Environment Management reference to alien species in several places, including articles 42(1)(c) and 51(e). However, this is likely to require the mandate provided by the Act is not particularly clear or strong.

Article 8j Traditional knowledge and related provisions

The CBD requires that, subject to national legislation, Parties respect, preserve, maintain and appropriately promote practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation diversity. These requirements are relatively subjective and difficult to assess in terms of implementation. However, developed ever more detailed criteria for implementation.

Decision III/14. Implementation of Article 8(j)

The main requirement under this decision was a request that Parties develop national legislation and corresponding obligations. Kenya has not yet developed such legislation but various legal and policy steps have been taken. The Environment Management and Coordination Act 2000 does contain a provision related to Article 8(j):

Article 51 *“The Authority shall, in consultation with the relevant lead agencies, prescribe measures adequate to protect biological resources in-situ and in this regard shall issue guidelines for.. –*

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f) integrating traditional knowledge for the conservation of biological diversity with mainstream

It is not clear whether 51(f) is a step towards the fulfilment of Kenya's obligations as it does not make direct reference to preserve, maintain and appropriately promote traditional knowledge. This will only become clear once NEMA introduces legislation on the issue.

At the policy level the Kenya Industrial Property Office (KIPO) has been making considerable efforts in its outreach to holders of traditional knowledge. This has been based upon the fact that KIPO would like to encourage informal protection of various forms of intellectual property protection, principally utility models, technological innovations and trademarks. New legislation is expected to be passed in the parliamentary term beginning March 2001. This includes provisions for the protection of traditional knowledge in a further form of protection that KIPO would like to see used by traditional knowledge holders.

A number of lead agencies have instituted activities that are intended to further the goals of Article 8(j), through activities conducted by the Kenya Forestry Research Institute (KEFRI) and the National Museums of Kenya (NMK). KEFRI has established ethnobotanical gardens around the country that it is hoped will both act as local level *ex situ* collections and more broadly support the continued use of traditional medicines. NMK has established an institution that is best described as a QUANGA. The Kenya Indigenous Knowledge (KENRIK) has thus far principally been involved in developing a bibliography of ethnobotanical knowledge in Kenya. However, it hopes to become a coordinating agency for such research in the future, particularly through the Kenya Society for Ethnoecology.

Further initiatives have not yet been undertaken but all of the lead agencies relevant to the implementation of Article 8(j) have committed themselves to a program of research on options for the development of national legislation for the protection of traditional knowledge in Kenya. This proposal is at an early stage of development but it is hoped that it will be underway soon. Donors have expressed interest in the project a key difficulty has been the availability of resources to develop and implement activities prior to their commencement.

Decision III/14 also requested Parties to forward information and case studies to the Secretariat. Kenya's first report on traditional knowledge but simply made the observation:

"There are gaps in the legal framework regarding indigenous knowledge, as it is regarded as a product of nature."

² Summary of existing laws and regulations, p.16.

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Consequently no substantive information has been forwarded as regards current initiatives and policy developments prepared to date are generally focused on the substance of knowledge rather than on legal and policy implications by individual academic researchers, thus none have been forwarded to date. However, it is expected that future legislation or regulatory measures will be based upon case study research so it is likely that the level of information

Article 9. Ex-situ Conservation

Provisions for the *ex-situ* conservation of biodiversity are quite widespread in Kenya with a number of agency activities.

1. The National Genebank of Kenya. The Genebank has been operative for over ten years and has a collection of species. Approximately half of these are currently commercially useful, either at the micro or macro level. The collection is considered to have commercial potential. Consequently biodiversity conservation tends to be incidental to the bank's central to it. There is certainly consideration of the conservation status of the accessions held, and of the status of the species in general, but there is no real policy of targeting endangered or threatened species that are not agriculturally useful factors but the most significant of these is that the Genebank's parent institution is the Kenya Agricultural Research Institute which has a mandate for broader conservation activities. Combined with this is the fact that limited resources and staff have to prioritise, broadening its mandate to cover all threatened and endangered plant species would clearly overwhelm the institution.

2. The National Museums of Kenya (NMK) has a number of *ex-situ* conservation related activities, principally in the area of Biodiversity. These activities specifically target threatened and endangered species and ecosystems. Where necessary, limited storage of seed germplasm and conduct replication. NMK also houses a plant nursery display garden, the East African Herbarium. These departments contain a wealth of information, both current and historic, and the propagation and reintroduction activities where necessary. The PCPU, mentioned earlier in the context of *in-situ* conservation, also has these *ex situ* conservation strategies. NMK is also currently conducting large-scale collection missions in partnership with Kew (UK) as part of Kew's Millennium Seed Bank project³. This project targets the arid and semi arid land in the western third of Kenya's territory and intends to collect the widest possible range of all plant genetic resources from that extent possible, within national capacities, duplicate samples will be deposited with appropriate national institutions.

³ This project also involves the majority of the other lead agencies such as KWS, the Forest Department and KEFRI but NMK is the coordinator.

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3. The Kenya Forestry Research Institute (KEFRI) contains several sections with activities that relate to the reintroduction of indigenous tree species but also other forest related species, particularly medicinal plants. The sections is the seed unit that replicates and freely distributes tree seeds. These are mostly indigenous species but also commercially useful species. KEFRI has also undertaken significant activities involving medicinal plants, including the establishment of a series of ethnobotanic gardens in various parts of the country.
4. The Forest Department (FD) maintains the Nairobi Arboretum that contains approximately 100 hectares of forest. With the assistance of an NGO, the Friends of Nairobi Arboretum, there has been considerable success in the management of the arboretum.
5. The public universities, principally the University of Nairobi (UoN), have played a significant role in *ex-situ* conservation activities. This has mostly been based in botany and agriculturally related departments as part of their mandate. However, they are plagued by chronic under funding – UoN is frequently unable to even buy light bulbs for drying plant specimens.
6. The Kenya Marine and Fisheries Research Institute (KEMFRI) has significant stations on the Coast and on Lake Victoria. It has some capacity for *ex-situ* conservation activities but of late it probably suffers the most from under funding and consequent problems of capacity. With its headquarters in Mombasa, it has problems of coordination as nearly all other research centres are based in and around Nairobi.
7. The International Agricultural Research Centres (IARCs) located in Kenya include two with significant *ex-situ* conservation capacity for Research in Agroforestry (ICRAF) and the International Livestock Research Institute (ILRI). Both of these are international level efforts both in terms of extension work and capacity building and more directly in terms of providing technical support. The International Centre of Insect Physiology and Ecology (ICIPE) also holds a small amount of material, particularly with insect pathogenic value. ICIPE also has significant capacity for insect breeding although this has not been used for conservation and reintroduction purposes. Kenya is also an active supporter of other IARCs, particularly the International Centre for Maize Improvement (CIMMYT), the International Rice Research Institute (IRRI), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), the International Institute for Tropical Agriculture (IITA), the International Centre for Tropical Agriculture (CIAT) and the Potato Centre (CIP).
8. A number of community based organisations (CBOs) and NGOs conduct *ex-situ* conservation activities, mostly of the technology type. Such initiatives include the ethnobotany project of the Ilkerin Loita Development Project and the establishment of community seed banks by the Intermediate Technology Development Group – Kenya (ITDG-Ke).

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As the above information illustrates *ex-situ* conservation strategies are fairly widely practiced in Kenya. However, agricultural, and to a slightly lesser extent ethnomedical, resources rather than targeting threatened and endangered species in general. This focus is mostly one of necessity as funds and infrastructure are extremely limited, threatening the projects. NMK conducts some activities with a broader scope but these are still limited by resource and the Environment Management and Coordination Act contains the following provisions:

Article 52 “The Authority shall, in consultation with the relevant lead agencies –

- a) *prescribe measures for the conservation of biological resources ex-situ especially for those species threatened with extinction;*
- b) *issue guidelines for the management of:-*
 - i) *germplasm banks;*
 - ii) *botanical gardens;*
 - iii) *zoos or aquaria;*
 - iv) *animal orphanages; and*
 - v) *any other facilities recommended to the Authority by any of its Committees or considered necessary;*
- c) *ensure that species threatened with extinction which are conserved ex-situ are re-introduced into their natural habitats where:*
 - i) *the threat to species has been terminated; or*
 - ii) *a viable population of the threatened species has been achieved.”*

This Article clearly provides for an effective implementation of CBD Article 9 but given the experiences of the past, it would seem to be a significant question over Kenya's capacity to successfully follow through on these requirements and commitments from the donor community. The donor community has been supportive in the past but this support is of a specific nature, something that is not effective for a comprehensive program of *ex-situ* conservation.

Article 10. Sustainable Use of Components of Biological Diversity

Through the structures of its National Environment Action Plan (NEAP) and National Biodiversity Strategy and Action Plan, Kenya has developed a potentially effective structure for ensuring the sustainable use of biodiversity. These policies are contained in the Environment Management and Coordination Act but their effectiveness is yet to be fully established. The NEAP has a longer history and has had some measure of success but lead agencies still mostly tend to operate sectorally with collaborative i

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than the rule. This does often lead to effective measures and strategies in particular geographic regions or constituting a comprehensive approach.

Customary use of biodiversity is encouraged selectively. In general Government initiatives in the agricultural introduction of improved varieties and increasing levels of technology with the aim of increasing yields and t Equally health policies tend to focus on the provision of western health care and medicines. However, some lea practices within their own operations. Particularly notable are the roles of the Ministry of Culture, KEFRI, the (KEMRI) and to some degree NMK in encouraging the use of traditional medicines. These initiatives frequ sustainable use practices.

Remedial action in the case of degraded ecosystems is a difficult proposition in Kenya. KWS has undertaken su certain protected areas, such as Amboseli National Park. However, the more general phenomenon is that resou attempting to prevent further degradation, principally brought on by the enormous population pressure facing : ways this emphasis is a policy decision in that Kenya's emphasis is on preventive measures rather than reme available these are considered to provide greater benefits when applied to preventive actions. In general the poli provisions⁴ support the concept of remedial action but in practice such activity is rare to non-existent beyond Permanent Presidential Commission for Soil Conservation and Afforestation that advises the government on rer As with most other initiatives the Commission is handicapped both by the scale of the problem and the limited res

Cooperation between the public and private sectors is generally encouraged, principally in an informal manner legislative provisions where committees are gazetted so as to include representation from the private sector Management Coordination Act provides for the inclusion of four representatives of the business community in the Committee. Historically cooperation between the public and private sectors has always been most effective convergence of interests since Kenya's main tourist attraction is its environment. Most national parks contain tou least have very close relationships with one's nearby. This form of cooperation is strictly monitored and enforce been occasional problems the relationship has generally been a mutually supportive one. In some instances, mo but also including the Bamburi Cement Company's restoration of an old quarry as an *in-situ* conservation and ec extended to companies developing individual initiatives but this practice has yet to spread more widely.

The most direct encouragement of sustainable use practices, particularly when considering customary use issu some degree research centres. However, as mentioned previously many of these activities tend to focus on very sj questions. When this is combined with the fact that the coordination and recording of NGO activity is generally

⁴ Most prominently the Environment Management and Coordination Act in Part IX covering environmental restoration orders.

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not being employed to its full potential. This problem can, to some degree, be addressed by Government policy but means that such a solution can never be more than a contributory factor.

Article 11. Incentive Measures

Incentive measures for the conservation and sustainable use of biodiversity are difficult to assess in Kenya. While negative, prohibitive, nature. The current provisions addressing EIAs that are contained within the Environment do not specifically mention biodiversity as a consideration. However, this is principally because the Act clearly is an appropriate tool for dealing with such questions. Given Kenya's past experience in the execution of EIAs, at least a significant input into the process, it would seem likely that biodiversity conservation will be a major consideration. Experts in EIAs are likely to come from the existing lead agencies, as they are the major source of such expertise. In exception these agencies place a high priority on biodiversity considerations. Further prohibitive measures under the Environment Management and Coordination Act, namely environmental restoration orders and environmental easement mechanisms do not specifically address biodiversity conservation but do contain provisions that could be considered

Article 108(4) *"Without prejudice to the general effect of the purposes set out in subsection (2) an order may require a person on whom it is served to.. –*

- b) restore land, including the replacement of soil, the replanting of trees and other flora and outstanding geological, archaeological or historical features of the land or the area contiguous to the land specified in the particular order;*
- f) prevent damage to the land or the environment, aquifers beneath the land and flora and fauna specified in the order or land or the environment contiguous to the land or sea specified in the order;*

Article 112(4) *"Without prejudice to the general effect of subsection (2), an environmental conservation order may require a person on whom it is served to.. –*

- a) preserve flora and fauna;"*

Both environmental restoration orders and environmental easements include the direct penalties of having to uncovers the cost thereof. Environmental restoration orders also carry additional provisions for the award of damages and for the awarding of costs. Finally there is the fact that, in Part XIII, the Environment Management and Coordination Act contains the most severe statutory penalties, in terms of both fines and prison terms, for environmental offences.

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The Wildlife (Conservation and Management) (Amendment) Act (CAP 376, 1989) also contains a range of incentives of a prohibitive nature. There are the more obvious penalties for the infringement of the Act's provisions but there are also incentives. KWS has the ability to set terms and conditions for, or even take control of, areas that are considered vital to the country under its jurisdiction. Consequently landowners whose property adjoins protected areas have a strong incentive to ensure that these areas do not produce adverse environmental impacts.

The Plant Protection Act (CAP 324, 1979) contains measures, once again generally of a prohibitive nature, aimed at protecting agrobiodiversity. The principal intention of this legislation is to prevent the introduction and spread of disease and pests that have impacts on agricultural crops. However, the provisions of the Act can be read as applicable to any pest or disease. Accordingly this Act can also be seen as implementing the requirements of Article 8 of the CBD as it addresses the prevention of the introduction of invasive alien species.

Positive incentive measures, particularly as they relate to the private sector, have not been well developed in Kenya. KEFRI do conduct activities, such as the provision of free tree seeds and extension services, as part of their mandate. However, these are internal policies of the lead agencies concerned rather than statutorily established. Despite significant political and financial support, institutional level extension services have suffered badly in the recent period of severe budgetary pressure. Most of the NGOs or other research institutions, have also made considerable efforts at developing alternative income generating activities in rural communities, particularly those living in and around threatened forest ecosystems. Such initiatives are explicitly not really gained recognition in other legislative instruments. They do not, as yet, attract any particular rewards that might encourage their implementation.

Article 12. Research and Training

The main thrust of the obligations contained in Article 12 is directed at developed countries to ensure support for developing countries. However, it is clear that developing countries also have an obligation to facilitate the provision of this support, and to develop a framework for its application. All of the public universities offer at least some training courses of relevance to biodiversity. These include the wildlife management courses offered by Moi University, the agriculturally related courses offered particularly at the Jomo Kenyatta University of Agriculture and Technology (JKUAT), and the botany and zoology courses offered at the University of Nairobi. Biodiversity considerations, particularly as regards monitoring and sustainable use, are also covered in departments and courses such as pharmacology and pharmacognosy, biochemistry, microbiology etc. Most of these courses have partnerships both with lead agencies and with the international research centres present in the country. They attract large numbers of students from all over the continent. A good example of both the cooperation and international partnerships in biodiversity initiatives can be found in the International Centre of Insect Physiology's African Regional Postgraduate Programme.

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Conducted in partnership with JKUAT, this program has successfully trained and graduated some 140 doctoral students in Africa.

Many of Kenya's lead agencies, most notably KWS, KEFRI, KARI and NMK, also actively support scientific research for both Kenyan and foreign students and professionals. This extends into post-doctoral and other research centers. Agencies have long had mechanisms for playing host to both academic and private sector researchers and initial good track record of seeking and supporting training for their staff both in Kenya and overseas. This is frequent support has normally been available to make up the gap.

Most of the initiatives in education and training are based upon the individual policies and practices of institutions that exist. Obvious examples include the mandate of the National Council for Science and Technology (NCST) in the 250) and the research mandates of lead agencies such as KWS. The Kenya Industrial Property Office (KIPO) also encourages activities involving technology transfer under the Industrial Property Act (1989). Kenya's legal encouraging foreign research in the country are discussed more fully in the section on Article 15 of the CBD below.

Article 13. Public Education and Awareness

The academic, at least as regards the tertiary sector, aspects of Article 13 have largely been covered by the earlier primary and secondary levels the Government does have requirements for environmentally related courses, particularly agricultural concerns, but these are not yet fully developed. The national media also tend to provide extensive coverage in general this coverage is not significantly affected by government policy. Lead agencies do, however, conduct awareness programs in fulfillment of their mandates. To the extent that they do not relate to specific activities, such as field projects, public education and awareness roles tend to be considered as implicit and do not appear in legislation. Normally general provisions included in the mandates of lead agencies, such as that for KWS in the Wildlife (Amendment) Act (1989):

Article 3A(e) *“provide wildlife conservation education and extension services to create public awareness”*

The NBSAP is the exception to this general rule but while it refers to public education and awareness it does not undertake.

Article 14. Impact Assessment and Minimising Adverse Impacts

Kenya has considerable experience in the conducting of Environmental Impact Assessments (EIAs) but until the Management and Coordination Act this was done on a fairly ad hoc, and sometimes flawed, basis. The Kenya EIA Act requires EIAs for all of its operations and requires them for others in areas where it has jurisdiction. Historically Government has conducted EIAs in cases where environmental impacts may be an issue. However, the body proposing the project to be assessed, input or monitoring, has generally conducted these studies and thus their effectiveness has not always been clear. Several major projects have been queried, leaving their status unclear.

The Act establishes an effective framework for EIAs by requiring that the National Authority must register any assessment in Kenya. The provisions for EIAs are found in Part IV of the Act. Requirements for publication of EIAs for public input are established in the Act itself but most other details have been left to the promulgation of regulations. These regulations are likely to be promulgated but considering the prominence of EIA provisions in the Act one would expect this to be a priority area. To some degree civil society has already initiated the process of implementing the Act's EIA provisions. For EIA experts that is generally expected, both by its members and the lead agencies, to play a leading role in advising the Authority.

Given the fact that considerable expertise is available, particularly in lead agencies such as KWS, and that the Act provides for financing from those proposing particular activities, it can be expected that the provisions of the Act should be fully implemented. However, it will be necessary to ensure that the Authority has sufficient capacity to monitor and review the activities.

At the policy level the NEAP, due to its role and legally binding nature is intended to ensure that government meets the requirements of Article 14.

The international aspects of Article 14 are largely still under construction in Kenya. The East African Cooperative for Development is going some way to re-establishing the East African Community that collapsed in the 1970s. EAC currently has Kenya, Uganda with Burundi and Rwanda having also applied for membership. On several occasions the three current members have agreed that environmental issues will be an early priority. Cooperation with neighbouring countries to the North of Kenya is hampered by the highly unstable nature of the border regions.

Article 15 – Access to Genetic Resources

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The implementation of Article 15 in Kenya is currently a work in progress and it is thus difficult to say exactly how far it is not being fulfilled. As far back as the early 1994 planning workshops were held to examine the question of the CBD. In 1998 these led to more substantive initiatives including the establishment of an Expert Group on Access and Benefit-Sharing (EABS) under the auspices of the National Council for Science and Technology (NCST) and of the Plant Genetic Resources Working Group (PGRWG) under the auspices of the National Museums of Kenya (NMK). Both were inter-institutional and cross-sectoral groups. Both were developing at least guidelines for access and benefit sharing and to a large degree both were overtaken by events. The Access and Benefit-Sharing Act entered into force in January 2000, after a long delay. This Act gave responsibility for access and benefit-sharing to the newly created National Environment Management Authority (NEMA) that is currently in the process of being established. The EABS and PGRWG groups are still active to some degree. The PGRWG, on the basis of an agreement involving all of the major research institutions, is implementing a large-scale access and benefit-sharing project in collaboration with the Royal Botanic Gardens, Kew. This led to the gazetting, in 2000, of the National Advisory Research Committee on Genetic Resources. This committee is working under the Science and Technology Act and is expected to be convened in mid to late 2001. It remains to be seen how the NEMA, as and when it is substantively established, as links between them and the NEMA Implementing Committee. However, it seems likely that, at a minimum, one of them will be recognised as some form of advisory body. The EABS is described as one where solid progress is being made and all the elements required to either fulfil, or at least to approach, the obligations under Article 15 are in place. It will be fundamentally important to ensure that institutional coherence is maintained and the legal authority of NEMA will do this provided that NEMA has sufficient resources to fulfil its functions. The situation is difficult for many of the lead agencies whose resources are rapidly diminishing in what is a period of severe budgetary stringency.

Convention Requirements

- a) Endeavour to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties and not counter to the objectives of this Convention

Kenya does not place excessive restrictions on the issuance of permits for any kind of access to genetic resources. However, that such activities have proved problematic due to the regulatory system have been with proposed large-scale collection of genetic resources at biopiracy. Lead institutions, particularly the public universities, the Kenya Wildlife Service (KWS) and the National Museums of Kenya have a long track record of assisting researchers, both foreign and local. While the ability to monitor the uses of genetic resources is limited it is quite clear that Kenya can be said to facilitate access and that it does not generally place any unreasonable conditions that might be counter to the Convention.

- b) Endeavour to carry out scientific research based on genetic resources provided by other Contracting Parties and, where possible in, such Contracting Parties

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Generally Kenyan national institutions engage in research concerning genetic resources of domestic origin. The most significant are the activities of the various international research centres present in its territory, both However, strictly speaking these centres are not under Kenyan jurisdiction and thus have separate arrangements. The second exception is far more limited in that it concerns resources collected under the cooperative systems Community that collapsed in the 1970s. Firstly these resources were collected prior to the entry into force of the tend to be preserved herbarium samples rather than propagating material and thus have limited, if any, usefulness. Finally there is the fact that most of the East African institutions involved with these questions have a good history of the collapse of the EAC. As far as foreign researchers making use of Kenyan genetic resources the current permit system requires a local institutional partner for any project. This has been difficult to enforce at times, particularly in more than one made.

- c) Take legislative, administrative or policy measures with the aim of sharing in a fair and equitable way the and the benefits arising from the commercial and other utilization of genetic resources with the Contracting

Legislative and policy measures on access to genetic resources have long been an issue of discussion with substance at least four years now. The only specific legislative measure that has been put in place thus far is Article 53 of the Coordination Act, 2000, which reads as follows:

Article 53 (1) *“The Authority shall, in consultation with the relevant lead agencies, issue guidelines and procedures for the management and utilisation of genetic resources of Kenya for the benefit of the people of Kenya.*

(2) *Without prejudice to the general effect of subsection (1), the guidelines issued or measures prescribed*

- a) *appropriate arrangements for access to genetic resources of Kenya by non-citizens of Kenya including the fee to be paid for that access;*
- b) *measures for regulating the import or export of germplasm;*
- c) *the sharing of benefits derived from genetic resources of Kenya;*
- d) *biosafety measures necessary to regulate biotechnology;*
- e) *measures necessary to regulate the development, access and transfer of biotechnology; and,*
- f) *any other matter that the Authority considers necessary for the better management of the genetic resources.*

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However, the current system does require that any individual wishing to conduct research in Kenya must obtain more than one lead agency authorised to issue such permits depending upon the exact circumstances, principally temporary permits are issued, as the National Council for Science and Technology (NCST) must screen permits and requirements that researchers must report to local authorities in the area where they wish to conduct their research. Samples collected verified and approved by a designated authority prior to departure. Several key weaknesses have been identified in the application of this practice. Where research is conducted outside of protected areas the system is only really designed to fall within the mandate of the Ministry of Education. Within protected areas the Kenya Wildlife Service has been able to establish its own procedures, which it has been able to do effectively. A further difficulty has been enforcement and to monitor research activities is minimal to non-existent. Another major concern of the responsible agencies has been to further down the research and development line, where activities are conducted outside of Kenya's jurisdiction. In the context of the moves towards developing a new, specifically tailored, regulatory regime in the initiatives in this section.

Obligations Deriving from Decisions of the Conference of the Parties

COPs 2 and 3

In Decisions II/1 and III/15 parties are required to forward information on access to genetic resources implemented upon perspective Kenya may or may not have fulfilled this requirement. It has not forwarded information, beyond participation in the access expert panel, but its activities to date have been experimental, and thus often somewhat tentative. Final decisions have yet been taken. While in Decision III/15 information was also requested on research programmes not been done as one of the major difficulties has been the availability of funding and technical capacity for workshops that some NGOs have occasionally been willing to support.

Decision III/15 makes further non-binding statements involving capacity building, research and regulatory development. Kenya has been generally supportive of such activities but they are still somewhat scattered and suffer from a lack of resources. The fact that access issues are only now in the process of being brought under the overall supervision of a single lead agency in Kenya of a relative wealth of experience and expertise in most areas relating to the field.

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A final statement is also made in III/15 concerning the negotiations for the revision of the International Undertaking on Plant Genetic Resources. Kenya is not a member of the contact group for the revision of the IU and awareness of the presence in the country of the headquarters of three IARCs.

COP5

COP 5's Decision V/26 created several binding obligations. The first of these involves the designation of a national authorities to be responsible for access to genetic resources. This is not practical for Kenya at the arrangements to this effect. However, it can be expected that with the formal establishment of NEMA this can constitute the competent national authority and may or may not delegate the position of focal point to the National Genetic Resources.

Two further obligations are not relevant to Kenya at the present time as they involve reporting to the CoP on measures and that in developing national legislation the development of the IU should be taken into account. It may have made substantive progress on implementation by COP 6 in May 2002. It is also possible that national legislation, developed but this will depend greatly upon the availability of resources, the substantive establishment of NEMA among the relevant lead agencies. In this context, and given the fact that the negotiations for the revision of the IU concluded by the end of 2001, it can be expected that Kenya will create whatever flexibility is necessary to accommodate.

The final obligation is that Parties should provide information on various aspects of access and benefit sharing and this may be a difficult proposition for Kenya as much of such information is still scattered among a wide range of institutions. In particular centres of information, such as KWS and NCST records, the major research universities and some systematic collation and analysis has yet been undertaken. Some individual researchers familiar with access issues have collected to inform their own activities. One of the major problems is that while Kenya has no comprehensive amount of activity is on an unrecorded individual-to-individual, or otherwise ad hoc, basis, precluding the possibility of a comprehensive assessment.

Article 16. Access to and Transfer of Technology

Kenya has historically been effective in facilitating the transfer of environmentally friendly technologies in given tax and import duty concessions and other incentive measures. The lead agencies also have clear policies of

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of support to foreign researchers and projects, partly in the expectation of some level of soft technology encouragement the level of appropriate technology transferred to the country on concessionary terms has been provided is generally support for training overseas and a small amount of older, or publicly available, hard techno

In legislative terms the Government's support for technology transfer is found in the mandates of most lead agencies. The Science and Technology Act establishing the National Council on Science and Technology (NCST) and the Industrial Property Act establishing the Kenya Industrial Property Office (KIPO). KIPO's role is particularly significant as it is mandated to handle patent licensing agreements. KIPO is also of interest as one of the most developed Industrial Property offices in Africa. A significant effort by the Government of Kenya in the field of intellectual property rights has not, thus far, led to the voluntary transfer of environmentally related technologies from developed countries. Kenya has been pressuring other countries to ensure that intellectual property rights are supportive of the objectives of the CBD. Recently this has been reflected in the leadership of the African Group on TRIPs issues at the World Trade Organisation's Third inter-Ministerial Conference.

Article 17. Exchange of Information

Kenya has, through the creation of a Biodiversity Data Management (BDM) Project developed a strategy for coordinating and sharing other information resources held by sectoral institutions. It is envisaged that this will lead to the creation of a clearing house mechanism internationally available through the Clearing House Mechanism. The original intention was to have the National Environment Management Authority (NEMA) as the coordinating agency. The situation is now somewhat in flux as there is a presumption that NEMA will succeed in taking over this role. NEMA's mandate to manage the BDM project can be said to be implied in the monitoring provisions of the Environment and Coordination Act. However, despite the fact that it is likely that NEMA will assume responsibility for the project, capacity will once again be major considerations. NEMA has historically had problems in fulfilling its mandate primarily due to lack of resources.

Article 18. Technical and Scientific Cooperation

Kenya, to the extent that its capacity allows has always shown great commitment to technical and scientific cooperation at the national and international levels. All of the lead agencies and public universities have provisions relating to cooperation with other institutions.

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research although beyond general provisions these are normally considered to be implicit in statutory measures. The Wildlife (Conservation and Management) (Amendment) Act (1989) provides a representative example of such a measure.

Article 3A(g) “conduct and co-ordinate research activities in the field of wildlife conservation and management.”

The National Council for Science and Technology (NCST) and the Kenya Industrial Property Office are intended to coordinate technical and scientific activities undertaken by lead agencies.

Beyond these legally mandated activities the Government of Kenya has generally been supportive of initiating cooperative research activities, whether on a bilateral or multilateral basis. In practical terms the majority of initial activities of the British Department for International Development (DFID) with KARI or the support that the Agency (JICA) has provided to NMK. However, the Government of Kenya has also traditionally played host to a number of multilateral institutions present in the East and Horn of Africa.

Cooperation involving indigenous and traditional technologies is still in its infancy at the governmental level. That at the Kenya Medical Research Institute (KEMRI) has long been an exception to this. The Ministry of Culture has been active in preserving indigenous knowledge and does so through a variety of public education and awareness programmes as well as through the NMK has always had some involvement in this field due to its interests in ethnobotany but it has recently begun the activities of the Kenya Resource Centre for Indigenous Knowledge (KENRIK). As mentioned earlier KEMRI is active in this field.

Traditionally the most active sector in developing indigenous and local community technologies has been that such as the Intermediate Technology Development Group – Kenya (ITDG-Kenya) have sought to develop and encourage a range of technologies including ethnoveterinary medicines, traditional medicines, water purification, cooking strategies. To a lesser degree other research institutions, such as ICRAF and ICIPE, have pursued interests in the phenomenon. The Governmental contribution to these types of activities is limited but normally consists of land concessions and the provision of political support and/or space for activities to be conducted at the local and national levels.

Article 19. Handling of Biotechnology and Distribution of its Benefits

Kenya was an active participant in the negotiations for the Cartagena Protocol on Biosafety and was the first country to also indicate its commitment to the ongoing implementation of the Protocol and seems likely to be an active participant in the future.

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Parties. The National Council for Science and Technology (NCST) plays a coordinating role in relation to policy involving and the use of biotechnology. As part of this coordinating role NCST has established an inter-agency Committee, to review research proposals and advise on monitoring, risk assessment and risk management issues that derives from the National Regulations and Guidelines for Safety in Biotechnology in Kenya that were promulgated by the Inspectorate Service (KEPHIS), particularly in its implementation of the Seeds and Plant Varieties Act (1972) and also plays a significant lead role in regulatory issues.

Several lead agencies are involved with biotechnology related activities although the majority of these are at the subsistence level of the field, such as the micropropagation and tissue culture activities that have involved a range of agricultural crops experimented with by NMK in the context of conservation activities. The key agency in more sophisticated biotechnology is the Agricultural Research Institute (KARI) that has developed close links with multinational corporations such as organizations such as the International Service for the Acquisition of Agri-Biotech Applications (ISAAA). International organizations headquartered in Nairobi have also been active in the field, most notably the International Livestock Research Institute (ILRI) which develops vaccines and diagnostic kits for several livestock diseases. The International Centre of Insect Physiology and Ecology (ICIPE) is a coordinating institution for BioNet-Africa, a network of universities in the East and Horn of Africa that seeks to promote biotechnology applications.

When foreign researchers or institutions seek access to Kenyan genetic material for biotechnology applications the Kenyan partners to seek capacity building as part of the benefit-sharing provisions. However, in practical terms the process as the only legislative requirement is that a researcher has a local partner institution. Discussions on a system for access and benefit sharing have thus far consistently featured a desire for strict requirements regarding access to genetic material developed using Kenyan genetic material so it is likely that this will be included in the regulations that NEMA will develop.

Kenya's regulatory system for biotechnology has been published and the National Council on Science and Technology is aware of the limits of its capacity and resources. This is facilitated by NCST's key role in Kenya's Biodiversity Clearing House Mechanism.

Article 20. Financial Resources

The Environmental Management and Coordination Act makes specific provision for financial support for the operations of the Government in Article 20(3):

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“There shall be made to the Authority out of monies provided by Parliament for that purpose, grants towards the Authority in the exercise of its powers or the performance of its functions under this Act.”

Similar provisions have also been made in the legislation establishing all the lead agencies and on numerous parcels of land granted for the use of international institutions including the United Nations Environment Programme (UNEP), the International Centre for Research in Agroforestry (ICRAF) and the International Centre of Insect Physiology and Ecology (ICIPE).

All lead agencies have historically depended to a large degree on the support of the donor community and the level of support has varied in the relative efficiency of the agency. The most obvious example in Kenya is the Kenya Wildlife Service (KWS), which is particularly well supported and has, simultaneously, established a worldwide reputation.

Given the current economic climate in Kenya donor support is likely to become even more critical. There is some doubt whether the budgetary provision for the establishment of NEMA will have negative impacts on support for other environmental agencies.

Article 21. Financial Mechanism

The main obligation for developing countries under this Article is that they should provide information on their financial mechanism. Kenya has not taken any comprehensive steps towards this although the information does exist and is submitted to the mechanism.

Article 22. Relationship with other international conventions

Article 22 contains two operative elements. The first of these is that the CBD does not generally invalidate previous agreements. However, this is qualified by stating that where these previous agreements address biodiversity considerations in a way that is inconsistent with the CBD then they will be invalidated and the CBD will control. This approach is supported by Article 30 of the CBD.

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Treaties (1969). This Article provides that where states are Party to successive treaties relating to the same subject treaty are automatically modified to the extent that only those provisions compatible with the later treaty continue. The Vienna Convention is subject to a state's declaration that a later treaty is deemed not to be incompatible with an operative element of CBD Article 22 where the CBD is declared to be consistent with the provisions of the United

Kenya can be considered to be in broad compliance with the provisions of Article 22 for several reasons. The measures related elements of the Environmental Management and Coordination Act, the only framework environmental legislation clearly consistent with, and in most cases are derived directly from, the country's obligations under the CBD. Kenya made no declarations to the fact that it considers other treaties compatible with the CBD and thus can be considered in full compliance with the provisions of the Vienna Convention. Kenya has made no declarations to the fact that it considers other treaties compatible with the CBD and thus can be considered in full compliance with the provisions of the Vienna Convention. Kenya has made no declarations during the process of adopting and ratifying the CBD that might be considered as having an effect on

In Decision III/21 the Conference of the Parties to the CBD urged that the conservation and sustainable use of wildlife and their habitats, should be fully incorporated into national plans and strategies and that the national authorities for wildlife should cooperate in the implementation of these treaties. The Environment Management and Coordination Act's establishment of the Kenya Wildlife Service as the lead agency in environmental issues can be interpreted as fulfilling Kenya's obligations under this decision. Action Kenya supports such an interpretation. KWS is the implementing agency for both the Ramsar Convention and the Bonn Convention and has already taken steps that will ensure compatibility in the implementation of all biodiversity related agreements. Kenya has been to initiate the development of an internal secretariat that is intended to coordinate all of KWS' responsibilities related to biodiversity. The second element of KWS' strategy has been to initiate contacts with the NEMA Implementation Committee to ensure that policy development activities to those of NEMA as and when it is established. While the effect of this approach at the commencement of activities by NEMA it seems clear that the right steps have been taken to ensure internal coherence and ensure that these policies compliment wider national efforts.

Article 26. Reports

Kenya submitted its first National Report in March 1998. The Report does contain some elements referring to the implementation of the Convention but the bulk of its discussion covers principles and sometimes planned activities. The Report contains a summary of the national country study on biodiversity and goes some way towards prioritisation but contains no specific recommendations. While reference is made to the National Biodiversity Strategy and Action Plan this was still in the process of development at the time of the Report.

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consideration was impossible. Notably absent in Kenya's first National Report is direct input from any of the local practical implementers of the CBD's provisions.

2. State of Kenya's Implementation of the The World Heritage Convention

2.1 Background

The Convention Concerning the Protection of World Cultural and Natural Heritage (World Heritage Convention) provides financial mechanisms to protect objects of cultural and natural heritage, which are of value to present, and its provisions of Article 1 establish that 'cultural heritage' includes monuments that are of universal value from the point of view of science and sites that include the works of man or the combined works of nature and man, which are of outstanding universal value from historical, aesthetic, ethnological or anthropological points of view. Under Article 2 'natural heritage' includes natural and biological formations or groups of such formations that are of outstanding universal value from the aesthetic point of view, includes the habitats of threatened species of plants and animals of outstanding value. Natural heritage is also comprised of precisely delineated areas of outstanding value from the point of view of science, conservation or natural beauty. The measures relating to the protection of natural heritage are the main elements of interest as regards the conservation of biodiversity.

The fundamental obligations a Party assumes under the WHC are that it should identify, protect and conserve cultural and natural heritage for present and future generations. These obligations should be integrated into national planning and development and be supported by adequate practical measures, such as the training of professionals in relevant expertise. Additionally, Parties are to refrain from measures that might either directly or indirectly injure sites of importance to cultural and natural heritage.

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The WHC also establishes the principle that the aspects of cultural and natural heritage found within the jurisdiction of the wider World heritage and as such the international community has an obligation to assist in their protection. The financial mechanism of the WHC but it is unclear to what degree it creates corresponding obligations for the sites located. This is complicated by the fact that the Convention also specifically recognises the rights and interests of the world heritage aspects of the WHC cannot be considered to create anything more than 'soft' obligations except as

In Articles 8 to 13 the Convention establishes a World Heritage List for sites of outstanding cultural or natural interest. The decision for consideration to be listed is ultimately at the discretion of Parties despite a general obligation to submit lists of sites. The World Heritage in Danger List can only be derived from the World Heritage List.

The administrative provisions of the treaty establish a Secretariat (Article 14) and a World Heritage Fund (Article 15) consisting of a combination of mandatory and voluntary contributions. The funding mechanism is intended to support the protection of the World Heritage sites.

2.2 WHC Listed Sites in Kenya

Kenya has two sites on the World Heritage List; the Mt. Sibiloi / Central Island National Parks and the Mount Kenya National Park. The two sites can be considered to have significance as both natural and human heritage. Mt. Sibiloi and Central Island National Parks, located on the shore of Lake Turkana in northern Kenya, are best known for the more than 350 species of aquatic and terrestrial animals that they support. The site is a particularly important part of the flyway for northbound migrants. The parks also serve as breeding grounds for the Nile crocodile, with Central Island having been estimated to support a population of more than 1000. Mt. Sibiloi and Central Island are also significant in ecosystem terms as their combination of distinctive avifauna and a large number of reptiles in a desert environment constitutes an exceptional laboratory for ecosystem research. The cultural significance of the site due to the numerous discoveries of at least four species of hominid fossils dating back 100,000 years as well as discoveries relating to the ancestors of many modern animal species.

The Mt. Kenya National Park / Natural Forest site, straddling the equator in central Kenya, is one of the oldest protected areas in Kenya. The National Park having been declared in 1949 and having been a gazetted forest reserve prior to that. It became a UNESCO Man and Biosphere programme in 1978 and a World Heritage Site in 1997. The significance of the site is strongly identified with its Afro-alpine ecosystem that is a home to at least 13 endemic plant species as well as a large number of animal and bird species. In national terms Mt. Kenya is extremely important as a watershed that supports a large population of more than 7 million people. In cultural terms Mt. Kenya is historically important as the home of Ngai and his wife and since independence it has become a major symbol of national identity for all Kenyans.

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2.3 Responsible Agencies and Legislative and Policy Measures Adopted to Implement the WHC

The Kenya Wildlife Service (KWS) is the national implementing agency for the WHC and directly manages the National Parks both the Mt. Sibiloi / Central Island site and the bulk of the Mt. Kenya site are accorded the highest level of protection by law. The statutory instruments underlying this status are the Wildlife (Conservation and Management) Act (CA) and the Wildlife (Conservation and Management) (Amendment) Act (1989). The specific instruments protecting the sites are the National Parks Acts (Mt. Sibiloi 1973, Central Island 1985 and Mt. Kenya 1949). At the policy level the main instruments for the two sites are the most important instruments. The Forests Act and an associated gazette notice establish the Forest.

In general the legal instruments implementing the WHC actually predate Kenya's membership of the Convention. The exceptions to this are the designation of KWS as the implementing agency and the management plans for the two sites, the latter having been undertaken, in the case of Mt. Sibiloi / Central Island, subsequent to the listing of the sites in 1997.

Kenya's provisions for protecting natural heritage beyond listed sites are also broadly compatible with the WHC obligations established by it. This is because the same legislative instruments underlie the protection of unlisted sites under the two Wildlife (Conservation and Management) acts. As with the case of Mt. Kenya the Forest Act also protects areas of natural significance. The National Museums of Kenya (NMK) also deserves mention here as although it is not the lead agency it does undertake many activities that further its objectives. This is true for culturally significant sites under the WHC and true for sites of natural significance because of NMK's activities under the Centre for Biodiversity.

As KWS is the lead agency for most protected areas in Kenya policies for the implementation of the WHC are generally consistent with those involving other biodiversity related agreements. However, although KWS is the focal point for a lot of the biodiversity work it does not hold this position as regards the CBD. This has not proved to be a major problem as the Service has tried to develop strongly CBD compatible policies. It is to be expected that coordination will continue to be effectively underpinned by policy-making interests with those of NEMA.

2.4 Experiences in Implementing the WHC

In summary the implementation of the WHC in Kenya has been a relatively simple exercise as the obligations were already recognised in Kenyan legislation and policies prior to its accession. As a result Kenya constitutes a good example of a country having had a longer than normal period to assess and adapt to varying impacts. However, some problems in imple

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The Natural Forest element of the Mt. Kenya site is not a National Park but rather a gazetted forest that is managed by the Forest Department. The problem here is that the area suffers from extreme population pressures and the type of environmental degradation found elsewhere in Kenya and sub-Saharan Africa under such conditions. Gazetted forest has a lower level of protection is weaker than that of national park status, for both practical and statutory reasons. Further, the removal of land from the area of gazetted forest in Kenya and this practice raises questions as to the long-term sustainability of the site. Statutory measures might alleviate the pressure on the Natural Forest it is clear that only significant improvements in the local communities can provide long-term security for the site. These problems are not limited to Mt. Kenya but are a common problem in the preservation of many of Kenya's sites of outstanding natural importance.

The prioritisation and listing of sites under the WHC also has some systemic problems. Kenya is obliged to assess the financial ability to conserve them to WHC standards on a long-term basis. Consequently the considerations for listing are actually related to their relative significance but rather to their ability to attract the necessary financial support, not their scientific value. The listing of Mt. Sibiloi / Central Island has been made possible by the overwhelming importance of its avifauna and archaeological sites as it receives very few visitors due to a remote, and sometimes insecure, location. With a budget of USD50,000 and 43 staff (1996) it is difficult to see how the site can be maintained and appropriately exploited in the long term.

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3.State of Implementation of the

Ramsar Convention on Wetlands in Kenya

3.1 Background

The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971) is defined as

“the conservation and wise use of wetlands by national action and international cooperation as development throughout the world.”

The Convention's original emphasis was on the conservation and wise use of wetlands primarily to provide habitats for waterfowl. This emphasis has been broadened to cover **all aspects** of wetland conservation and wise use, recognising wetlands as ecosystems and the role of wetlands in biodiversity conservation in general and for the well-being of human communities.

Countries are encouraged to join the treaty and membership entails:⁵

- an endorsement of the principles that the Convention represents, facilitating the development at national level, including legislation that helps to make the best possible use of their wetland resources in their quest for sustainable development;
- presents an opportunity for a country to make its voice heard in the principal intergovernmental forum for the conservation and wise use of wetlands;
- brings increased publicity and prestige for the wetlands designated for the List of Wetlands of International Importance, thus providing a basis of support for conservation and wise use measures;
- brings access to the latest information and advice on application of the Convention's internationally-agreed criteria for identifying wetlands of international importance, guidelines on application of the wise use concept, and the results of research in wetlands;
- brings access to expert advice on national and site-related problems of wetland conservation and management through the Ramsar Bureau personnel and consultants and through application of the Ramsar Advisory Mission mechanism with the Ramsar Bureau;
- encourages international cooperation on wetland issues and brings the possibility of support for wetland conservation through the Convention's own Small Grants Fund or through the Convention's contacts with multilateral and bilateral institutions.

⁵ “What is the Ramsar Convention on Wetlands?”, http://www.ramsar.org/about_infopack_2e.htm

3.2 Kenyan situation

Wetlands are estimated to cover 2.5% of Kenya's land area that is 584,850 sq.kilometres. Wetlands have been permanently waterlogged with fresh, saline, brackish or marine waters, including both natural and man-made areas (Kenya Standing Committee on Wetlands). This definition was tailored to suit local conditions, however it is used of wetlands as given by the Ramsar Convention. Kenya has a broad range of wetland types. The marine and 550km length of the Kenyan coast, and include important ecosystems including mangrove forests, cliffs, sand bars and some unique coastal forests. Wetlands constitute the prime source of water in many areas and contribute significantly and for both industrial and domestic use. They also provide tourist attraction sites-a major export of the economy. Economic value, this in turn has led to their being exploited by human activities such as reclamation and drainage. Loss of about 15% of its coastal wetlands and 9% of its inland wetlands during the last decade.

It is recognized that wetlands are an invaluable component of biodiversity resources. The Environmental Management and Conservation Act (EMCA) has specific reference to the protection and conservation of wetlands and in Part V states:

Article 42(2) "The Minister may, by notice in the Gazette, declare a lake shore, wetland, coastal zone or other area to be a wetland and impose such restrictions as he considers necessary, to protect the lake shore, wetland coastal zone or other area from degradation...."

The National Wetland Policy (see later) is currently being drafted and is compatible and complimentary with the National Biodiversity Action Plan.

At provincial/regional levels, wetlands have been considered in integrated planning processes, such as the Integrated Catchment Assessment (ICAM) process which brings together all stakeholders, including government ministries, private sector, NGOs and development authorities, with the prime purpose to develop management plans that include all natural resources and their use. There are also several initiatives at local levels, such as at Lake Nakuru National Park, Lake Bogoria and the Tana Delta where integrated planning based on a catchment approach are being undertaken. In all cases wetlands and water resources play a central role in the planning and management processes.

3.3 Kenya and the Ramsar List of Wetlands of International Importance

Article 2.1 of the Convention on Wetlands states:

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"Each Contracting Party shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance...."

Article 2.4 obliges on each Contracting Party to designate
"at least one wetland to be included in the list"

Article 2.2 states that

"Wetlands should be selected for the List on account of the international significance in terms of ecology and hydrology. In the first instance wetlands of international importance to waterfowl at any season should be included in the List."

All issues pertaining to the list were encapsulated in Resolution VII.II adopted by the Conference of Parties in 1982, which established the framework and Guidelines for the future development of the List of Wetlands of International Importance." Even today, the Convention is founded upon this "Vision for the Ramsar List":

"To develop and maintain an international network of wetlands which are important for the conservation of biological diversity and for sustaining human life through the ecological and hydrological functions they perform."

The Convention on Wetlands came into force for Kenya on 5 October 1990. Kenya presently has two sites designated as Wetlands of International Importance, with a surface area of 48,800 hectares.

Lake Naivasha

Ramsar site no.724. Lake Naivasha is located in a high altitude trough of the Rift Valley and is one of the few freshwater lakes in Kenya. The area comprises of a crater lake, river delta and separate lake and has an extensive range of terrestrial and wetland habitats. Several species of large mammals live in the area. More than 350 species of waterbirds frequent the site, including 'fulica cristata', 15,000 individuals. The lake provides a water supply for human activities and is a popular site for recreation such as fishing and agricultural activities. The ecology of the lake has actually changed positively due to the lake's expansion in 1997/98. The area of wetland has expanded significantly and improved the lakes area in respect of all biodiversity. However one of the major environment related problems is that the lake is subjected to pollution from the flower farmers around the lake. In response to this, the local community has produced a management plan for flower farmers a code of conduct to regulate the use and disposal of agro-chemicals and employed an environment officer to monitor the lake's health. The Lake Naivasha Riparian Association was one of the Ramsar Wetland Conservation Award winners in 1998.

Lake Nakuru

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Ramsar site no.476. Lake Nakuru is situated in the Rift Valley province and is a National Park. It is a shallow, saline lake and the permanent Ngosur River. The lake is extremely important for at least 33 species of waterbirds. Although during a drought cycle, the El Nino rains boosted the biodiversity, especially in terms of the significant increases of water levels, there is still a lot of pressure on the site but initiatives such as the WWF Lake Nakuru conservation and development project that extend and through extensive training and awareness shares practical skills on soil and water management among local communities in the area.

Other wetland sites in Kenya

Efforts have been made to have Lake Bogoria listed as a Wetland of International Importance under the Ramsar Convention. This has not been achieved due to the changes in the administrative boundaries of Baringo District in which the wetland was previously located and now the lake lies in the other district-the Koibatek district which means that fresh negotiations with the local authority need to be undertaken. The authorities are still pursuing the same.

3.4 Responsible Agencies and Legislative and Policy Measures Adopted to Implement the Ramsar Convention

The Kenya Wildlife Service (KWS) is the main actor involved in the management, control, and use conservation currently conducted under the KWS/Netherlands Wetlands Conservation and Training Programme which is divided into three main components:

- The conservation of coastal/marine wetlands and the management of marine protected areas;
- The conservation and management of terrestrial wetlands and
- Training capacity development in wetland and conservation management

One of the objectives of the said programme is to contribute to the development of a national policy on wetlands and whose draft is ready.

The National Wetlands Policy is being developed by the National Wetlands Standing Committee (NWSC) which includes representatives from various ministries and other stakeholders including the national universities and IUCN who participate in the committee's work on wetland conservation matters. The committee is a sub-committee of the Inter-Ministerial Committee on Wetlands. Once finalised and adopted, a group that includes government representatives, planners, NGOs, local communities and other stakeholders will undertake the implementation process.

The main features of the Policy include:

- Wise wetland use

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- Conservation of wetlands for their value and functions
- Precautionary principle for wetland development
- Wetland inhabitants and communities to be involved in conservation and management
- Wetlands will be considered in national planning
- Raise awareness

Other features of the Policy include:

- Responsibility for sustainable management practices
- Restoration and recovery of wetlands
- EIA requirements for the development and monitoring of wetlands
- International responsibilities to be adhered to
- Regulations and legislation-the specific Article referred to earlier of the Kenyan Environmental Management Act

Problems identified in the management of wetlands include a lack of long term planning on wetlands use and knowledge of wetlands and that there is no complete inventory of wetlands in place. Financial constraints are a huge reason, KWS' main priority is on wetlands-and other biodiversity rich places- lie, within the protected areas. Some areas are wetlands outside the protected areas that have direct or indirect influence on the protected areas. Wetland resources are also considered.

3.5 Regional programmes

There are several sub regional initiatives being undertaken, such as:

- Joint sessions between Kenya, Uganda and Tanzania within the framework of the GEF-funded Lake Victoria Programme (LVEMP) which project addresses 6 large components that include the buffering capacity resources, pollution and water quality, fisheries and water hyacinth. The overall aim of the project is to improve the lake and restore its ecological, hydrological, biological, economic and socio-cultural values in the perspective.
- Consultations between Kenya, Ethiopia and Tanzania on the proposed GEF-funded projects on the conservation of Valley Lakes and especially cross-border wetlands like Omo river/lake Turkana and lakes Jippe and Natron
- GEF-funded Transboundary Biodiversity Conservation Project, in which the wise use and conservation of wetlands
- UNEP Regional Seas Programme for Eastern Africa that addresses marine and coastal conservation projects in Kenya, Somalia, Tanzania, Mozambique and several Indian Ocean island states in the Western Indian Ocean

4.State of Implementation of the Convention on Migratory Species in Kenya

4.1 Background

The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) aims to protect all avian migratory species throughout their range. It is an intergovernmental treaty concerned with the conservation of migratory species on a global scale.

Parties to the Convention work together to conserve migratory species and their habitats by adopting strict protection measures for those that have been categorized as being in danger of extinction throughout all or a great proportion of their range and range States. The Convention also provides for concluding agreements for the conservation and management of species of unfavourable conservation status or who would gain from international cooperation, as listed in Appendix II. The Convention provides a framework for undertaking joint research and monitoring activities.

Obligations assumed by a State when it becomes a Party to CMS⁶

- Nominate a 'focal point'. Parties may nominate a second focal point if they choose to
- Nominate a 'scientific counsellor'. Parties may nominate an alternate if they choose to. The said counsellor is a member of the Scientific Council
- Government representative to participate at the Conference of Parties
- Payment of annual contributions to the CMS Trust Fund
- Protection of Appendix I species in accordance with the Convention
- Active participation in developing proposals for including species in the Appendices
- Active role in the regional Agreements (as far as Range States parties are concerned) and political commitment to take legislative and enforcement measures to conserve the species and international cooperation.

Several Agreements have been concluded under the auspices of CMS. These may range from legally binding treaties to non-binding understandings. One of the said Agreements is the:

⁶ UNEP Environmental Law Training Manual, p.78

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4.2 Agreement on the Conservation of African Eurasian Migratory Waterbirds, 1995 (AEWA)

This Agreement is the largest developed under the CMS to date, and was concluded on 16 June 1995. The Agreement is ecologically dependent on wetlands for at least part of their annual cycle.

The Agreement has a number of signatories and also provides for 'Range States'-that is, those states that exercise jurisdiction over a particular migratory species. Kenya is listed as a Range State under this Agreement. Indeed Kenya is a party to the Agreement. Kenya co-operates with other range states on the conservation of the migratory waterbirds. Wetlands International that compiles and analyses data received from the range states. In this regard waterfowl (July and December) and the data forwarded to Wetlands International for comparison with those from other States. There is also joint cooperation with other countries in the western Indian Ocean sub-region on sea turtle and participates in information exchange with many other countries and institutions on environmental and biodiversity. Within the framework of IUCN specialised commissions, conservation information is exchanged widely through IUCN network.

The Kenya Wildlife Service (KWS) is the national implementing agency for the CMS. So far there has been no dedicated Secretariat, and CMS tends to be dealt with as part and parcel of other Conventions. Migratory species in general are covered by the Convention on Biological Diversity and the UN Convention on the Law of the Seas (UNCLOS) covers migratory fish species, specifically provide for the special instruments required for conservation. Therefore, Article 5 of the CBD and Article 11 of the UNCLOS on their parties to implement co-ordinated international conservation measures for migratory species through the CMS. Indeed the CMS provides for these measures.⁷ In realisation of the synergies between the Conventions, and to ensure that the CMS and CBD secretariats have signed a Memorandum of Co-operation. Indeed there are also overlaps with other in Ramsar convention, CITES and WHC, however despite these overlaps, each convention has its own focus and role.

⁷ See UNEP/CBD/COP/5/INF/28; How the Implementation of the Convention on Migratory Species complements the implementation of the Convention on Biological Diversity, Note by the UNEP/CMS secretariat, and the appended "A Guide to the Complementarities Between the Convention on Migratory Species and the Convention on Biological Diversity", Glowka, *Biodiversity Strategies International*.

5. State of Kenya's Implementation of the The Convention on International Trade in Endangered Species of Wild Fa

5.1 Background

CITES is based on a tiered approach to the achievement of two central objectives. The main objective of the Convention is to prevent the negative impacts of international trade in endangered species. The second objective covers species that do not yet meet the criteria for endangered status. CITES aims to prevent international trade contributing to the reduction of a species to endangered levels. The Convention provides for trade in threatened, and in very specific situations even endangered, species can benefit some countries that have conservation activities and thus provides for a system of permits to regulate trade rather than simply prohibiting trade in animal species in its regulatory system.

The tiered approach of CITES is based on its three operative appendices (Appendix IV contains model forms a restrictive and covers species that are currently considered to be endangered. The theory, iterated in Article II(1), in such species could lead to extinction. For the country of origin CITES requires that an Appendix I species must have a permit issued by a national Management Authority and on the advice of an established Scientific Authority. A permit must also be based on a series of criteria that focus on both the manner of the proposed transfer and the reasons for the transfer. Adequate to justify trade in Appendix I species; normally such transactions occur for primarily scientific purposes. For the provision of imports permits are required for the provision of an export permit. Accordingly CITES also places obligations on exporting states. These obligations basically mirror those imposed on countries of origin.

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Appendix II covers threatened species and specimens of Appendix I species that have been bred in captivity. Trade in such species should be restricted to prevent them from becoming endangered. Trade in Appendix II species is subject to the advice of a Scientific Authority system as Appendix I species. The distinction is that an import permit is not required for Appendix II species and thus commercial uses of Appendix II species are permitted.

Appendix III includes all species that are regulated by individual parties or that parties believe should be listed. Listing a species in Appendix III obliges a party to issue export permits for any trade and other parties are required to issue import permits where applicable.

The CITES system requires that countries designate Management and Scientific authorities to implement it and establish support mechanisms such as rescue centres and systems for the maintenance of records. They are also required to establish CITES that include the confiscation and repatriation of specimens.

5.2 The Lusaka Agreement

The Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Flora and Fauna is an agreement of CITES at the regional level in Africa. It establishes a framework of cooperation between enforcement agencies to combat trafficking in all species of flora and fauna and thus has a somewhat broader mandate than CITES and thus has of in implementing agreements such as the CBD as well. As of December 1999 Kenya has been designated as the established under the Lusaka Agreement and thus there can be no question of Kenya's commitment to, and fulfilment of, the Agreement.

5.3 Responsible Agencies and Legislative and Policy Measures Adopted to Implement CITES

KWS is the Management Authority for CITES and is also the Scientific Authority for fauna under the treaty. KWS is integrating its various responsibilities and the office responsible for permits is in close contact with the Research Institute for Wildlife Research to changing circumstances as well as competent decision-making based on current information. This is also supported by the Forest Department based on the two institutions co-management of certain protected areas. The Scientific Authority principally rests with NMK due to its capacity in botany. Kenya has generally been highly aggressive in enforcement, mirroring its approach to illegal activities that has included a shoot to kill policy for poachers under certain conditions.

Kenya is in an unusual position as regards the fauna aspects of CITES as it prohibits all hunting and trapping except for certain species and for many species of megafauna even these are prohibited by policy, the most notable examples of the latter

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This makes CITES implementation relatively straightforward as there is no distinction between the appendices, or species. The implementing legislation is the Wildlife (Conservation and Management) Act and the Wildlife (Amendment) Act that far exceed CITES requirements. The only exports that are permitted are strictly for scientific purposes and have never included the aforementioned species of megafauna. A further significant point is that it is illegal to remove any animal, vegetable or mineral, without express permission.

The situation of flora is more ambiguous. The absence of the simple approach used with fauna makes trade in flora more difficult to manage. A further complication is that while flora are clearly considered in some aspects of the Wildlife (Conservation and Management) Act, they are only referred to occasionally leaving their overall status vague. Other legislation relating to flora, particularly the Forest Act and the Timber Act, does not address the concerns of CITES. The situation of flora in protected areas is better than for fauna, but problems do arise involving flora found in unprotected areas. Awareness of the potential risks to trade is lower and thus enforcement that much more difficult. The legal provisions for flora are fundamentally different from those for fauna. Any specimens for export must be identified to the satisfaction of the Scientific Authority and for any species listed in the CITES appendices a permit must be granted by KWS. For species not listed under CITES the only requirement is that the specimens should be for scientific purposes.

5.4 Experiences in Implementing CITES

Kenya's experience in the implementation of CITES has generally been positive and in the area of megafauna it has been a leading actor in the Convention. Kenya's capacity and assertiveness in the implementation of CITES has sometimes been compared with the policies of other range states. A good example of this is as regards the status of elephants under CITES where Kenya's efforts are being undermined by the policies of states that support trade in the species, particularly ivory. Kenya's implementation involving fauna has been an effective and straightforward process.

The situation regarding flora is much less clear with enforceability being the major concern. The lead agency for flora has received donor support equivalent to that provided to KWS and there is a consequently lower level of capacity. This has also meant that the legal and policy framework governing trade in flora is not fully complete. The principal enforcement mechanism is generally effective for species that have already been listed in the CITES appendices it has not proven adequate for species that may be threatened, or even endangered, but that are not listed. There is a clear need for legislation and for other similar resources to more explicitly consider the provisions and objectives of CITES.

7. The United Nations Convention to Combat Desertification

The United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD) implicitly considers biodiversity issues because of its concern with ecosystem conservation and sustainable development through long-term strategies based on the rehabilitation, conservation and sustainable management of land. There are strong links to the objectives of the CBD and other biodiversity related agreements.

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Drought and desertification are immediate problems for a large proportion of the Kenyan population with some 8 the population, having been estimated as suffering adverse consequences. According to the 1998 Poverty Report⁸ was highest in North Eastern (58%), Eastern (57%) and coast provinces all of them falling within the areas most desertification. Given this situation Kenya has been active in attempting to achieve the goals of the UNCCD long

The entry into force of the UNCCD led to the Government of Kenya assigning responsibility for implementation to the National Environment Secretariat (NES). There has been no specific implementing legislation. NES' lack of statutory legal status, as well as its constantly critical funding situation has meant that effective implementation of the UNCCD, other than through pilot projects, has been difficult. NES has established a potentially effective structure, led by a national coordinating body (NCB) and a national committee (NSC) with strong links to the community level. This structure is intended to implement a national action plan and others provided for the establishment and management of a Community Desertification Trust Fund. The situation in the regular budget is indicative of the situation. At the policy level KWS has been effective in integrating the principles of the Convention, particularly its community development strategies, and efforts have consistently been made to ensure that poverty reduction take the Convention's provisions into account.

NGOs and CBOs have had some success in implementing the provisions of the UNCCD on a piecemeal basis. A notable achievement in implementation has been its effort to develop an overview of initiatives in the country aimed at combating desertification, to create some level of coordination amongst these initiatives. Follow up to the useful recommendations has been limited due to enormous scale of the problems and the NCB's limitations as indicated above. Ultimately Kenya's UNCCD depends on the future development of NEMA, as that institution is expected to succeed NES and develop desertification strategies. Particularly important in this regard is the expectation that NEMA will develop a comprehensive

7. The United Nations Framework Convention on Climate Change

⁸ First Report on Poverty in Kenya, Volume 1, Incidence and depth of poverty, 1998

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The United Nations Framework on Climate Change sets an “ultimate objective” of stabilizing atmospheric concentrations of greenhouse gases at levels that prevent dangerous anthropogenic interference with the climate system. These levels should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. To achieve this, all Parties have a general commitment to address climate change, adapt to its effects, and report on the action they are taking to implement the Convention.

Kenya has signed and ratified (30 August 1994) the Convention. Although Kenya, relative to industrialised countries, is not particularly vulnerable to climate change, especially in the rural areas, it is increasingly evident that as the country gears itself towards industrialization, the National Environment Secretariat (NES) is the focal point and through the Inter-Ministerial Committee on Environment and Development, the technical sub-committee on climate change, the National Climate Change Activities Coordinating Committee (NCCCACC) and the National Climate Change Committee (NCCC) matters pertaining to climate change, including advising the Government on what initiatives should be undertaken to meet the Convention's objectives are translated and incorporated into national development priorities. The NCCCACC and the NCCC include Environment Conservation Officers take the interests of all stakeholders into account in carrying out this task. However, the NCCCACC and the NCCC include, inadequate financial support to carry out all its activities, underdeveloped early warning systems, inadequate information on the dangers of gaseous emissions and their control and management and generally inadequate information, inadequate compliance mechanisms and not enough enforcement mechanisms in place to control emissions.

A specific policy or action plan to address climate change has not been developed to date, but policies for sound environmental management, the NEAP, the NBSAP, the EIA Guidelines and Procedures and the Environmental Management and Co-ordination Act, 1999, are in place. Additionally, Sessional Paper No.6 of 1999 on Environment and Development states that the Government will develop a comprehensive policy on the management of atmospheric pollution and air quality; establish emission standards for major sources of greenhouse gas emissions and particle matter; strengthen research and monitoring; undertake impact assessment on climate change; and strengthen institutional structure for the management of climate change matters. Currently, Kenya is well into the process of developing a national report to be submitted to the CoP.

⁹ <http://www.unfccc.de/resource/process/components/response/respconv.html>

8. Regional and Sub-Regional Agreements to which Kenya is a party

8.1 The African Convention on the Conservation of Nature and Natural Resources, 1968.

The African Convention on the Conservation of Nature and Natural Resources, developed under the auspices of the Organisation of African States (OAS) (OAU) is the most comprehensive regional agreement on environmental issues in Africa. Signed in 1968 by 11 states and ratified by Kenya in May 1969, it is a principal reason why countries such as Kenya had laws broadly covering biodiversity related issues prior to the entry into force of these treaties. While, due to its timing, the Convention on Biodiversity this is clearly a major consideration for the treaty:

Article IV(2) *“The Contracting States also shall undertake the conservation of plant species or communities of special scientific or aesthetic value by ensuring that they are included in conservation areas.”*

While the above clause addresses the question of flora there are similar provisions in the sections of the treaty dealing with terrestrial resources (Article IV) and marine resources (Article V). These provisions are based on the ecosystem approach that has been adopted in the CBD. As a consequence there are also extensive provisions on protected areas both in specific terms and in principle, in the definition provided by Article III (4).

The African Convention's provisions on issues such as development plans (Article XIV), inter-state cooperation (Article XIII), research (Article XII) and organisation of national conservation services (Article XV) all correspond to the provisions of the CBD on the same issues. Article XI, customary rights, raises the issues of traditional knowledge in a similar manner to the CBD. In addition Article IX, traffic in specimens and trophies, and the appendices to the Convention correspond to the provisions of CITES and to some degree Article VII (1)(b) can be seen as addressing the major concerns of the CBD.

The African Convention also endorses basic principles, particularly that of sustainable use, that have subsequently been adopted in the CBD:

Accepting that the utilization of the natural resources must aim at satisfying the needs of man according to the carrying capacity of the environment;

¹⁰ The Convention has been ratified without qualification by 30 African states and signed but not ratified by a further 12.

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An examination of the African Convention on the Conservation of Nature and Natural Resources, in combination with the CBD, clearly demonstrates a deep and longstanding commitment to the principles of the CBD, and other biodiversity related conventions. The CBD advances the principles and objectives of the African Convention. While African national laws were largely developed in line with the African Convention, and thus made compatible with the future CBD, comprehensive implementation was limited by access to technical expertise. The NEAPs and NBSAPs for example, only became a feature of African policy making once they received a clear endorsement for such initiatives by the African Convention's Article XIV.

8.2 Convention for the Protection, Management and Development of the Marine and Coastal Resources of the Eastern African Region (Nairobi, 1985)

The provisions of the Convention for the Protection, Management and Development of the Marine and Coastal Resources of the Eastern African Region are similar in nature to those for any other agreement relating to protected areas. There are provisions for the protection of fragile ecosystems, the habitats of endangered species as well as broader provisions to maintain the overall level of environmental quality. In short the obligations created by this Convention mirror those found in the CBD's provisions on *in-situ* conservation of biodiversity.

The implementation of this convention is almost exclusively covered by earlier sections of this report, particularly the Ramsar Convention. Some form of protected area status, principally national marine parks and national marine reserves, is found in territorial waters, particularly those immediately adjoining the coast and surrounding the coral reef. In legislation, the management of these areas is not distinguished from that of terrestrial parks and reserves. At the policy level there is a focus on the development and implementation of management plans. However, these differences are based on technical and policy differences. In some instances the terrestrial coastal area has proved problematic with the status of area of importance as an important wetland with major significance for migratory birds, remaining unclear due to local political difficulties. A coastal area is a currently proposed project for titanium mining in the Kwale district of Coast Province. This project has led to the development of standards for environmental impact assessments but also for public education and awareness, and accountability in the EIA process has come from the local community and civil society organisations. Government policy has largely been towards monitoring the application of existing laws, which are deficient in the absence of EIA regulations, and a more positive insistence that local community wishes and views should be respected.

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In summary the obligations established by the Convention for the Protection, Management and Development of the Eastern African Region are replicated by the obligations created by broader agreements such as the CI consequence legislative implementation is as discussed in earlier sections regarding these other agreements governmental support and effective lead agency action, with some deficiencies in coordination, also applies with isolated local circumstances.

8.3 Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African

The Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region was established for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African focused on coastal and marine issues the Protocol is rather an extension of some of the principles and objectives trade to the national level. Thus, while it does address trade issues, the Protocol also covers questions of ecosystem measures involving capture or killing, protection of migratory species and alien invasive species. Due to this it also be seen to tie into the concerns of the CBD and the Convention on Migratory Species.

Since the Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region is predicated on areas and / or wildlife issues the main implementing agency in Kenya is automatically the Kenya Wildlife Service implementing legislation is once again the Wildlife (Conservation and Management) Act as amended in 1989. This as discussed earlier in the section on CITES, straightforward in Kenya, at least where fauna are concerned, as the trade is leaves only very restricted, and thus fairly easily monitored, opportunities for trade. Also as discussed earlier the situation is clear.

It should be noted that both the Protocol and its parent Convention predate the CBD and it has thus been suggested that they should be reviewed to ensure compatibility. However, Kenya has made no stipulations as regards the compatibility of the Protocol with the CBD. The result of this situation is that the CBD can be assumed, according to the provisions of the Law of Treaties, to have automatically modified the earlier agreements wherever necessary. This has essential implications for implementation as the Environment Management and Coordination Act clearly derives many of its principles and objectives rather than the two East African regional agreements.

8.4 Convention for the Establishment of the Lake Victoria Fisheries Organisation (Kisumu,

The Convention for the Establishment of the Lake Victoria Fisheries Organisation is principally a commercial aspects that touch on biodiversity issues. The first of these is the Convention's interest in the maintenance of the associated habitats. The second aspect is the general aim of improving the environment of the lake, and in particular provisions that have clear links to basic international biodiversity agreement principles such as sustainable utilisation and collaborative research strategies.

In legislative terms the Convention has been difficult to implement in terms of its biodiversity related interests and policy from conservation related agencies. However, coordination has been far more effective at the policy level have been somewhat informal, due to immediate problems facing Lake Victoria's environment. The major Fisheries Convention has, thus far, been the question of invasive species as the introduction of the water considerably disrupted the ecosystem and created consequent economic costs for surrounding communities and there also been a significant question with strong evidence of problems relating to pesticide use. Fisheries policy in Kenya has been chaotic but recent pressure from the European Union, the main export market for Kenyan fish, has led to fundamental changes. The Convention has been mainly targeted at the streamlining and harmonisation of fisheries policy and regulation. There have also been challenges with conservation related lead agencies due to the economic difficulties that have arisen from the degradation of the lake. It is expected that continuing economic pressure, particularly from the EU, will lead to further consolidation and progress towards the goals of this Convention.

9. National Initiatives for the Effective Implementation of Biodiversity-

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Kenya's biological resources are diverse, with an estimated 35,000 known species of animals, plants and micro-organisms. The Government has taken a firm initiative to protect its biological diversity and incorporates issues of sustainable agriculture, industrial development, human settlements and water and sanitation initiatives. The Government has designated 1.7 million hectares of land area (about 8%) as protected areas for wildlife and forestry conservation, and to ensure the survival, conservation and sustainable use of valuable assets. This *in-situ* conservation includes 26 national parks, 30 national reserves and 2 game sanctuaries. *In-situ* conservation includes arboreta/botanical gardens, animal orphanage, animal (snake and crocodile, game, ostrich) and private sectors.

Kenya's National Vision as stated in the Summary of the NBSAP, Ministry of Environment and Natural Resources:

Kenya's national vision is that there will be a healthy environment providing abundant biodiversity resources for people. Our biodiversity resources will be sustainably conserved and utilized by sensitised and empowered management practices, and the application of modern and indigenous technologies. Best practices in biodiversity conservation will be integrated into national development planning, and through good governance, there will be sustainable utilization and equitable improved social, cultural and economic status of the people for posterity.

The General Objectives as set out in the same document, are:

*-To conserve Kenya's biodiversity
-To sustainably use its components
-To fairly and equitably share the benefits arising from utilization of biodiversity resources among stakeholders
-To enhance technical and scientific cooperation nationally and internationally, including the exchange of information and technology for conservation.*

In an effort to realise these objectives, and in accordance with the obligations set forth in the CBD, and more so in the context of the NBSAP, which has been examined before, the said Article calls for parties to:

develop national strategies, plans or programmes, or adopt existing plans, to address the provisions of the CBD and to integrate biodiversity work into sectoral and cross-sectoral plans, programmes and policies.

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The importance of developing national biodiversity strategies and action plans is further underscored in Resolution Chapter 15 of Agenda 21¹¹. Hence the CBD calls for country studies; national strategies and action plans. Kenya has a NEAP and has submitted a national report to the CoP. The NBSAP will be put to test by continual analysis of the progress in identifying whether its overall objective-

To address the national and international undertakings elaborated in Article 6 of the Convention. It is a national implementation of the Convention to ensure that the present rate of biodiversity loss is reversed, and that present levels are maintained at sustainable levels for posterity..

is met.

Kenya's strategic approach to developing the NBSAP recognized that the country did not have one integrated national biodiversity strategy. Rather, there were a number of sectoral strategies and programmes that would generally operate independently to address this fragmented approach and to realise its obligations under the CBD and work towards attaining its objectives. A National Strategy, developed as one of the tools to meet these objectives. Various precedents and guides were used in developing the National Strategy, mentioned throughout this study, analyses the gaps between current reality and the aspirational objectives. The Strategy addresses the issues raised in the Convention, stating what needs to be done and how to do it. The Strategy specifically lists the actions to be undertaken, by whom and includes a time frame for doing so, is attached as Annex 1. The Strategy process include factors such as most of the conservation efforts focussed on a small number of species thereby in view, a lack of sufficient human and technical expertise and a lack of funds.

The Environmental Management and Coordination Act is the legislative cornerstone of Kenya's efforts to conserve biodiversity. The Act calls for the establishment of a National Environment Management Authority (NEMA) which

Article 9(1) "...to exercise general supervision and co-ordination over all matters relating to the environment in the instrument of Government in the implementation of all policies relating to the environment."

The said Act also makes specific reference to translating the obligations imposed by environment conventions into the national context:

Article 124(1) "Where Kenya is a party to an international treaty, convention or agreement, whether bilateral or multilateral, relating to the management of the Environment, the Authority shall, subject to the direction and control of the Council of Ministers, coordinate and manage the agencies:-"

¹¹ Chapter 15 of Agenda 21 calls on governments to develop "new or strengthen existing strategies, plans or programmes of action to meet the account of education and training needs" and "to undertake country studies or other methods to identify components of biological diversity for sustainable use"

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- (a) initiate legislative proposals for consideration by the Attorney-General, for purposes of giving effect to such treaty, convention or agreement in Kenya or for enabling Kenya to perform her obligations or exercise her rights under such treaty, convention or agreement;*
- (b) identify other appropriate measures necessary for the national implementation of such treaty, convention or agreement;*

The current Mid-Term Expenditure review Framework (MTEF) and the Poverty Strategy Reduction Paper (PSR) provide the framework for the management of the natural resources, funds must be available to carry out the same. At present only 2% of ministerial allocations are for environmental management on the ground and all the rest of the allocations are from development partners. In the next ten years, preferential treatment will be given for environmental considerations during the next ten years, such as by encouraging sustainable use and protection of the environment through the budget and also by for example, in the Investment Programme and in private sector investment and supporting the effective management of the same. With professional skills and sound regulatory and enforcement policies and legislative measures, paving the road to the country's national environmental objectives.

¹² For a list of recommendations for the preparation of NBSAPs, see Report of the NBSAP Workshop for Eastern Africa, RBF (Mombasa), 2000.

10. Conclusion and Recommendations

This study has taken a broad over view of Kenya's implementation of a number of regional and global bio agreements have profound implications for Kenya's legislative and policy structure in all fields, particularly approach is considered. Despite this complexity it is clear that there are some trends that have both benefited and internationally derived obligations. These trends are of particular concern as Kenya's development of a new state matters creates a unique opportunity for past problems to be addressed, just as it also presents an unusually dangerous historical deficiencies in biodiversity policy.

The study makes the following findings:

- 1) Kenya has historically been consistently supportive of the objectives of the various biodiversity agreements political will is weakening and it thus constitutes an important asset for future management and planning political will has been fundamental to all of Kenya's successes in the past several decades as it has a capacity of both the technical and policy aspects of biodiversity, partly through its fostering of a predictable

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- 2) The statutory and financial weakness of NES is a fundamental structural problem that has resulted in the lead agencies with no effective coordination. The coordination that has taken place has been of a largely and thus has still always been plagued by the presence of competing institutional overlaps and also by gap
- 3) The establishment of NEMA is clearly a potentially effective solution to the problems of NES but this v problems are addressed:
 - a) The scope and complexity of the Environment Management and Coordination Act 2000 are enorm commitment by the people of Kenya to successfully implement;
 - b) The statutory force of NEMA will be difficult to fully realise unless the institution is appropriately : considering the current donor climate, will need to show substantive support in terms of both fun branches of government to allow NEMA the option of being an effective international fundraiser, so success or failure of most Kenyan lead agencies in the past. It will also be important that this suppor become self-defeating by unduly damaging the interests and capacities of existing lead institutic strategies to ensure the availability of resources.
 - c) The NEMA Implementing Committee must rapidly broaden its activities to be seen to be considering agencies and thus ensure their commitment to, and cooperation with NEMA. Without this it will be di actual needs and capacities.
 - d) The NEMA Implementing Committee must rapidly move from its current focus on administrative ar clearly takes account of the institutions many future functions. If these functions are not considered systemic difficulties will be built into the institution. This may involve the early involvement of spe fields such as access to genetic resources or wetlands management.
- 4) The NEMA Implementing Committee should make Article 15 of the CBD, access to genetic resources, , genetic resources is a crosscutting issue of significant importance to Kenya due to the high level of activities in the country and/or based on its genetic resource base. The current situation clearly allows for genetic material, both through so-called 'biopiracy' but also through the lack of awareness of some lead ag fragmented, and frequently *ad hoc*, approach is often ineffective but there have been success stories so so access to genetic resources in Kenya would be warranted to highlight successful strategies as well as sy: important that the NEMA Implementing Committee consider access to genetic resources at an early countries in implementing Article 15 indicate that structural factors are a critical element in the success or

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- 5) Agricultural and fisheries legislation and policy need to be more explicitly included in the biodiversity agenda to the CBD and the ongoing negotiations for the revision of the International Undertaking on Plant Genetic Resources. Agriculture have clearly illustrated the basic linkages between agricultural and biodiversity considerations and events involving invasive species have also established clear common issues between fisheries policy and biodiversity. There is no explicit consideration of agricultural and fisheries issues in the Environment Management Act. Various statutory instruments governing agriculture and fisheries do not contain more than a minimum of biodiversity considerations. Even more important than the statutory level is that of policy and practice in the ministries and agencies responsible for these issues. At a minimum the development of clear linkages between the ministries and agencies responsible for these issues should be made an early priority of NEMA and at the other extreme a review of the agricultural and fisheries legislation should be undertaken.
- 6) The Kenya Wildlife Service has had considerable success in implementing innovative strategies for coordinating biodiversity concerns at the internal level. This tradition of innovation seems to be continuing and is now being extended to engagement with NEMA. These efforts should be actively reinforced at KWS but also efforts should be made to coordinate with other agencies in an effort to avoid overlapping and/or conflicting mandates and activities.
- 7) A comprehensive review of legislation and policy relating to flora and microorganisms is needed to determine current regulatory overlaps and gaps. Kenya's traditional focus on fauna has been and should continue to be particularly as regards ecosystem conservation. However, this focus has been unable to address the ever increasing number of microorganisms leaving a situation where research and commercial activity involving fauna is comprehensive and the regulation of activities involving flora and micro organisms is patchy at best, and frequently even contradictory. Regulations and ground level practice should be examined and a focus placed on flora and micro organisms areas not covered by the provisions of CITES. This is not to suggest that Kenya should be encouraged to continue its current term successful strategy of focusing on fauna but rather that it should be encouraged and supported in filling policy gaps that have developed, particularly in the last twenty years.
- 8) The holding of a national Environment Convention that would include all lead agencies and key stakeholders is a key objective of the Environment Management and Coordination Act. This Convention could build upon the basic structure of the Act.

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NEMA Implementing Committee but more importantly it could break up into focused technical working groups on the basis of advisory bodies to NEMA on the various aspects of its mandate. The Convention would also build on the National Regulations and Guidelines for Safety in Biotechnology in Kenya. Such a Convention if efficient to produce substantive results, would allow NEMA to be founded on broadly considered and technically sound structure and processes of the Conference of the Parties to the CBD, combined with some aspects of the suitable model for such a national Environment Convention.

ANNEX 1

Kenya-The Action Plan¹

The Action Plan identifies specific policy objective and actions to be undertaken in an effort to enhance the biodiversity.

In the short term, the action plan attempts to translate and put the strategy into action. In Kenya's case the action specific objectives within the next five years.

	ACTION	BY WHO
1.	Strengthen institutional and community capacities and linkages	Government of Kenya, KWS, NGO CBOs
2.	Promote gender equity in biodiversity management	Government of Kenya, KWS, NGO CBOs
3.	Strengthen and harmonize national policies and legislation for the effective conservation and sustainable utilization of biodiversity	Government of Kenya, KWS, NGO CBOs
4.	Take measures to reduce the impacts of poverty on biodiversity	Government of Kenya, Private sector NGOs, CBOs
5.	Strengthen national capacity for monitoring and evaluation of biodiversity	Government of Kenya, KWS, NGO Universities

¹ The Kenya National Biodiversity and Action Plan, Ministry of Environment and Natural Resources

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	ACTION	BY WHO
6.	Strengthen and maintain high standards of management and conservation in the protected area system, especially the wildlife sector	Government of Kenya, KWS, Private sector, NGOs, CBOs, Universities
7.	Protect aquatic ecosystems from pollution and other threats	Government of Kenya, Private sector, NMK, KWS, NGOs
8.	Protect and promote sustainable development activities in arid and semi-arid lands	Government of Kenya, KAR, Universities, KWS, CBOs
9.	Promote the conservation and sustainable utilization of forests	Government of Kenya, KEFR, Universities, Private sector, NGOs, CBOs
10.	Rehabilitate degraded ecosystems and restore threatened species	Government of Kenya, KWS, NMH, Universities, NGOs
11.	Formulate national guidelines and regulations with respect to alien, invasive and genetically modified organisms; biotechnology and biosafety	Government of Kenya, KARL, NCS, Universities
12.	Support and promote the utilization of indigenous knowledge, innovations and practices	Government of Kenya, NGOs, CBOs
13.	Strengthen national <i>ex situ</i> conservation facilities	KARL, NMK, Universities
14.	Promote the sustainable utilization of the components of biodiversity	Government of Kenya, Private sector, Universities, KWS, NMK, NGOs, CBOs
15.	Provide incentives to promote biodiversity conservation	Government of Kenya, NGOs, CBOs
16.	Strengthen the national capacity for research and training, technical and scientific cooperation and biotechnology	Government of Kenya, KAR, Universities, NMK, KWS, NCST
17.	Strengthen national programmes for public education, awareness and exchange of information	Government of Kenya, Universities, NGOs, CBOs
18.	Strengthen pollution control measures and conduct impact assessments	Government of Kenya, Private sector
19.	Facilitate access to genetic resources and transfer of technology	Government of Kenya, KWS, NMH, Universities, NCST
20.	Strengthen the conservation and sustainable utilization of agricultural biodiversity for food and agriculture	Government of Kenya, NMK, KW, Universities, Private sector, NGOs, CBOs
21.	Act on the decisions of the Conference of Parties	

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	ACTION	BY WHOM
21.1	Address issues on alien species and develop relevant country-drive projects as elaborated in Decision VI/1	Universities, KARL, KEMFRI, NGO Government of Kenya
21.2	Develop country-driven projects to implement the Global Taxonomy Initiative (Decision III/10 and Annex 1)	NMK, Universities
21.3	Develop and implement the National Clearing House Mechanism (Decision IV/2)	Government of Kenya
21.4	Explore options and modalities for access and benefit sharing mechanisms in the national context (Decision IV/8)	Government of Kenya, NCST, NMF Universities, NGOs
21.5	Institute appropriate measures, including ways and means, to assess environmental impacts and minimize their adverse effects on biodiversity (Decision IV/10)	Government of Kenya, Universities
21.6	Design and implement economically and socially sound incentive measures for the conservation and sustainable use of biodiversity (Decision IV/10)	Government of Kenya, NGOs
21.7	Analyze and report nationally as appropriate the content and national obligations implied in Decision III/11	Government of Kenya
21.8	Identify, assess and report back to the COP the relevant on-going activities and existing instruments at the national level, choosing among the thematic areas in the indicative list in Annex 2 of the COP IV report	Government of Kenya
21.9	Identify and report to the COP issues and priorities in agricultural biodiversity that need to be addressed at the national level	Government of Kenya, Private sector KWS
21.10	Make tourism and related activities compatible with the conservation and sustainable use of biodiversity (Decision IV/15)	Government of Kenya, Private sector KWS
21.11	Implement the work programme elements for forest biodiversity as elaborated in Decision IV/7	Government of Kenya, Universities KWS, NMK
21.12	Implement the work programme elements for the biodiversity of inland water ecosystems as elaborated in Decision IV/4	Government of Kenya, KWS, NMF Universities, KEMFRI

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	ACTION	BY WHOM
21.13	Implement the work programme elements for the biodiversity of marine and coastal biodiversity as elaborated in Decision IV/5	KEMFRI, KWS, NMK, Universities
21.14	Implement the Global Plan of Action of the FAO for food and agriculture	Government of Kenya, KAR Universities, NMK
21.15	Implement Decision III/20 on issues related to biosafety, including the National Biosafety Framework	Government of Kenya, NCS Universities
21.16	Consider and address specific issues on the conservation and sustainable use of agricultural biodiversity raised in Decisions III/11 and IV/6	Government of Kenya, KAR Universities, Private sector