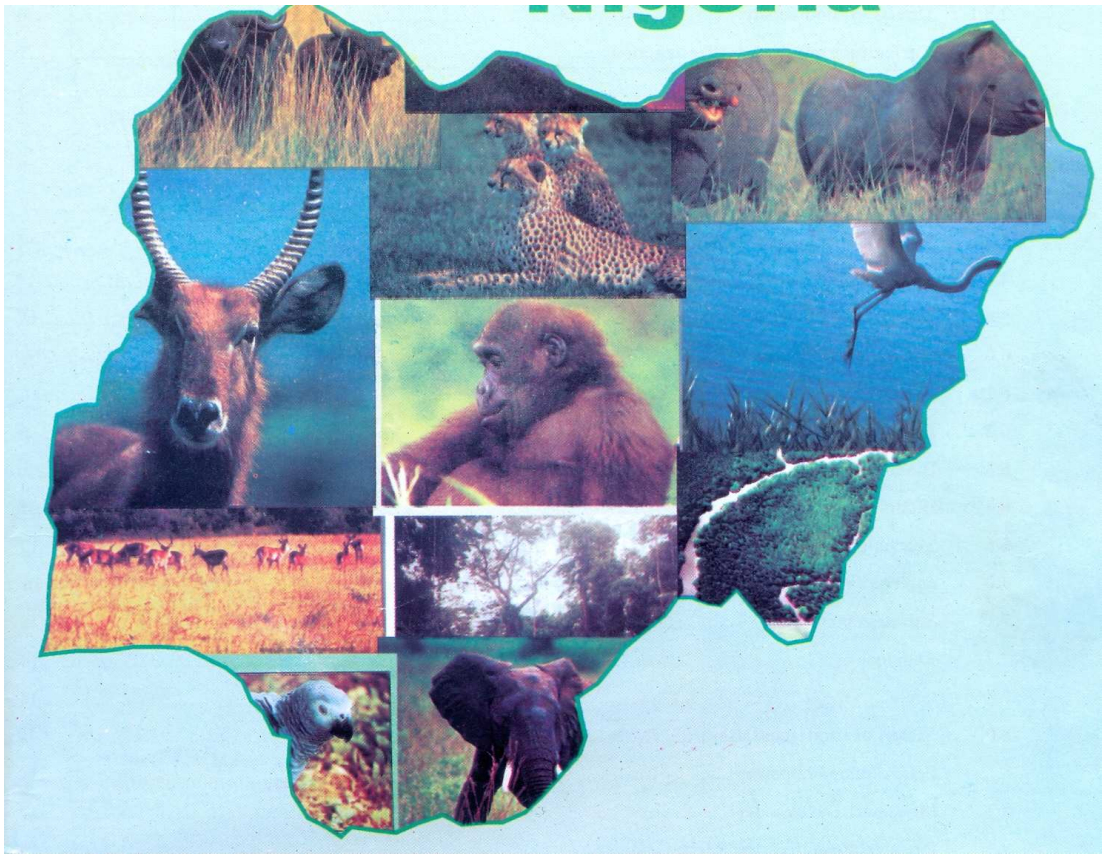
FEDERAL REPUBLIC OF NIGERIA



FOURTH NATIONAL BIODIVERSITY REPORT
ABUJA 2010

TABLE OF CONTENT

LIST OF ACRONYMS

ADB	-	African Development Bank
BD	-	Biodiversity
BDCP	-	Bio-resources Development and Conservation Programme
BON	-	Broadcasting Organization of Nigeria
CBD	-	Conservation on Biological Diversity
CBOs	-	Community Based Organizations
CITES	-	Convention on International Trade in Endangered Species
CRIN	-	Cocoa Research Institute of Nigeria
CRNP	-	Cross-River National Park
EMP	-	Environmental Management Programme
FAO	-	Food and Agriculture Organization
FDF	-	Federal Department of Forestry
FEPA	-	Federal Environmental Protection Agency
FHI	-	Federal Herbarium Ibadan
FMANR	-	Federal Ministry of Agriculture and Natural Resources
FMF	-	Federal Ministry of Finance
FME	-	Federal Ministry of Environment
FMI	-	Federal Ministry of Information
FMIA	-	Federal Ministry of Internal Affairs
FMJ	-	Federal Ministry of Justice
FMST	-	Federal Ministry of Science and Technology
FMWH	-	Federal Ministry of Works and Housing
FORMECU	-	Forestry Monitoring Evaluation and Co-ordination Unit
FOS	-	Federal Office of Statistics
FRIN	-	Forestry Research Institute of Nigeria
GCLME	-	Guinea Current Large Marine Ecosystem
GMO	-	Genetically Modified Organism
IAR	-	Institute for Agricultural Research
IART	-	Institute of Agricultural Research and Training
ICRAF	-	International Centre for Research in Agro-forestry
IITA	-	International Institute of Tropical Agriculture

INC	-	Inter-governmental negotiation Committee
IUCN	-	International Union for the Conservation of Nature
MAN	-	Manufacturers Association of Nigeria
NACB	-	Nigerian Agricultural Co-operative Bank
NACCIMA	-	National Association of Chambers of Commerce, Industry, Mines and Agriculture
NCGRAB	-	National Centre for Genetic Resources and Biotechnology
NARP	-	National Agricultural Research Project
NBTE	-	National Board for Technical Education
NCF	-	Nigerian Conservation Foundation
NDIC	-	Nigerian Deposit Insurance Corporation
NEST	-	Nigerian Environment Study/Action Team
NGOs	-	Non-Governmental Organizations
NIFFR	-	Nigerian Institute for Freshwater Fisheries Research
NIFOR	-	Nigerian Institute for Oil Palm Research
NIHORT	-	National Horticultural Research Institute
NIOMR	-	Nigerian Institute for Oceanography and Marine Research
NPAN	-	Newspapers Proprietors Association of Nigeria
NRCC	-	Natural Resources Conservation Council
NSE	-	Nigerian Stock Exchange
NUC	-	National Universities Commission
PMAN	-	Performing Musicians Association of Nigeria
RRIN	-	Rubber Research Institute of Nigeria
SDFs	-	State Departments of Forestry
SEPA's	-	State Environmental Protection Agencies
SMANRs	-	State Ministries of Agriculture and Natural Resources
UNAAB	-	University of Agriculture Abeokuta
UNCED	-	United Nations Conference on Environment and Development
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environment Programme
UNESCO	-	United Nations Educational Scientific and Cultural Organization
WWF	-	World-Wide Fund (for nature)

FOREWARD

Provision for the protection and improvement of Nigeria's environmental and safeguarding of its water, air and land, forest and wildlife is enshrined in the Nigeria's constitution. It is in line with this that the country joined other members of the international community to prepare the United Nations Convention on Biological Diversity that seeks to guarantee the conservation of species and habitats for posterity.

Biodiversity is essential in several aspects of human welfare, spirituality and culture, food security, health etc. For us in Nigeria, biodiversity is particularly important in the rural areas on which a large proportion of our people's livelihood depends.

While best managed at the local level, is sustained biodiversity is subject to being affected by issues operating at global level. The challenges surrounding climate change have made the conservation of biodiversity more complex in its entirety. Successful biodiversity conservation therefore requires the participation of a variety of stakeholders.

National reporting within the framework of the CBD forms an important component of assessment of biodiversity and the level of compliance with CBD and NBSAP. Assessment involves measuring biodiversity abundance, distribution and variability, as well as its impacts on biodiversity.

This Fourth National Report provides both information on the status of biodiversity and presents the overall compliance with the Convention on Biological Diversity(CBD), its targets and Nigeria National Biodiversity Strategy and Action Plan(NBSAP).

Nigeria is obliged in collaborating with other Parties of the United Nations Convention on Biological Diversity in presenting its Fourth National Report to the global community as part of its obligations in the joint endeavour to conserve Biological Diversity and its utilization in a sustainable manner.

JOHN ODEY
Minister of Environment

ACKNOWLEDGEMENT

The Federal Government of Nigeria would like to acknowledge the assistance it received from various stakeholders in the preparation of this document.

In producing this document, state government departments responsible for biodiversity were active participants and made valuable contributions. Constant review meetings were held with a variety of stakeholders, including NGOs active in Biodiversity conservation.

Finally, the Focal Point (the Federal Ministry of Environment) acknowledges all who have in one way or another contributed to the successful production and completion of Nigeria's Fourth National Biodiversity Report to the United Nations Convention on Biological Diversity.

Federal Ministry of Environment

Executive Summary

Nigeria occupies a unique geographic position in Africa and the variability in climate and geographic features endows her with one of the richest biodiversity in the continent. Its diversity of natural ecosystems ranges from semi-arid savanna to mountain forests, rich seasonal floodplain environments, rainforests, vast freshwater swamp forests and diverse coastal vegetation. Nigeria's Niger delta contains the largest tract of mangrove in Africa.
The individual components of biodiversity – genes, species, and ecosystems provide our society with a wide array of goods and services.

A country report published in 1992 by the Federal Environmental Protection Agency (FEPA) indicated that Nigeria possesses more than 5,000-recorded species of plants, 22,090 species of animals, including insects and 889 species of birds, and 1,489 species of microorganisms. It estimated that 0.4% of the plant species are threatened and 8.5 % endangered, with 0.14% of the animals and insects threatened and 0.22% endangered. The country study listed 135 reptilian species, 109 amphibian species and 648 fish species and recognized the forests in Cross River State of Nigeria to be a hotspot for amphibian biodiversity. Nigeria is known as a global hotspot for primate species, with a great diversity found especially in the Gulf of Guinea forests of Cross River State. Some of the endemic species include three monkeys, the white-throated monkey *(Cercopithecus erythrogaste*r), Sclater's guenon *(Cercopithecus sclateri*) and the Niger Delta red colobus *(Procolobus pennantii epieni*) and four bird species, the Anambra waxbill *(Estrilda poliopareia*), the Ibadan malimbe, *(Malimbus ibadanensi*s), the Jos Plateau indigo-bird *(Vidua maryae*) and the Rock Fire-Finch *Lagonostica sanguinodorsalis*. The most endangered gorilla subspecies on earth, the Cross River gorilla *(Gorilla gorilla diehli*) with an estimated population of less than 250 individuals is found only in a couple of protected areas in Cross-River State, south eastern Nigeria.

The IUCN Red List of Threatened Species (i.e. of globally threatened species) includes 148 animals and 146 plants that are found in Nigeria. Of these, 26 animals and 18 plants are classified as endangered and another three animals and 15 plants are critically endangered worldwide.

Natural and man-made threats, socio-cultural problems as well as direct and indirect consequences of socio-economic development have contributed to the erosion of biodiversity at all levels. Within the last 25 years, it is believed that about 43% of the forest ecosystem has been lost through human activities. Nigeria, with a population of over 140 million people constitutes nearly a quarter of the total population of sub-Saharan Africa. A population growth rate of more than 3 % and increasing poverty (especially in rural areas) has put severe demand on the country's natural resources, the institutional structures and the resources available to manage them. There has been a general institutional weakness and lack of technical capacity to effectively tackle the nation's environmental issues, including threat to biological diversity.

Nigeria is a signatory to several international treaties and conventions for conservation and sustainable use of biodiversity, which demonstrates her commitment to the conservation of natural resources. Consequently, the country took active part in all the negotiation processes leading to the adoption of the Convention on Biological Diversity and was one of the 153 signatories to the Convention at the United Nations Conference on Environment and

Development (UNCED), commonly known as the Earth Summit in R*io* de Janeiro, 1992. Subsequently, the country ratified the convention in 1994 and thereafter, started the process of preparing her Biodiversity Strategy and Action Plan. In 1993, "A Country Study Report" prepared by the Federal Environmental Protection Agency (FEPA) documented the status of Nigeria's biological diversity, policies, laws, and conservation programmes.

Nigeria launched her National Biodiversity Strategy and Action Plan in 1997.

The goal of the National Biodiversity Strategy and Action Plan(NBSAP) is ***'to develop appropriate framework and programme instruments for the conservation of Nigeria's Biological Diversity and enhance its sustainable use by integrating biodiversity consideration into national planning, policy and decision-making processes.*** This strategy is part of our national commitments under the Convention to Biological Diversity and a testimony to our responsibilities to our future generations.

The NBSAP establishment an adaptive process that institutes national goals, sets priorities, and provides frameworks for addressing: ***Biodiversity conservation; Sustainable use of biological resources; Equitable sharing of benefits; Conservation of agro-biodiversity; Biosafety; and Biodiversity – Industry Interface.***

The NBSAP addressed the following areas which have guided Nigeria's various conservation priorities and actions

Biodiversity Conservation:

The Nigerian government recognizes the need to conserve its biological diversity and has made a commitment to conserve Nigeria's 25% of total forest area. Emphasis is placed on *in situ* conservation of biodiversity within protected areas such as Forest Reserves, Game Reserves, National Parks and Wildlife Sanctuaries. *In situ* conservation outside protected areas will is encouraged to complement conservation of biological diversity inside protected areas, to secure Nigeria's biodiversity for future generations.

Priority attention is placed on conservation of unique ecological characteristics and ecosystems such as mountain, mangrove, wetlands, savanna and rain forests and transit sites for migratory species. The Plan also contains specific priority setting and actions for *ex situ* conservation of various species of plants and animals of economic importance, including re-introduction of locally extinct animals, lost crops, and conservation of threatened or endangered species. The administrative and policy reforms contained in the Plan provide a vehicle for achieving our biodiversity conservation goals and objectives.

***Conservation of agro-biodiversity*:**

Due to the diversity of habitats in Nigeria and the tropical climate, there is great diversity of plant species, including several that have been domesticated. Nigeria's plants include many species with traditional value as food items, medicines and for various domestic uses and a number of these have been catalogued in various specific areas of the country. Nigeria is also an epicenter for diversity of wild varieties of important crop plants. A number of these wild crops and their relatives although more adapted to the environment and climate are being replaced with new varieties/cultivars and are therefore threatened with extinction.

The NBSAP outlined a programme of work to encourage both the *ex situ* and in farm conservation of the country's agricultural biodiversity.

Other Policy Considerations

Development of baseline information on indigenous food trees, crops, microbes etc, which would be published and disseminated to stakeholders;

Development of Zoological/botanical gardens in the various eco-geographic zones in order to capture the nation's agro-biodiversity;

Composition of an effective committee in order to revive dormant and non-performing local organizations, which facilitate conservation, involving participatory approach to ensure success;

Strengthening Agricultural and Forest Research Institutes to conserve species that fall under their mandate;

Initiation of a programme of bio-pesticides production from indigenous plant derivatives;

Realignment of crop science research to focus on indigenous food crops and plants; and

Adequate equipping of relevant research institutions to conduct research on indigenous plant species.

Sustainable Utilization of Biological Diversity

An integrated and coordinated plan for biological diversity utilization is in the NBSAP. Government has established a national programme for sustainable utilization of biological resources at the Ministry of Science and Technology, the Forestry Research Institute of Nigeria, as well as the Raw Materials Research and Development Council in order to optimize the contribution of these resources in the national economy. It is also envisaged that an Inter-Ministerial Panel or a full-fledged Biodiversity Institute will be established to coordinate and harmonize the activities of various agencies of Government, bio-industries and the civil society in sustainable utilization of biological resources.

Policy Perspectives

a. Development of a national policy to regulate the exploitation of biological resources, with emphasis on added local value and broad stakeholder participation instead of export of raw plant materials.

b. Development of a national database of ethno-botanical and ethno-medical information. This is expected to be done with the active collaboration of local communities, traditional healers, ethno-botanists and taxonomists. To achieve this goal, a system of incentives is expected to create reward for the holders of indigenous knowledge. In this regard, the NBSAP recognized the need for immediate steps to be taken to establish a Clearing House Mechanism (CHM) this will in turn involve:

i. Coordination of biological resources information collection, especially through the establishment of an efficient Clearing House Mechanism (CHM), with full government support. This would include a review of roles and responsibilities of related ministerial and line agencies at federal and state levels to ensure articulation of all relevant information. The information collected should reflect the categories as identified by the World Conservation and Monitoring Centre (WCMC) namely, Conservation, Genetic Resources, Technology, Biotechnology, Environmental Statistics/Economics, Policy, Human Factors, Environmental Law; and

ii. Recognition of a distinct role for the media in biodiversity information management.

c. Initiation of a programme of bio-discovery, with emphasis on the collection of information on microorganisms and their role in bioremediation.

d. Internalization of the process of data collection through education and public awareness, which would include encouragement of indigenous crop studies in secondary schools and university training in plant taxonomy and systematic.

Access and Benefit Sharing

Article 10 of the CBD requires signatories to the convention to develop Fair and Equitable sharing of benefits arising from the utilization of the commercialization of biological diversity. Hitherto local communities have derived minimal benefits from the commercial exploitation of the country's biodiversity. The NBSAP is intended to address this problem by according recognition to local communities as the custodians of most of the nation's biodiversity. A national policy on intellectual property rights and traditional knowledge is be developed to formulate a *sui generis* system that will reward indigenous knowledge. Access to national parks is regulated through the National Parks Decree of 1999, which gives the Conservator General, on approval from the Honourable Minister for Environment, authority to grant access to the national parks. The development of Bio-prospecting Framework for Nigeria is ongoing.

Biosafety

Developments in genetic engineering have led to the development of Genetically Modified Organisms (GMO's) and their derived products in crops, food and consumer goods. This evolution from purely research and development endeavour to consumable products has generated serious debate on the benefits and risks associated with altering the genetic material of living organisms. Although genetic modifications of plants and animals through domestication and controlled breeding have gone on with little debate for several thousand years, it was only since 1973 that scientists began to transfer isolated genes from one organism into the DNA of other organisms. The use of this technology has become more widespread and sophisticated such that there is now increased public concern over the safety of genetically modified plants and animals especially in their use for human consumption. The uncertainty over the effects of genetically modified crops and the consumption of GM foods has also raised concerns in the health profession over the regulation and safety of GM foodstuff. For the purpose of the NBSAP, the immediate concern is on the regulation of the trans-boundary movement of living modified organisms and procedures for risk assessment and safety in the utilization of such organisms in Nigeria.

The expert consultation process on this issue reached the conclusion that this was clearly a policy area where the grafting of foreign solutions based on experiences from outside our region may prove to be catastrophic. The NBSAP provides for multi-sectoral approach in developing legislation and establishing guidelines for the control and monitoring of GMO's. Counter-balancing this need for caution is the equally important national development objective of participating and harvesting the fruits of this technology, which has been widely recognized as being capable of changing the entire agro-pharmaceutical industry. The national strategy advocates increased activities in the non-transgenic biotechnology processes, use of naturally occurring micro-organisms for industrial processes and to improve agricultural productivity and the intensification of traditional plant breeding technologies, while developing adequate guidelines and protocols for field testing and subsequent release of genetically modified

organisms For a biodiversity rich country such as Nigeria, unregulated importation and use of living genetically modified organisms may be catastrophic to the environment, human health and sustainable development of the country. Nigeria has successfully developed a National Biosafety Framework to ensure the safe use of GMOs in the country.

Financial Mechanism

Although the commercial value of biological diversity in Nigeria exceeds the cost of conservation measures by more than $3 billion at 1993 values ($3.75 billion versus $0.37b), biodiversity conservation has not been recognized as feasible investment in Nigeria's economic development and consequently natural resources valuation has not been fully incorporated into the national economic planning. It has been estimated that the ratio of conservation costs to Nigeria was about 3.8 % of GDP while the aggregate contribution of biodiversity to the GDP was about 46% in 2001. In 1990, it was estimated that the monetary value of other benefits realized from conservation was put at well over $6 billion. With the increase in bio prospecting and bio-discovery activities in Nigeria and the growth in biotechnology related industries that utilize indigenous genetic materials as feedstock, the 2002 estimate for the benefits of biodiversity to Nigeria is over $8 billion per annum. The strategic plan therefore provides for a significant increase in the national expenditure on biodiversity conservation in order to ensure the continuous availability of these resources.

Level of Achievement of the CBD Targets:

The Action Plan makes concrete provisions for a programme of research, extension and education that will enhance sustainable development of Nigeria's biodiversity, using a combination of policy reforms, new legal instruments, institutional collaboration and a responsive financial mechanism targeted at areas of greatest need in order to achieve the CBD 2010 Targets. It has also established a framework for continuous assessment and monitoring of biodiversity and a system of measurement of the stated targets.

Nigeria is richly endowed with diverse flora and fauna. These vital resources are presently threatened by increased population pressure and intensified human development activities and unsustainable utilization of Biodiversity. These activities have been of major concern to political leaders, policy makers and analysts, ecologists and economic managers who realize that natural resources are the backbone of industry and national development. Consequently government has adopted the policy of integrated conservation and sustainable use of the nation's biological diversity, with a view to promoting greater awareness of the value of biodiversity as well as involving more stake holders in biodiversity conservation. In line with Article 6 of the Convention, Nigeria has integrated biodiversity concerns into her environmental policy and in developing the National Biodiversity Strategy and Action Plan. The country has also taken steps to integrate biodiversity considerations into the various sectors of the economy. The major constraints identified in conserving biodiversity and in the achievement of the 2010 Targets, include the dearth of trained/skilled manpower, appropriate technology, and inadequate funds to implement the various biodiversity programmes. What Nigeria requires is enhanced cooperation at the local, regional, and global levels to ensure the conservation and sustainable use of her rich biodiversity and ensuring equitable sharing of the benefits derivable from these resources. A successful effort will no doubt influence development in the West African sub-region, and so enhanced international cooperation. The 4th National Reports examined the level of Nigeria's implementation of the NBSAP objectives and the 2010 CBD Target based on various anticipated actions and targets to be achieved. The realization of the actions and targets is however far fetched.

FOURTH NATIONAL BIODIVERSITY REOPRT 2010

1.0 INTRODUCTION

Nigeria is located in the western part of Africa between latitudes 4 16'N and 1352'N; and between longitudes 249'E and 1437'E. It occupies a total land area of 923,768 km2 with a population of about 120 million people. By virtue of it geographical extent, it spans different climatic and ecological zones. The variable climatic conditions and physical features have consequently endowed Nigeria with a very rich biodiversity. The mean manual rainfall ranges from about 450 mm in the northeast to about 3500 mm in the coastal south-east, with rains falling within 90 to 290 days respectively. The mean annual temperature ranges from 21^{o}C in the south to 30^{o}C in the north with extremes of 14^{o}C and 45^{o}C and a latitude range of 0 – 1000m above sea level.

At the current annual growth rate of 3%, the country's population may reach 150 million by the year 2011. Consequently, the demand for food, fuel-wood and other biological resources will experience a corresponding increase and this will lead to increased pressure on land, water and other resources. Thus the high rate of population growth is crucial among the set of factors that degrade the environment and threaten biodiversity in Nigeria. In line with this, the Federal Government of Nigeria(FGN) has adopted various measures to address issues that can adversely affect its populace and natural resources.

Although Nigeria derives about 80% of its external earnings from the oil sector, agriculture contributes about 38% of the GDP. About 70% of the population derives their means of livelihood from agriculture, and the economy is characterized by a large rural based traditional sector. Furthermore, most of the rural poor derive their livelihood from wild species of biodiversity. The urban population also benefit from the exploitation of the country's biological resources, particularly in the construction industry.

Nigeria operates a federal system of government with 36 States and the Federal Capital Territory, Abuja. There are 774 Local Governments at the third tier level, which support the Federal system. The country has over 250 ethnic groups with rich cultural endowment. The diversity of culture has considerable impact on biodiversity utilization and the level of protection. Natural and man-made threats including unsustainable natural resource exploitation as well as direct and indirect consequences of socio-economic development have contributed to the erosion of biodiversity in the country.

Nigeria signed the Convention on Biological Diversity in 1992 and ratified it in 1994. It has since participated actively in the activities of the Convention and is committed to its objectives. Nigeria equally signed the Cartagena Protocol on Biosafety which is intended to conserve Biological Diversity from adverse impact of Genetically Modified Organisms (GMOs). The country, therefore, accords very high priority to a successful implementation of all articles of the Convention as a responsible member of the global community and in pursuit of sustainable development.

This report documents efforts of the FGN in the implementation of the Convention and the NBSAP, prepared through a participatory process in compliance with the obligations pursuant to Article 26 of the Convention and in keeping with decisions of the second and third Conferences of Parties to the Convention.

1.1 **CURRENT STATUS OF BIODIVERSITY IN NIGERIA**

i. Biodiversity Endowment

Nigeria is rich in Biodiversity. The country is endowed with a variety of plant and animal species. There are about 7,895 plant species identified in 338 families and 2,215 genera. There are 22,000 vertebrates and invertebrates species. These species include about 20,000 insects, about 1,000 birds, about 1,000 fishes, 247 mammals and 123 reptiles. Of these animals about 0.14% is threatened while 0.22% is endangered.

Family	Number of Threatened Plant spp.
Acanthaceae	26
Adiantaceae	5
Agavaceae	2
Amarantaceae	1
Anacardiaceae	7
Annonaceae	15
Apocynaceae	19
Araceae	3
Araliaceae	1
Aristolochiaceae	3
Asclepiadaceae	2
Aspidiaceae	7
Aspleniaceae	6
Athyriaceae	2
Balsaminaceae	1
Begoniaceae	2
Boraginacea	4
Burseraceae	1
Butomaceae	1
Caesalpiniaceae	13
Capparidaceae	2
Caryophylaceae	2
Celastraceae	6
Combretaceae	9
Commelinaceae	3
Compositae	36
Connaraceae	6
Convolvulaceae	3
Cruciferae	1
Cucurbitacea	6

Cytheaceae	1
Cyperaceae	21
Dennstaedtiaceae	1
Dichapetalaceae	11
Ebenaceae	7
Ericaceae	2
Eriocaulaceae	3
Euphorbiaceae	31
Flacourtaceae	7
Gentinaceae	2
Geraniaceae	1
Gnetaceae	1
Goodeniaceae	1
Graminae	19
Guttiferae	4
Hymenophylacelae	4
Hypericaceae	3
Icacinaceae	2
Iridaceae	1
Labiatae	6
Lauraceae	2
Lecythidaceae	2
Lemnaceae	1
Lentibulariaceae	1
Liliaceae	2
Lobeliaceae	3
Loganiaceae	4
Lomariopsidaceae	2

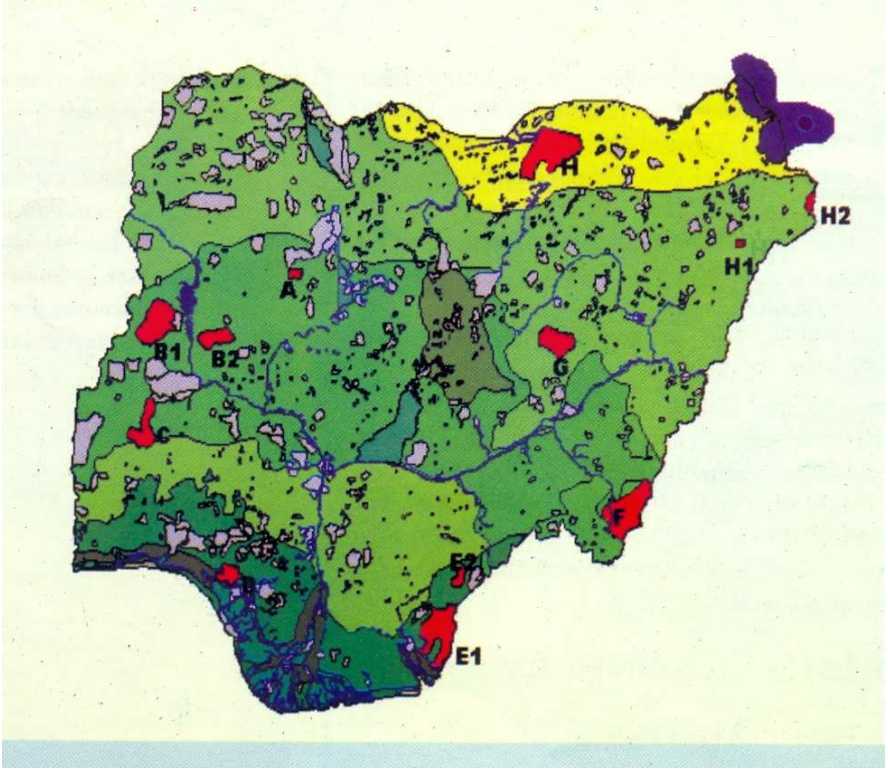
Table of threatened plant species

About 1,489 species of micro-organisms have also been identified (Table 1). All of these animal and plant species occur in abundance within the country's vegetation that range from the mangrove along the coast in the south to the Sahel in the north. Most of the biodiversity sustain the rural economy.

Table 1: INVENTORY OF PLANT SPECIES

GROUPS OF PLANTS	**FAMILIES**	**GENERA**	**SPECIES**
Algae	67	281	1335
Lichens	-	14	17
Fungi (Mushrooms)	26	60	134
Mosses	-	13	16
Liverworts	-	16	6
Pteridophytes	27	64	165
Gymnosperms	2	3	5
Chlamydosperms	2	2	6
Monocotyledons	42	376	1575
Dicotyledons	172	1396	4636

Total	**338**	**2215**	**7895**



GAME RESERVES
Table 2

S/No.	Name of Reserve	Area Location	Vegetation
1.	Ebbazikampe	Kwara State	Guinea Savannah
2.	Okpara	Oyo State	Rain Forest
3.	Upper Ogun	Oyo State	Dry Forest/G. Savannah
4.	Ohosu	Edo State	Low land Rain forest
5.	Ologbo	Edo State	Low land Rain forest
6.	Iri-Ada-Obi	Edo State	Low land Rain forest
7.	Emu-Urho	Edo State	Low land Rain forest
8.	Orle River	Edo State	Low land Rain forest
9.	Gilli-Gilli	Edo State	Low land Rain forest
10.	Anambra	Anambra State	Rainforest/Derived savannah
11.	Udi/Nsukka	Anambra State	Low land Rain forest
12.	Akpaka	Anambra State	Low land Rain forest
13.	Obudu	Cross River State	Low land Rain forest
14.	Stubbs creek	Akwa-Ibom State	Mangrove/Swamp Forest

15.	Ibi	Taraba State	Guinea Savannah
16.	Wase Sanctuary	Plateau State	Sudan Savannah
17.	Wase Rock Bird Sanctuary	Plateau State	Sudan Savannah
18.	Pandam Wildlife Park	Plateau State	Sudan Savannah
19.	Pai River	Plateau State	Sudan Savannah
20.	Ankwe River	Nasaraw State	Sudan Savannah
21.	Damper Sanctuary	Nasaraw State	Sudan Savannah
22.	Nasarawa	Nasaraw State	Sudan Savannah
23.	Lame/Bura	Bauchi State	Sudan Savannah
24.	Kogin Kano	Kano State	Sudan Savannah
25.	Lake Chad	Borno State	Sahel Savannah

Wild life

1.2 NIGERIA PROTECTED AREA

i. Protected Areas Network:

Nigeria's present day National Parks and Game Reserves were originally forest reserves, first established in the early 1900s. The British colonial administration spearheaded the creation of game reserves to conserve wildlife to provide protein supplement and also for posterity (Table 2).

After a survey of the wildlife resources of West Africa in 1932, Col. A. H. Haywood recommended the establishment of game reserves in the savannah region of Nigeria, particularly in Borgu/Oyo; Wase/Muri and the Tsafe/Kwiambana areas. He also recommended the establishment of Game Departments to coordinate wildlife management, enforce wildlife laws and protect endangered species such as Chimpanzee (*Pan troglodyte*), Gorilla (*Gorilla gorilla*), Ostrich (*Struthio camelus*), Rhinoceros (*Diceros bicornis*), Giraffe (*Giraffe camelopardalis*), Pigmy

hippopotamus (*Hexaprotodon liberensis helsopi*) and water chevrotain (*Hyemoschus aquaticus*).

One important obstacle to wildlife conservation in Nigeria was that the conservation areas included traditional hunting grounds of communities that live around these areas, thereby denying them their hunting rights. To ameliorate this, Nigerian government ensures the participation of Nigerians in wildlife enforcement since they are in the best position to convey conservation ideas to the people, conservation is being limited to specific areas where there would be no conflicts with local interest and all revenues earned from hunting licenses and proceeds from sale of wildlife trophies are being ploughed back into conservation activities.

The Borgu Forest Reserve with an area of 245 km2 was also demarcated and established as a game reserve in 1963 by the Northern Nigeria government.

A comprehensive survey of the wildlife situation in Nigeria in 1962 showed drastic reduction in wildlife numbers when compared with neighbouring countries, a trend attributed to excessive hunting. This led to a recommendation preventing hunting or capture of all species with low or reduced numbers, a ban on night hunting and the establishment of closed hunting seasons. It was further recommended that more game reserves should be established and wildlife advisory board be established with professionally trained ecologists to protect wildlife resources, implement management programmes and carry our research and public enlightenment. Some areas believed to be important for conservation were recommended for immediate protection and designation as game reserves. These include: Lake Chad, Jos Plateau, Lafia (north of River Benue), Mambilla and Obudu, (for gorillas and chimpanzees), Cross River, Upper Ogun and Gilligilli.

On 23 September 1975, the area formerly known as Borgu Game Reserve together with the adjacent Zugurma Game Reserve were declared as the Kainji Lake National Park and the decree for the establishment of this park was eventually promulgated in 1979, with a Board of Trustees. In 1991, the Federal Government created five more National Parks, namely: Gashaka Gumti National Park, Old Oyo National Park and Yankari National Park which has been handed over to Bauchi state since 2006, together with Kainji National Park, came under the management of the National Park Service. Decree 46 of 1999 created two new National Parks, Okomu National Park and Kamuku National Park, bringing the total number of national parks to 8 which has now been reduced to 7 due to the hand over of Yankari National park to Bauchi state with 28 game reserves in the country (figure 1).

KEY TO NATIONAL PARKS MAP

S/No.	Name of Park	Area	Location	Vegetation Type
A.	Kamuku National Park	121,130 ha	Kaduna State	Guinea Savannah
B.1 B.2	Kainji National Park (Borgu Sector) Kainji National Park (Zugurma Sector)	532,000 ha	Niger State	Guinea Savannah

C.	Old Oyo National Park	253,000 ha	Oyo State	Dry Forest/G. Savannah
D.	Okomu National Park	200 ha	Edo State	Lowland Rainforest
E.1 E.2	Cross River National Park (Oban Division) Cross River National Park (Okwango Division)	400,000 ha	Cross River State	Lowland Rainforest
F.	Gashaka Gumti National Park	6,402,480 ha	Taraba State	Guinea S/ Montane
G H.1 H.2	Chad Basin National Park (Hadejia Nguru Wetlands/ oasis Sector) Chad Basin National Park (Sambisa Sector) Chad Basin National Park (Chingurme-Duguma Sector)	230,000 ha	Borno State	Sahel Savannah

The total area of land under national parks is about 2.4 million hectares.

Nigeria's present network of protected areas includes a biosphere reserve, 7 national parks, 445 forest reserve, 12 strict nature reserves and 28 game reserves. Other sanctuaries and game reserves which are to be conserved have been proposed. These game reserves were meant to conserve wildlife and to supplement protein from domestic sources. Species that had priority for conservation then were identified to include chimpanzee (*Pan troglodytes*), lowland gorilla (*Gorilla gorilla*), ostrich (*Strutio camelopedalus*), Black Rhinoceros (*Diceros biocornis*), Giraffe (*Giraffa camelopardalis*), Pigmy hippopotamus (*Hexaprotodon liberiensis*) and water chevrotain (*Hyemoschus aquaticus*). There is evidence that some of these have since become extinct and there is need for the a new survey of species to determine their present status.

1.3 THREATS TO BIODIVERSITY

i. Population Pressure:

As already indicated, the population of Nigeria is expected to increase to about 150 million by 2011. This will result in increased demand for natural resources thereby posing threats to biodiversity. With increase in population and consequent increase in demand for biodiversity resources, natural habitats are being destroyed for plantation establishment, irrigation, urbanization, roads, food and livestock production, and non-timber forest resources utilization. Threat to wildlife due to unsustainable hunting.

Large areas of natural forests are being exploited for tree species such as the mahoganies, *Nauclea diderrichii* (opepe), *Terminalia ivorensis* (Odigbo), *Terminalia superba* (Afara), *Triplochiton sceleroxylon* (Obeche) and others known in international market. High intensity of logging and illegal exploitation of these and other species has continued to pose serious threats to the country's forest resources.

Non-timber forest products (NTFPs) are used for food, medicines, oil, resin, tannin, household equipment, fuel wood and furniture and building materials. The subsistence rural dwellers have continued to exploit these products for income

generation. NTFPs varieties of other economic uses include the rattan cane (*Laccosperma sedndiflora*), chewing sticks (*Garcinia manii*), wrapping leaves such as *Thaumatococcus danielli* which also produces fruits that are sweeter than sugar. *Triplochiton sceleroxylon* is known to be the host of the larvae of *Enaphae venata* a moth species which apart from producing cocoons that are good material for local silk ("Sanyan") they are also good sources of animal protein to both the urban poor and rural dwellers.

There has been a trend of increasing use of medicinal plants amongst both urban and rural dwellers. This trend has grave consequences on the survival of some plant species. This is because of the unsustainable manner in which many species are harvested. Furthermore, the downturn in the economy and inflationary trend has led to the excessive harvesting of non-timber forest products to various uses. Some of these species are now threatened. Examples are *Hymenocardia acida, Kigelia Africana* and *Cassia nigricans* (Table 3).

Cheetah, Acinomyxjubalus

Table 4: THREATENED PLANT AND ANIMAL SPECIES AND THEIR USES

SPECIES	**MAIN USES**	**STATUS**
A. PLANTS		
Milicea excelsia	Timber	Endangered
Diospyros elliotii	Carving	Endangered
Triplochiduiton scleroxylon	Timber	Endangered
Mansoiea altissinia	Timber	Endangered
Masilania accuminata	Chewing stick	Endangered
Carcina manni	Chewing stick	Endangered
Oucunbaca aubrevillei	Trado-medical	Almost Extinct
Erythrina senegalensis	Medicine	Endangered
Cassia nigricans	Medicine	Endangered
Nigella sativa	Medicine	Endangered
Hymenocardia acida	General	Endangered
Kigelia africana	General	Endangered
B. ANIMALS		

Crocodylus niloticus	Food/medicine/leather	Endangered
Osteolaemus tetraspis	Food/medicine	Endangered
Struthio camelus	Food/medicine	Endangered
Psittacus erithacus	Medicine/pet	Endangered
Cercopithecus erythrogaster	Food	Endangered
Loxodonta africana	Food/Ivory	Endangered
Trichecus senegalensis	Food	Endangered
Giraffa camelopedalus	Food/medicine	Endangered
Python sabae	Bags	Endangered
Gazella dorcas	Food	Endangered

Biodiversity

ii. Agriculture and Habitat destruction:
Agriculture in Nigeria is largely based on traditional technology. Shifting cultivation remains a major farming system among the peasant farmers who produce over 90 per cent of total food supplies. The farming method is a primary cause of habitat destruction. This is because it is characterized by vegetation destruction short fallow periods and unequal access to farmland.

The establishment large scale plantations of cash crops as well as indiscriminate bush burning and overgrazing also lead to habitat destruction for indigenous species of plants and animals occurring in narrow ecological ranges. The area devoted to grazing in the country rose from 166,326 km2 in 1978 to 187,236 km2 in 1995. Because most of the cattle are concentrated in the semi-arid zones that support 90% of cattle, the area is subjected to overgrazing, indiscriminate bush burning and shortage of fodder.

iii. Genetic Erosion:

A substantial loss of species diversity (intra and infra-specific) is due to habitat destruction resulting from land clearance for various uses. Forest exploitation vegetation clearance, dam construction and oil spill are the major causes of natural gene-pool loss as is occurring in many species including *Irvingia gobonensis* and *I. wombulu* in the rainforest and Niger Delta. Most species that were originally common in Nigeria are becoming rare.

The use of only improved varieties of crops and the complete neglect of local varieties and the land races also lead to loss of biodiversity. A major example of this is the use of improved okra (*Abelmoscus esculentus*) in place of the native materials of the tall okra. (*A. caillei*) that is popularly known to be sensitive to day-length. Local varieties including sword bean (*Canavalia ensiformis*), African yam bean (*Sphenostylis stenocaarpa*) and Lima beans (*Phasceolus lunatus*) are now becoming extremely rare, as only improved cowpea (*Vigna unguiculata*) is being cultivated in many farms.

Similarly, *Dioscorea dumetorum*, *Dioscorea bulbifera*, *Trichosanthis* species (Snake tomato), and *Digitaria exilis* (Hungry rice 'acha') are no longer in popular cultivation. Restricted planting of many other popular crops have also been reduced and they have been replaced with commercially improved varieties, thereby causing the loss of important gene resources of these plants.

Grazing pressure, fire, and excessive use of systemic herbicides, including pollution are other factors that affect biodiversity loss. Fire destroys large areas of forest ecosystems annually with the elimination of sensitive species such as *Afromosia laxiflora, Ceoba pentandra, Entada abyssinica, Hildegardia barteri* and *Holarrhera wulfbergia*. Although, fire is a natural phenomenon in the savanna, it is steadily entering the rainforest.

Indiscriminate hunting of wildlife for food to compliment subsistence farming and bush burning leads to loss of biodiversity and also depletes the ecosystem by causing death of wildlife; destruction of eggs and plant species, while illegal grazing of livestock in game reserves constitutes a threat to wildlife itself.

Kola nuts

iv. Causes of Biodiversity Loss:

Available evidence shows that biodiversity is being lost at a disturbing rate in Nigeria. The causes of biodiversity loss are largely related to human factors. These are due to interaction with the environment for development, improved quality of life resulting from industrialization, technological advancement and rapid growth in urbanization.

The direct causes of biodiversity loss in Nigeria include the following economic policies, rising demand for forest products, cultural practices, poor law enforcement and weak laws. Factors such as rapid urbanization have collectively increased deforestation and biodiversity loss. For example, increased export demands for primates and birds for research and trade in timber and non-timber species are indirect causes of biodiversity loss in various parts of the country. Low budgetary allocation to the forestry sub-sector has curtailed national efforts to reforest large areas that have been deforested. Consequently, the allowable timber cuts are not replaced hence sustained yield of the forests cannot be attained. Continued timber cut without replacement indirectly leads to biodiversity loss.

Cultural practices that encourage the use of specific species for festivals often limit the population of species particularly occurring under narrow ecological range. Moreover, most of the laws that control the management of several species are outdated and their enforcement is inadequate. The consequence is over exploitation of resources and subsequent loss of biodiversity.

Direct causes of biodiversity loss are related to agricultural activities, bush burning, fuel-wood collection, logging, grazing and gathering. The introduction of cash crops like cocoa, coffee, rubber, cotton, groundnut and oil palm into the farming systems since the 1900s was a big impetus for massive deforestation of the natural ecosystems. For example, the land devoted to agriculture increased from 8.9 million hectares in 1951 to about 55.8 million hectares in 1995. The massive rate of deforestation is a direct cause of biodiversity loss.

Wood accounts for about 85% of domestic energy use in the country. Preference is often given to wood species with high calorific values that occur largely in the savannah and rainforest ecosystems of the country. Thus high depletion of fuel-wood species is easily noticeable in the savannah and rainforest ecosystems.

2.0 NIGERIA NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN

2.1 Summary of the Plan:

Nigeria started the process of preparing its own Biodiversity Strategy and Action Plan (BSAP) in 1995. The World Bank funded it as part of an Environmental Management Programme. The current draft is a result of a series of consultation with stakeholders through workshops at national and zonal levels.

The goal of the plan is to conserve and enhance the sustainable use of the nation's biodiversity and to integrate biodiversity-planning considerations into national policy and decision-making. It identified the biggest threat to conservation of biological diversity as poverty.

In the plan emphasis is placed on in situ conservation through protected areas such as Forest Reserves, Game Reserves, National Parks and Wildlife Sanctuaries. Priority attention is placed on conservation of samples of ecological characteristics (montane, mangrove wetland and rain forest, and endemic species across the country.

The NBSAP also contains specific priority actions for ex situ conservation of various species of plants and animals of distance economic importance, including the re-introduction or rehabilitation of endangered species of plants and animals and the conservation of threatened and endangered species. The administrative and policy reforms contained in the plan provide a vehicle for achieving its conservation goal and objective. It emphasizes the values inherent in individual, community and NGOs activities in Nigeria.

Finally, the Action Plan makes concrete provision for a programme of research, extension and education that will enhance the sustainable development of Nigeria's new legal instruments, institutional collaboration and responsive financial mechanism.

(i) Sustainable use of components of biological diversity especially the aspects concerning the protection and encouragement of customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation and sustainable use requirements (Article 10);

(ii) Incentive measures for the conservation and sustainable use of components of biological diversity (Article II);

(iii) Access to genetic resources (Article 15);
(iv) Access to and transfer to technology (Article16; and
(v) Handing of biotechnology and distribution of its benefits (Article 19).

3.0 EFFORTS OF INTEGRATING BIODIVERSITY CONSERVATION INTO NATIONAL POLICIES AND PROGRAMS

Some of Objectives of the NBSAP have been integrated into programs and some levels achieved through the following means:

i**. Policy Frame work**:

The national policy on conservation and sustainable use of biological diversity is an integral part of the national policy on environment. The national policy on environment which was reviewed in 2006/7 further strengthened the biodiversity conservation. The policy was first developed in 1989 following the promulgation of the Federal Environmental Protection Agency (FEPA) decree no 58 of 1988 and revised in 1999. The decree provides the legal framework for the implementation of the policies on environmental protection, natural resources conservation and sustainable development. The 1999 National Policy on Conservation of Biological diversity is aimed at:

a. integrating Biological Diversity considerations into national planning, policy and decision making and
b. conserving and enhancing the sustainable use of the nation's biological diversity.

With the creation of the Federal Ministry of Environment (FME) in 1999, FEPA was absorbed and the Ministry became the highest policy making body responsible for addressing environmental issues in Nigeria, including conservation of biodiversity.

In pursuit of the policy objectives as enunciated, an overriding concern is to alleviate poverty and increase the per capita income of Nigerians. Consequently, the country has developed strategies and programmes for sound and sustainable management of biodiversity involving the most vulnerable groups particularly women and children. The strategies have been designed to promote sustainable and adequate levels of funding and focus on integrated human development programme, including income generation, increased local control of resources, strengthening of local institutions and capacity building including greater involvement of community based and non-governmental organizations, as well as the lower tiers of government as delivery mechanisms.

The achievement of some of the above strategies has been through the intervention project known as Local Empowerment and Environmental management program(LEEMP); its for the empowerment of rural populace while protecting the environment.

There is 2006 National Forestry Policy and 206 Biosafety Policy to give guidance for the protection and conservation of Biodiversity in the Country.

ii. Legal Framework:

One of the significant outcomes of Nigeria's participation in the United Nations Conference on Environment and Development (UNCED) was the signing of the Convention on Biological Diversity. Nigeria, thus assumes obligations under the provision of the treaty in accordance with customary international law.

The Nigerian constitution makes fundamental provision for environmental protection and clearly identifies important components of environment. Section 20 of the constitution of the Federal Republic of Nigeria contains the country's environmental objectives that are meant to "protect and improve the environment and safeguard the water, air, land, forest and wildlife".

In recognition of the need to protect her biological resources, Nigeria has put in place a number of legislations including the Forestry Ordinance and the National Parks Act, the Environmental Impact Assessment Act, National Oil Spill and Detection Agency, National Environmental Standards and Regulations Enforcement Agency among others.
However the implementation of these laws have been weak apart from the fact that some of these laws need review. Some are how ever under going review at slow pace.
There are Biosafety and Biodiversity management bills that are before the Parliament in the country to further strengthen the issues of biodiversity conservation.
An indicative list of laws and international instruments are shown in boxes 1 & 2.

Dense forest of Cross River National Park

Table 1: ENVIRONMENT RELATED INTERNATIONAL CONVENTIONS AND PROTOCOL SIGNED AND RATIFIED BY NIGERIA
❖ African Convention on the Conservation of Nature and Natural Resources, Algiers), 1968
❖ International Convention for the Prevention of Pollution of the Sea by Oil, 1954-62
❖ Convention on Fishing and Conservation of the living resources of the High Sea, 1985
❖ Convention on the Prevention of Marine Pollution by Dump of Wastes and Other Matters, 1972
❖ United Nations Convention on the Law of the Sea, 1982
❖ The RAMSAR Convention on the Conservation of Wetlands of International Importance, especially as Water Fowl Habitat, 1971
❖ The Convention concerning the Protection of the World Culture and Natural Heritage, 1972
❖ Convention on International Trade in Endangered Species of Fauna and Flora (CITES) 1973
❖ Convention on the Conservation of Migratory Species of Wild Animals, 1973
❖ Framework Convention on Climate Change, 1992
❖ Convention to Combat Desertification, 1994
❖ Convention on Biological Diversity 1992
❖ Cartagena Protocol on Biosafety 2000.

Table 2: ENVIRONMENT RELATED NATIONAL LEGISLATIONS ENACTED BY NIGERIA
❖ **Exclusive Economic Zone Act of 1978**
❖ The Forestry ordinance 1937
❖ Wild Animal Preservation Laws of 2926
❖ Oil in Navigable Waters Act of 1968
❖ FEPA Act 1988, 59 of 1992
❖ FEPA Act of 1992
❖ EIA Act 86 of 1992
❖ National Parks Act 1979, 1991 and 1999.
❖ Sea Fishing Act 1971 and listing regulation of 1972
❖ The Endangered Species (Control of International Traffic) Act of 1983.
❖ NESRA Act 2006

Goliah Leron, goliah Ardea

iii. Institutional Framework:

A number of institutions and organizations have been designated to carry out activities that could facilitate the implementation of the CBD in Nigeria. The Federal Ministry of Environment coordinates the activities of these institutions. The creation of the Ministry is a deliberate design by the Federal Government to achieve a well-articulated, effective and efficient and efficient outfit that will adequately address and manage environmental issues in Nigeria in a holistic manner, devoid of duplication of efforts and competition among various government agencies.

The Federal Ministry of Environment has the responsibility to ensure that all developmental projects are subjected to Environmental Impact Assessment before they are embarked upon, to control land degradation including soil erosion, combat desertification, abate pollution, and embark on reforestation and conservation of biological diversity. The National Parks Service a parastatal of the Federal Ministry of Environment, has the overall responsibility for the protection and conservation of biodiversity in the national parks. At the state level, Ministries have been established for the protection of biological diversity and general environmental management. Private initiatives include the establishment of botanical/zoological gardens and support for biodiversity programmes through provision of financial grants. There has also been a marked increase in the number of non-Governmental Organizations (NGOs) that are concerned with the environment and conservation of biological severity.

The Prominent NGOs include the Nigerian Conservation Foundation (NCF), Nigerian Environment Study/Action Team (NEST) the Savannah Conservation CENRAD, ERA and the Nigeria Field Society and Biodiversity Conservation and Development Program. These Institutions have made substantial success on their various mandates but have being constrained by inadequate funding for the implementation of programs their programs.

iv. Institutions and their Responsibilities

1. Federal Ministry of Environment: advises Federal Government on all matters pertaining to the conservation utilization and regeneration of forests resources. It has overall responsibility for environmental management in the country, protection and management of biodiversity/resources through stakeholder participation. It also assists in the development of trained manpower to meet the demands of environmental management. These responsibilities have been carried out. The Federal Government has established National Environmental Standards Regulation Enforcement Agency to effectively enforce all environmental laws in the country. Other Agencies are National Parks Service, National Oil Spill and Detection Agency, under the Federal Ministry of Environment .

2. Forestry Department: Constitution and protection of forest lands through enforcement of relevant legislation, develop regeneration programmes and harvesting systems for biological resources.

3. State Ministries of Environment. The state Ministries of Environment also play the role of protecting the environment and Conserving Biodiversity at the state level,

4. Forestry Research Institute of Nigeria: has the responsibility of improving genetic value of species of economic potentials, improvement of methods of cultivating, harvesting and processing of forest products. It is to also improve knowledge of the ecology of plants and animals, the methods of pest control and management of biodiversity in natural forest. Further more, it is to integrate the cultivation of wild plants and wild animals of economic importance into the farming systems in different ecological zones to yield positive socio-economic benefits to the rural populace

5. Local Government Department of Agriculture and Natural Resources: Establish Local Government Forest Reserves, mobilize rural communities to support environmental and conservation programmes.

6. Ministry of Agriculture: Supports biodiversity conservation in grazing reserves through control of hunting and harvesting of plants, encourage and promote the consolidation of scattered and fragmented farm holdings, encourages production of agricultural crops and commodities to ensure food and nutrition security in the country and for export.

7. Ministry of Water Resources: development of surface and underground water for multipurpose uses and management of water sheds.

8. Universities/Technical Schools: conducts research on the control and management of species under in situ and ex situ conservation methods and train manpower for the execution of conservation programmes of government.

9. Non-Governmental Organizations: support biodiversity conservation through awareness campaigns, interpretive education and research, lobby governments to support environmental and Biodiversity conservation programmes, direct participation in preparation and implementation of management plans, report writing and in seeking for international funds to support biodiversity conservation.

Notable NGOs involved in biodiversity conservation in the country include Nigerian Conservation Foundation, (NCF), Forestry Association of Nigeria (FAN), Nigerian Field Society (NFS), Savanna Conservation (SC), Centre for Environment Renewable Natural Resources Management Research and Development (CENRAD) and Nigerian Environment Action Study Team (NEST), Biodiversity Conservation Programme (BDCP) .

10. Linkage Centre for Forest Conservation and Biodiversity (Federal Ministry of Environment/University of Agriculture, Abeokuta (UNAAB): environmental monitoring of conservation plots and agricultural lands, wildlife domestication, aquaculture, and conservation of medicinal plants and lost crops and research on species of Botanical and Zoological Gardens.

11. National Institute for Pharmaceutical Research and Development (NIPRD) Ethnobotanical/Ethno medical survey of medicinal plants for industrial Utilization and their conservation: documentation, training and evaluation of herbal products and traditional medical practice.

12. Agricultural Based Research institutions: conservation of ex situ seed gene bank and live field gene bank.

(i) Rubber Research Institute of Nigeria (RRIN): in-situ conservation of species of rubber, ex situ seed gene bank, live field gene bank and in -vitro for rubber.

(ii) Cocoa Research Institute of Nigeria (CRIN) Ibadan Conservation of in situ species of cocoa, ex situ Seed gene bank, live field gene bank and in viro for cocoa.

(iii) Nigerian Institute for Oil Palm Research (NIFOR) Benin: conservation of in situ species of cocoa, ex situ Seed gene bank, live field gene bank in vitro for cocoa.

(iv) National Cereals Research Institute (NCRI) Badagi: conservation of ex situ gene bank and live field gene bank for all cereals.

(v) National Root Crops Research institute, Umudike: conservation of live field gene bank on farm for cassava, potato, sweet potato, ginger and coca yam.

(vi) Institute of Agricultural Research, Samaru Zaria: conservation of gene bank for various food crops.

(vii) Institute of Agricultural Research and Training Moor Plantation, Ibadan: conservation of live gene bank for various crops for training and development.

(viii) National Horticultural Research Institute Ibadan: conservation of seed gene bank ,live field in vitro for horticultural food crops.

(ix) National Centre for Genetic Resources and Biotechnology, Ibadan :conservation of seed field gene bank in vitro for forest trees, fruit trees, vegetable and ornamentals.

(x) International Institute of Tropical Agriculture (IITA) Ibadan: conservation of ex situ seed gene bank and field gene bank for agricultural crops, and multipurpose trees.

(xi) Lake Chad Research Institute Maiduguri: conservation and genetic improvement of cereals, ex situ seed gene bank and field gene bank.

(xii) National Agricultural Extension and Research Liaison Services (NAELS), Zaria: public awareness on the Conservation of crop gene banks on the field and the use of environmentally friendly agricultural practices.

(xiii) National Animal production Research Institute (NAPRI) Zaria: conservation gene banks in livestock species.

(xiv) National Institute for Freshwater Fisheries Research (NIFFR) :genetic improvement of freshwater fisheries and conservation.

v . Federal Government Project Initiatives;

i.) National Biosafety Frame work(NBF) : the federal government of Nigeria has developed NBF with the collaboration of UNEP-GEF to ensure the safe management of living modified organisms(GMOs) to ensure they do not have adverse impact on the conservation of biodiversity and human health.

ii) Local Empowerment and Environmental management program(LEEMP); its for the empowerment of rural populace while protecting the environment.

iii) Guinea Current Large Marine Ecosystem(GCLME): its a project with collaboration with UNIDO for the implementation of pilot phase of mangrove reforestation and nypa palm utilization method in the Delta area of Nigeria. Its aimed at conserving biodiversity, improving the socio-economic life of the coastal communities.

iv) Integrated Management of Invasive Aquatic weeds project: this is a project with collaboration of ADB for the control of invasive aquatic weeds.

v) Climate Change Programme: this is a Federal Government Programme to address climate change problems . A special unit has been established to handle the issues of climate change in the country. Towards ameliorating the problem of climate change the Federal Government has directed that 60% of the Ecological fund of the Nation be dedicated to reforestation programs. Forestry Projects are been developed currently in the country. A climate change bill has been passed by the Parliament awaiting Presidential accent.

vi) Desertification and Drought Amelioration Department under the Federal Ministry of Environment ; this is a Department established to address issues of drought and desertification in the country.

vii. Fadama Integrated Land Management Project: This project empowers the Rural People on how to utilization wetlands in sustainable manner

vi Biodiversity Surveys:

Biodiversity surveys in Nigeria have come in various forms such as botanical surveys, zoological surveys, forest resources surveys, wildlife inventory and aquatic resources surveys. Results of such surveys have been utilized in the preparation of Conservation strategies and Action Plans. The following Conservation Strategies and land have benefited from the result of such surveys:

" National Conservation Strategy 1985

" Natural Resources Conservation Action Plan 1992

" National Biodiversity Strategy and Action Plan 1998
" State Environmental Strategy and Action Plan 1997

Nigeria however needs to make the survey continuous and systematic as different from the existing practice of discontinuous assessment. Under the State of the Environment assessment and Reporting Programme, the country is placing special attention on biological diversity, forests and coastal and marine resources. The programme commenced in year 2001 and is expected to provide input into the UNEP's Global Environment Outlook.

vii. Vegetation and Land Use Studies:

The First National vegetation and land-use studies were carried out in 1976 . The study revealed that the natural vegetation was altered by human activities such as grazing, cultivation, bush burning and logging over long period of time. The disturbances on the vegetation have resulted in the complex patchwork of vegetation with different ages and forms particularly in the densely populated areas. The 1976 studies were updated through another study in 1995. The study shows drastic changes in the vegetation over those of 1976. The highlights of these are shown in Table 3 .

Table 3: CHANGES IN NIGERIAN VEGETATION FROM (1976 1995)

S/NO	MAJOR VEGETATION TYPE	DECREASE IN AREA (KM^2)
i.	**Savanna**	
	Guinea Savannah	69,907
	Sudan Savannah	32,186
	Sahel Savannah	Significant increase
ii.	**Forest**	
	Undisturbed Forest	13,837
	Disturbed Forest	4,417
	Reparian forest	2,147
iii.	**Mountainous Vegetation**	
	Mountain forest	No change
	Mountain grassland	1,373
iv.	**Grasslands**	
	Continuous grassland	Increased by 6,955
	Discontinuous grassland	Increased by 5,111
v.	**Flood Plain Marsh/Swamp**	
	Shrub Swamp	7,651
	Grass Marsh	4,011
vi.	**Coastal Vegetation**	

	Freshwater Swamp	1,817
	Mangrove forest	9,994
	Tidal flats/Saltwater Marsh	541
vii.	**Exposed Areas**	
	Gully Erosion	18,395
	Sand Dunes	4,017
	Rocks outcrops	1,208
viii.	**Reservoirs**	Increased by 1,561
	Reservoirs	

viii. International Cooperation :

Nigeria believes that collective efforts at the sub regional, regional and global levels are crucial to achieving the conservation and sustainable use of biodiversity and the equitable sharing of the benefits from these resources.

Nigeria has participated actively in the initiation and negotiation bilateral and multilateral agreements, treaties and conventions at the sub-regional, regional, and global levels.

a. Sub-Regional Level:

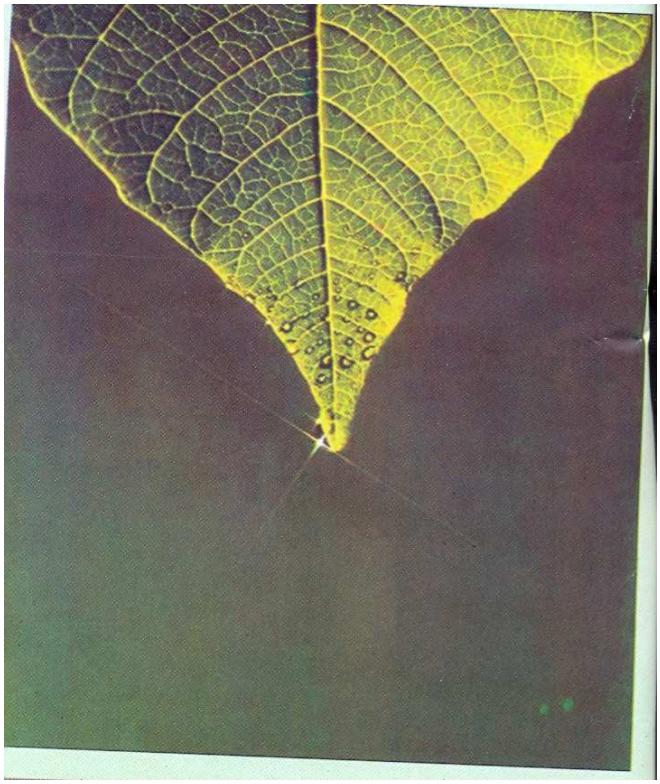
Through the Economic Community of West African State (ECOWAS), Nigeria has participated actively in the development and implementation of initiatives on the conservation of biological diversity in the sub-region. Such initiatives include Water Conservation, Agriculture and Aquatic weeds Control Projects and the UNIDO supported Gulf of Guinea Large Marine Ecosystem Project (GOGLME). The country has also participated in the elaboration of Sub-Regional Action Plans (SRAP) on desertification control under the UN Convention to Combat Desertification (CCD). In addition, it has also participated in the development of the African elephant conservation plan for the species in the sub-region and is helping in the development of some bilateral sub-regional projects relevant to biodiversity conservation. As a member of the Lake Chad Basin Commission, Nigeria is participating with other countries in the Chad Basin, in the Conservation of the resources of the Lake Chad.

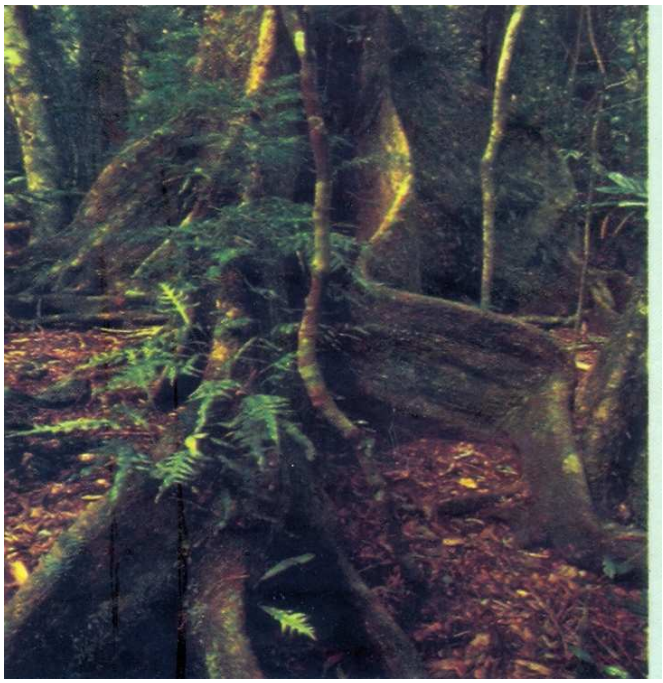
b. Regional Level:

At the regional level, Nigeria is working to forge partnership for the benefit of biodiversity conservation in the African region. Some of these activities include the FAO initiative on plant and Genetic Resources Development for Food and Agriculture. The country recently collaborated with UNEP to host the 8th session of the African Ministerial Conference on Environment. At the 4th Conference of the Parties to the Conservation on Migratory Species of Wild Animals in November 1999, Nigeria signed the Memorandum of Understanding on the Conservation of Sea Turtles of the Atlantic Coast of Africa including Macronesia and was appointed focal point for the species.

c. Global Level:

Nigeria has signed and ratified a number of biodiversity-related Conventions and Protocols and government has as a matter of policy ensured the implementation of the provisions of these Conventions, Protocols and Agreements at the national level. Some of the conventions and protocols have and about to be domesticated.





ix. Man power Development:

There is a dearth of trained professionals in biodiversity conservation and in keeping with Articles 12 of the Convention. The curricula in the relevant department of some Universities and other institutions of higher learning has been redesigned to address the needs of training professionals in biodiversity conservation in the country.

In-service and short-term specialized training in biodiversity conservation for the support staff in the various aspects of their functions has enhanced the implementation of the NBSAP to an extent.
There is need however for capacity building in international best practices.

x. Financial Resources and Mechanism:

The funding strategies for biodiversity conservation need to be reviewed to ensure adequate financial allocation to the Federal Ministry of Environment and other relevant establishments. This will be in consonance with Articles 20 and 21 of the Convention. Additional resources need to be mobilized from the Ecological Funds and annual budgetary provisions for biodiversity conservation are being considered. In view of this the federal government has directed additional funding for aforestation programs from the ecological Fund Office.
Trust Funds (as being operated in Ondo, Oyo and Cross-River states). Others are resources from multilateral agencies, NGO's CBO's and the private sector.

xi. Legal Reforms:
In consonance with Articles 4,15,17,22 and 42 of the convention, Nigeria has embarked on the review of biodiversity related laws. This is done through a consultative process involving the Federal Ministry of Justice (FMJ), the Law Review Commission and the Nigerian Institute for Advanced Legal Studies, the Federal Ministry of Environment, the National Assembly and other relevant stakeholders.

xii. Technology:

Conservation of biodiversity requires the development and application of appropriate technology, particularly in research, education, ex-situ conservation, and information management and risk analysis which can enhance the implementation of the NBSAP.

xiii. Public Awareness and Education:

In line with Article 13 of the Convention, the Federal Ministry of Environment as Focal Point, has the plan to collaborating with the Federal Ministry of Information (FMI), the Broadcasting Organization of Nigeria (BON) and the Newspapers Proprietors Association of Nigeria (NPAN), the Nigerian Guild of Editors (NGE), among others, through appropriate mass media instruments to achieve public education and awareness on the value of biodiversity and the need for their conservation and sustainable use. This could not be achieved however the Federal Ministry of Environment through the annual World Environment Day program show cases biodiversity conservation and its relevance.

4.0 PROGRESS TOWARDS THE 2010 TARGET AND IMPLEMENTAION OF THE STRATEGIC PLAN.

Nigeria is highly endowed with biodiversity. Information about its current biodiversity status is lacking. However various Non Governmental Organizations and some Government Institution have some information which have been basis for progress indicators.

Chapter 4 uses biodiversity indicators information available in Nigeria to assess the level of achieving the 2010 Target and the Global Goals and Targets agreed upon by the CBD. Information has been gathered from various Biodiversity conservation programs by various Agencies and Institutions in Nigeria which has helped in the development of Biodiversity conservation policies in the country.

4.1 –Progress towards 2010 Target:

PROTECTING THE COMPONENTS OF BIODIVERSITY

Goal 1. Promote the conservation of Biodiversity ecosystems, habitats and biomes

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
1.1: At least 10% of each of the world ecological Region effectively conserved	Nigeria's present protected areas include a biosphere reserve,. Other sanctuaries and game reserves which are to be conserved have been proposed. The total area of land under national parks is about 2.4 million hectares.	Nigeria has 7National parks, 445 forest reserve, 12 strict nature reserves and 28 game reserves	Forest Reserves covered about 11% of the country's land area, by 1980. But currently the total Reserve is about 4.2% The ecological changes in **Table 5** are indicators of progress trend:	Forest Reserves covered about 11% of the country's land area, by 1980. But currently the total Reserve is about 4.2% which is a great decrease instead of increasing	Specific Targets for each National Institution to achieve were not achieved
1.2: Areas of Particular importance to				Priority areas protected are wetland	The target is to increase protected areas

Biodiversity Protected				and national parks and forest reserve without much progress	

Assessment of Progress:

Some efforts have been made in Nigeria to establish ecological coherent series the country providing protection for nationally and internationally important species and habitats. The protected areas are part of Nigeria's effort to conserving her species and habitats. This has been done through legislation and Institutional arrangements and mainstreaming of biodiversity conservation activities into national programmes. Significant achievement has not been made in achieving this goal. There is need for more funding and action in order to meet the 2010 Target and beyond.

Goal 2. Promote the conservation of species:

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
2.1. Restore maintain or reduce the decline of populations of selected taxonomic groups	Species that had priority for conservation which are in table 3 have evidence that some of these have since become extinct and there is need for a new survey of species to determine their present status. Some of the	Status of plant and animal species as indicated in appendix 1-2 , table 3	**Biodiversity Surveys of 1976 and 1995 indicated drastic decrease of species and their habitats**	Some species that where endangered at indicated in the **1976 and 1995** surveys have evidence that some of them have since become extinct	The target is to protect the species from extinction

	plant species are presently in National Gene bank.				
2.2.State of threatened species improved		Species that had priority for conservation which are threatened in table 3		Species which are threatened in table 3 have that had priority for conservation have evidence that some of these have since become extinct	The Government of Nigeria has Various targets for the NBSAP which have various Institution mandates to accomplish

Assessment of Progress

Efforts have been made to address the decline in species population but there has been increase in the decline.

Goal 3. Promote the conservation of genetic diversity

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
3.1 Genetic diversity of crops, livestock and of harvested species of trees, fish and other valuable species and local knowledge maintaine	Nigeria has strengthened its National Gen bank, Aforestation program and Bioresource centre with the aim of improving, National Institute of Animal Research, National Institute for	**Native goat breed ,** Sustainable Fisheries Management programmes ; Agro-biodiversity; Medical Plants Conservation; Captive breeding of a variety of animal	National Conservation Strategy 1985 ,Natural Resources Conservation Action Plan 1992 ,National Biodiversity Strategy and Action Plan 1998 All show increase of	There are indications that there is increase of diversity of species due to in breeding cross breeding and technological application, though the situation has	**There are various Government programmes to increase biological resources in the country which has resulted in increase in diversity of species .**

d	Fresh Water Fisheries Research, Developed draft Guidelines for bioprospecting and indegenious knowledge in the conservation of biodiversity, with the aim of strengthening Genetic diversity of crops, livestock and of harvested species of trees, fish and other valuable species and local knowledge.	species; and animal species, and Plantations of indigenous tree crops.	diversity of species due to in breeding cross breeding and technological application. There is however total aggregate of genetic decline in domestic animals and crops	not been fully ascertained.	

Assessment of Progress

The National Genetic and Biotechnology Research Center has a pool of genetic materials of various plants in its Gen bank. Fisheries; Agro-biodiversity; Medical Plants Conservation, livestock, crop research programmes have increase the diversity of domestic animals, crops and fisheries resources. There is however total aggregate of genetic decline in domestic animals and crops .

Goal 4. Promoting sustainable use and consumption

Global Targets	**Nigeria's contribution to global Targets**	**Relevant Nigeria's Indicators and associated measures**	**Assessment of change of each measure**	**Summary of Change**	**Related Nigeria National Targets**
4.1	**The use of**	-Fadama		**Its not**	Governme

Biodiversity based products derived from sources that are sustainably managed and production areas consistent with the conservation of biodiversity	**fuel wood by Nigerians has been in the increase with various programs to enhance sustainable utilization, through reaforestation programs, Captive breed of wildlife is another step of sustainable utilization of wildlife in the country. The forest reverse with introduce agro-forestry also enhance conservation**	Integrated Land Management Project: This project empowers the Rural People on how to utilization wetlands in sustainable manner -Local Empowerment and Environmental management program(LEEMP); its for the empowerment of rural populace while protecting the environment.		**within the target achievement**	nt has established a national programme for sustainable utilization of biological resources at the Ministry of Science and Technology, the Forestry Research Institute of Nigeria, as well as the Raw Materials Research and Development Council in order to optimize the contribution of these resources in the national economy. It is also envisaged that an Inter-Ministerial Panel or a full-fledged Biodiversity Institute will be established to coordinate

					and harmonize the activities of various agencies of Governme nt, bio-industries and the civil society in sustainabl e utilization of biological resources. The planning process for this strategy initiated the formation of a private sector driven Bio-resources Industry Organizati on of Nigeria (BIN) to engage the private sector and civil society in monitoring the use of biodiversity for the production of consumer goods.

4.2 Unstainable consumption of biological resources or that impacts upon biodiversity reduced	Hunting for games in Nigeria and extraction of plant materials are forms of unsustainable utilization of biological resources. Nigeria has marine/coastal environment within its territory, rich in fisheries resources. Fishing is a major industry which is unsustainable practiced, Protection of the inland aquatic environment from pollution by oil exploration, agro-chemicals, and pesticides, industrial domestic wastes and restoring fish stock to sustainable level will contribute to the global target.	Establishment of Institute for Oceanography and marine Research, Department of Fisheries to ensure sustainable marine and fisheries resources extraction, National Oil Spill and Detection Agency		**No improvement**	, Training of fishermen to upgrade their proficiency in sustainable catching, handling of fish, Prevention and rapid response to off shore oil spills.
4.3 No Species of wild floral or fauna	Nigeria had substantial trade in wild floral and		**Nigeria has strengthened its**	**In two 2000/2001 it was discovered**	There is no specific national

endangered by international trade	fauna but not totally ensure compliance with CITES to contribute to the global target		**enforcement of CITES**	**that there were some lapses in the enforcement of CITES. There is currently improvement in the enforcement of CITES within the country.**	target

Assessment of Progress

Little progress is made in the contribution of Nigeria to the global target as fishing is carried out unsustainably in the country. The CITES licences issued are done to ensure that export of fauna and floral do not impact on the population of species concerned. However there has been cases of contavence of CITES procedures by individuals with no capacity to detect them.

Addressing threats to Biodiversity

Goal 5. Pressure from habitat loss, land use change and degradation, unsustainable water use reduced

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
5.1 Rate of loss and degradation of natural habitats reduced	**Nigeria has designated protected areas in the form of Parks, secred grooves, Forest Reserves, wetlands , botanical gardens, Game**	The total area of land under national parks is about 2.4 million hectares. Nigeria's present network of protected areas includes a		**Priority habits which are wetlands, mangroves and arid have been reduced due to human activities**	**The restoration of degraded habitat for restoration, Protection and conservation of Priority habitats**

	Reserves under special management	biosphere reserve, 7 national parks, 445 forest reserve, 12 strict nature reserves and 28 game reserves. Other sanctuaries and game reserves which are to be conserved have been proposed			

Assessment of progress

There is no substantial contribution to the achievement of the global target by Nigeria. There is gradual decrease in the priority habitats as well as species therein.

Goal 6. Control threats from invasive alien species

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
6.1. Path ways for major potential alien species controlled **6.2. Management plans in place for major alien species that threaten**	**Some major non native species like water hyacinth, Nypa palm have been noticed to be invasive**	**Presence of these species particularly in the coastal areas of Nigeria. Guinea Current Large Marine Ecosystem project**	**The Control measures are achieving some result but not enough**	**The trend is that there are increase in the Known species while there are no record of most non native species and their level of**	**There are no National targets on this goal but there are programmes in Nigeria that are controlling invasive species**

ecosystem, habitats of species		**and Invasive species project control are in place in the Nigeria to control invasive species**		**invasiveness**	

Assessment of progress

Invasive Alien species have been identified in Nigeria that threaten biodiversity and their habitats. The threats are in the form of displacing original species, spreading of diseases, competition for resources, parasitism. **Nigeria has ongoing invasive control projects and programmes in place, with some level of success**

Goal 7. Address challenges to biodiversity from climate change and pollution

Global Targets	Nigeria's contribution to global Targets	Relevant Nigeria's Indicators and associated measures	Assessment of change of each measure	Summary of Change	Related Nigeria National Targets
7.1. Maintain and enhance resilience of the components of biodiversity to adopt to climate change	Climate change is associated erratic weather with extreme , temperature ,draught, flooding, Sea level rise leading to loss of biodiversity. Nigeria has	Erratic weather with extreme , temperature ,draught , flooding, Sea level rise leading to loss of biodiversity. Nigeria has established a special climate Unit to tackle the issues of climate change. A climate change bill has also be passed into	**Not assessed**	**The change is not assessed as indicators have not be fully ascertained with parameters . Measures to address climate issues are being developed**	**No Nigeria specific targets to climate change.**

	established a special climate Unit to tackle the issues of climate change. A climate change bill has also been passed into an Act awaiting presidential accent. The Federal Government has equally directed that a major aspect of the Ecological Fund be directed towards aforestation programs with a view of mitigating impact of climate change. The	an Act awaiting presidential accent.			

	government has equally signed some international treaties with a view of working with the international community in addressing issues of climate change				
7.2 Reduce pollution and its impacts on biodiversity	Nigeria's economy is depended on petroleum and its exploration has affect biodiversity in the Niger Delta region of the country. Though the level of damage has not been fully	Damaged ecosystem in the Niger Delta Region of the country, with is attended biodiversity loss. The Nigerian Government has directed oil companies in the country to stop gas flaring by 2010 . It has also established a National Oil Spill and	**The assessment of change is still on going**	**The assessment of change is still on going**	**The national target is to achieve zero flaring; minimize oil spill and restore degraded sites and restore the biodiversity**

	ascertained. Gas flaring is also a major threat to biodiversity. The Nigerian Government has directed oil companies in the country to stop gas flaring by 2010 . It has also established a National Oil Spill and Detection Agency to address issues of oil spill to reduce its impact on biodiversity and the environment in general. Projects are	Detection Agency to address issues of oil spill to reduce its impact on biodiversity and the environment in general. Projects are also on ground to restore damage ecosystem due to oil exploration			

	also on ground to restore damage ecosystem due to oil exploration. Industrial pollution is another aspect that the Nigerian Government is equally concerned about				

Assessment of progress

Climate change is having a negative impact on habitats and biodiversity in Nigeria. There are no vivid indicators . Efforts are being made to reduce oil spill, gas flaring and other industrial pollution. The target of stopping of gas flaring has not been successful and the target has been moved 2011.

MAINTAINING GOODS AND SERVICES FROM BIODIVERSITY TO SUPPORT HUMAN WE				
Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods				
Global targets		Nigeria's contribution to global target	Relevant Nigeria indicator and associated measures	Assessment of change for each measure

8.1 Capacity of ecosystems to deliver goods and services maintained		Nigeria has undertaken a review of national targets and indicators relevant to the implementation of an ecosystem approach The biodiversity conservation features as a major component of the environmental is to integrate biodiversity conservation into the nation's economic and social development, by: Protecting ecosystems and species that are rare, endangered or facing extinction, Restoring, maintaining and enhance ecosystems and ecological processes essential for the functioning of the Nigerian biosphere, to preserve biological diversity and apply the principle of optimum sustainable yield in the use of living natural resources and ecosystems. Ecosystem assessment, shows that large areas of natural forests are being unsustainably exploited for tree species. Grazing pressure, fire, and excessive use of systemic herbicides, including pollution are other factors that affect biodiversity and habitat loss. Fire destroys large areas of forest ecosystems annually with the elimination of sensitive species	Restocking biological resources where they have either been lost or have become scarce.	This change has been assessed through various institutional records, annual activities like hunting, fishing festivals	
8.2 Biological resources that support sustainable livelihoods, local food security and health care, especially of	Survey and collection of indigenous fruit trees and other useful plants and creation/extension of arboreta and other				

poor people maintained.	germplasm collections. Wood accounts for about 85% of domestic energy use in the country. Preference is often given to wood species with high calorific values that occur largely in the savannah and rainforest ecosystems of the country. Thus high depletion of fuel-wood species is easily noticeable in the savannah and rainforest ecosystems. Establishment of medicinal plant gardens . Nigeria has supported or projects on ecosystem Services and Poverty Alleviation			

	Assessment of progress; Some progress has been achieved in the protection of wetlands and restoration of degrade use of the local people.

PROTECTING TRADITIONAL KNOWLEDGE, INNOVATIONS AND PRACTICES

Global targets	Nigeria's Contribution to global target	Relevant Nigeria indicators and associated measures	Assessment of change for each measures		
				Summary of change	Related Nigeria National Target
9.1 Protect traditional knowledge, innovations and practices	The Nigeria has interest in article 8j. Nigeria has set up a national committee to develop a national framework on Access and benefit sharing and Traditional Knowledge on conservation of biodiversity	No relevant Nigeria indicators at present	No change noticed	No change noticed	Encouragement of local communities to participate in restorative management of wetlands and arid zone vegetation
9.2 Protect the rights of indigenous and local communities over their traditional knowledge, innovations	The Nigeria has interest in article 8j. Nigeria has set up a national committee to develop a national	No relevant Nigeria indicators at present	No change noticed	No change noticed	Encouragement of local communities to participate in restorative management of wetlands and arid zone vegetation

and practices, including their rights to benefit-sharing	framework on Traditional Knowledge on conservation of biodiversity				

ENSURE THE FAIR AND EQUITABLE SHARING OF BENEFITS ARISING OUT OF THE USE OF GENETIC RESOURCES					
Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources					
Global targets	Nigeria contribution to global target	Relevant Nigeria indicator and associated measures	Assessment of change for each measure	Summary of change	Related Nigeria and national targets
10.1 Ass access to genetic resources is in line with the Convention on Biological Diversity and its relevant provisions	Nigeria has set up a national committee to develop a national framework on Access and benefit sharing	No relevant indicators at present			Non
10.2 Benefits arising from the commercial and other utilization of genetic resources shared in a fair and equitable way with the countries providing such resources in line with the Convention	Permit has been granted to a Research Institute on Access and Benefit Sharing	No relevant indicators at present			Non

on Biological Diversity and its relevant provisions			
Assessment of progress **Draft National Framework on Access and Benefit sharing has been developed but no specific National target**			

ENSURE PROVISION OF ADEQUATE RESOURCES					
Goal 11. Parties have improved financial, human, scientific, technical and technological capacity to					
Global targets	**UK contribution to global target**	**Relevant Nigeria indicator and associated measure**	**Assessment of change for each measure**		**Summa change**
11.1 New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention in accordance with Article 20.	Financial allocation to biodiversity conservation national has been only to the Forest sector . Nigeria has met its financial contribution to the CBD trusts fund, and GEF	CBD Trust fund	Non		
11.2 Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4.	Non	No relevant Nigeria indicators at present			
Assessment of progress Nigeria has been able to contribute to CBD and GEF Trust funds .					

4.2 Progress towards the Goals and Objectives of the Strategic Plan of the Convention

4.2.1 Introduction

The Nigeria national contribution to achieving the goals and objectives of the Strategic Plan is delivered under the umbrella of the Nigeria National Biodiversity Strategy and Action Plan (NBSAP) and associated country biodiversity/environment strategies for various states in the country. All of these plans and strategies are developed and implemented through a cross-sectoral, partnership approach that is replicated at all relevant levels.

4.2.2 Assessment of the Nigeria contribution to and progress towards each of the objectives of the Convention on Biological Diversity Strategic Plan:

Goal 1: The Convention is fulfilling its leadership role in international biodiversity issues
1.1 The Convention is setting the global biodiversity agenda
1.2 The Convention is promoting cooperation between all relevant international instruments and processes to enhance policy coherence.
1.3 Other international processes are actively supporting implementation of the Convention, in a manner consistent with their respective frameworks.
1.4 The Cartagena Protocol on Biosafety is widely implemented.
1.5 Biodiversity concerns are being integrated into relevant sectoral or cross-sectoral plans, programmes and policies at the regional and global levels.
1.6 Parties are collaborating at the regional and sub-regional levels to implement the Convention
Objectives 1.1, 1.2 and 1.3 all related to the effectiveness of the Convention on Biological Diversity in representing biodiversity concerns on the international stage and within the work of other international conventions. **Detail of implementation of the Cartagena Protocol (Objective 1.4) is provided under goals 2.4, 3.2 and 4.2.**
Objectives 1.5 and 1.6 are about Parties engaging in regional and sub-regional implementation activities. Nigeria is willing to undertakes these regional aspects of its biodiversity work as a member of the African Union once the Union embarks on their implementation

Goal 2: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention
2.1 All Parties have adequate capacity for implementation of priority actions in national biodiversity strategies and action plans
Nigeria has produced a national biodiversity strategy and action plan but not adequately implemented . It needs a review. Nigeria has some scientific and technical expertise in biodiversity conservation but not enough and ate not well coordinated . Biodiversity conservation activities are not well funded .
2.2 Developing country Parties, in particular the least developed and the small island developing States amongst them, and other Parties with economies in transition, have sufficient resources available to implement the three objectives of the Convention.
As a part of Nigeria's ensuring sustainable development, it has incorporated environmental impact assessment into its all developmental projects . It has also set up national committee to develop her access and benefit sharing framework The GEF is the financial mechanism for the CBD and the Nigerian Government is one of the contributors to the GEF .However Nigeria has not been able to commit enough resources to meeting the CBD objectives.
2.3 Developing country Parties, in particular the lease developed and the small island developing States amongst them, and other Parties with economies in transition, have increased resources and technology transfer available to implement the Cartagena Protocol on Biosafety.
Nigeria has been able to develop her National Biosafety Framework, but requires assistance to develop capacity to implement the Framework. Nigeria also donates toward the protocol's trust fund.
2.4 All Parties have adequate capacity to implement the Cartagena Protocol on Biosafety
Nigeria signed the Protocol in 2000, it also ratified it in 2002. The National Focal Point is the Federal Ministry of Environment Nigeria has been able to develop her National Biosafety Framework, but requires assistance to develop capacity to implement the Framework.
2.5 Technical and scientific cooperation is making a significant contribution to building capacity
Nigeria Ministry of Environment works both at country level and through partnerships Internationally to support better management of environmental resources including forests, fisheries and biodiversity.

This has included:

- Significantly increasing the amount of quality information available to policy makers on how natural resources and environmental services support economic growth.
- Providing specific and practical policy advice on measures necessary to sustain economic growth in the medium to long term.
- Strengthening both the amount and quality of the dialogue between Ministries of Finance and Environment, Agric. Science and Technology.

Nigeria has weak Institutions and lacks adequate human resources with inadequate funding in biodiversity conservation. The private sector has shown no interest in conservation matters.

Goal 3: National biodiversity strategies and action plans and the integration of biodiversity concerns into relevant sectors serve as an effective framework for the implementation of the objectives of the Convention
3.1 Every Party has effective national strategies, plans and programmes in place to provide a national framework for implementing the three objectives of the Convention and to set clear national priorities
Please see text in chapter **2.2 on the OVERVIEW OF THE IMPLEMENTATION OF THE NBSAP:**
3.2 Every Party to the Cartagena Protocol on Biosafety has a regulatory framework in place and functioning to implement the Protocol
• Nigeria has Biosafety Bill in the parliament, There is Biosafety policy in place, Biosafety Guidelines have been developed
3.3 Biodiversity concerns are being integrated into relevant national sectoral and cross-sectoral plans, programmes and policies
This is yet to be implemented .
3.4 The priorities in national biodiversity strategies and action plans are being actively implemented, as a means to achieve national implementation of the Convention, and as a significant contribution towards the global biodiversity agenda

Goal 4: There is a better understanding of the importance of biodiversity and of the Convention and this has led to broader engagement across society in implementation
4.1 All Parties are implementing a communication, education, and public awareness strategy and promoting public participation in support of the Convention
There is inadequate awareness on biodiversity and the convention:

There are opportunities provided by visiting nature reserves (which vary in scale from small fields to National Parks) Botanic gardens and open access plant collections for example, and Environment day which provide opportunity for public engagement to inform the sectors of the public about international policy issues and how they relate to biodiversity and plants generally.
4.2 Every Party to the Cartagena Protocol on Biosafety is promoting and facilitating public awareness, education and participation in support of the Protocol
Nigeria has incorporated public awareness and participation in its National Biosafety Framework, its implementation is far fetched. However Various workshops have been held and used to enlighten the public on the protocol
4.3 Indigenous and local communities are effectively involved in implementation and in the processes of the Convention at national, regional and international levels
This has not been achieved as expected . There are occasions whereby communities are involved in conservation efforts unconsciously .
4.4 Key actors and stakeholders, including the private sector, are engaged in partnership to implement the Convention and are integrating biodiversity concerns into their relevant sectoral and cross-sectoral plans, programmes and policies
ome private concerns particularly in the petroleum sector are currently incorporating conservation programs into their operations. Public Agencies are equally make efforts to mainstream biodiversity conservation into their operations as well. The Federal Ministry of Environment is at an advance stage in establishing an Environment Desk in each relevant Agencies and Institution to ensure compliance in the mainstreaming of conservation and other environmental issues into their programs

4.3 Conclusion

4.3.1 Introduction

The level of implementation of the CBD in Nigeria has been achieved through the Nigeria National Biodiversity Strategy and Action Plan(NBSAP) and various states biodiversity conservation programs.

The NBSAP has undoubtedly improved conservation and sustainable use of biodiversity in a number of ways. Some of these are by:

- Protecting ecosystems and species that are rare, endangered or facing extinction.
- Encourage rational and sustainable use of biodiversity that abound in reasonable quantities,
- Restocking biological resources where they have either been lost or have become scarce.
- Restore, maintain and enhance ecosystems and ecological processes essential for the functioning of the Nigerian biosphere, to preserve biological diversity and apply the principle of optimum sustainable yield in the use of living natural resources and ecosystems.
- Raise public awareness and promote understanding of essential linkages between biodiversity, environmental stability, development, and encourage individual and community participation in biodiversity conservation and protection efforts.
- Co-operate in good faith with other countries, international organizations/agencies to achieve optimal use of biodiversity and effective prevention or abatement of trans-boundary biodiversity degradation.
- Raising awareness on biodiversity particularly during the development of the NBSAP ;
- Focusing action on priorities;
- Providing a national framework through which policy planning, implementation and the sharing of best practice can take place efficiently and effectively;
- Embedding a target-based approach, for halting loss of biodiversity and restoring biodiversity.

There are still many challenges that need to be met in Nigeria as many species and habitats that continue to decline due, largely to habitat loss caused by agricultural intensification practices (including the use of fertilizers and pesticides); increased land drainage; the channelization of water courses and eutrophication of water bodies; the reduction in extent of hedgerows and loss of farm ponds. A range of conservation-related measures introduced in Nigeria of which the NBSAP is notable one have also helped, cumulatively to recovery for many of the most threatened habitats and species.

4.3.2 **Access and Benefit Sharing**

4.3.3 Nigeria remains committed to the Ninth Conference of Parties' decision to implement an international regime on access and benefit-sharing of genetic resources by the 10th Conference of Parties in 2010. Nigeria has been participating in the CBD various meeting and programs and drafted **Access and Benefit Sharing** framework towards achieving the 2010 target.

4.3.4 THE IMPLEMENTATION OF THE NBSAP:

The implementation of the National Biodiversity strategy and Action Plan (NBSAP) has not been successful due to some constrains . The overall objective of biodiversity conservation in Nigeria, is to set in place, as soon as possible, measures that would conserve the dwindling resources and reduce further damage, and over a long term, taking necessary steps to reverse the trend of the damage done to biodiversity. The biodiversity conservation features as a major component of the environmental is to integrate biodiversity conservation into the nation's economic and social development, by:

- Protecting ecosystems and species that are rare, endangered or facing extinction.
- Encourage rational and sustainable use of biodiversity that abound in reasonable quantities,
- Restocking biological resources where they have either been lost or have become scarce.
- Restore, maintain and enhance ecosystems and ecological processes essential for the functioning of the Nigerian biosphere, to preserve biological diversity and apply the principle of optimum sustainable yield in the use of living natural resources and ecosystems.
- Raise public awareness and promote understanding of essential linkages between biodiversity, environmental stability, development, and encourage individual and community participation in biodiversity conservation and protection efforts.
- Co-operate in good faith with other countries, international organisations/agencies to achieve optimal use of biodiversity and effective prevention or abatement of trans-boundary biodiversity degradation.

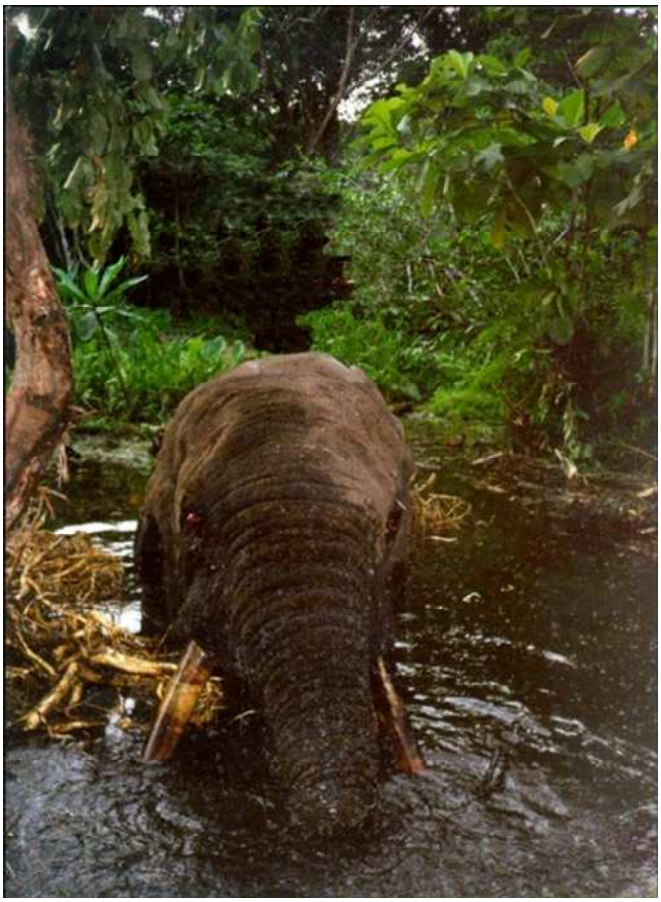
S/No.	**Specific Actions (in-situ conservation of forests outside forest reserve)**	Level of Achievement	Executing Agency
1	Conservation of special ecosystems e.g. wetlands, lands, fragile ecosystems and montane vegetation types and arid zone.	There are Fadama projects for the sustainable utilization of some wetlands in the country, one of this wetlands is the Nguru which has pool of biodiversity, There is also Nigeria –Niger	FMEnv, FMANR, NIOMR, FRIN, NIFFR, SMEnv and FCT

		drought and desertification program for the critical land areas in the North' The sustainable utilization and management of the fragile soils for the perpetuation of species of economic, medicinal and genetic conservation values is been embarked upon.	
2	Encouragement of local communities to participate in restorative management of wetlands and arid zone vegetation	The department of Forestry in the Federal Ministry of Environment and States ministries of Environment have set up various initiatives to manage and utilize the wetlands and arid zones in the country in sustainable manner. Rural communities are guided on the use of the wetland and arid lands in sustainable manner, This has been achieved through Local Empowerment and Environmental management program(LEEMP); its for the empowerment of rural populace using forest resources while protecting the environment. Fadama projects have also been used to achieve this target	FMEnv, FMANR, SMEnv, SMANR & SME
3	Encouragement of local governments, local communities, NGOs and private individuals to develop private forests of Multipurpose trees in urban and rural areas.	Some Local Governments in the country, NGOs and individuals have embarked on this through the Federal Government aforestation program	SMEnv, LGAs, NGOs, CBOs
4	Rehabilitation of plant nurseries operated by State Departments of Forestry for the production of 5 million multipurpose plant seedlings every year.	Most of the States have rehabilitated their nurseries and in some cases established new ones	FMEnv, FMANR, SMANR, FRIN, SMEnvs, NGOs.
5	Strengthening of the capability of private industries, Universities to manage natural forest outside forest reserves on a sustainable basis.	Private Industries and universities capacities have been Strengthening to manage natural forest outside forest reserves through	FMEnv and FMANR

		seminars and workshop. Some oil companies in the country have taken it upon themselves to go into this sector.	
6	Organisation of storage and retrieval of data from conservation areas and making them available to policy makers and managers.	Efforts are being made to pool all the sectors biodiversity conservation areas to a central node in the Ministry of Environment. The Ministry is presently in the process of establishing a viable network of information system. Towards this end, an Environmental Data Bank Unit has been established but this would need to be upgraded and made more viable. The Federal office of Statistics has also gathered data on Biodiversity in the Country. Nigeria is also making effort to be more involved in the Biodiversity Clearing House Mechanism of the Convention Biological Diversity. A Biodiversity website will soon be established	FMEnv & FMANR SMEnv
7	Designation of appropriate parts of protected areas for managed harvesting of non-timber products by local people to ensure benefits to local people and guarantee of protection of resources.	This has been established in some parts of the country, particularly in the southern part of the country. Deliberate attempts are on going to enhance the yield o indigenous and exotic species facing high economic demand in sustain their supplies and improve the survival of their substitutes	FMEnv, FRIN, FMANR, SMEnv & SMANR

S/No.	**Specific Actions for Wildlife Conservation**	Level of Achievement	Executing Agency
1	Institutional capacity building in order to	More funds have been given	FMEnv & SMANR &

	increase the total wildlife conservation area from the present 5.8% to 25%.	to the National Park Service to facilitate its operations.	SMEnv
2	Creation of Biodiversity Reserves in each ecological zone as "Ecozone Biodiversity Centres"	Bio-resource center has been established in Odi in the south- south zone of the country with more to be established in other zones	FMEnv & FMANR, SMEnv & SMANR
3	Enactment of a comprehensive modern national law that would ensure efficient conservation of biodiversity in Nigeria.	This law is yet to be in place, However a national biodiversity and Biosafety bills in the parliament	FMEnv, FMJ, Nigerian Institute for Advanced Legal Studies
4	Ecologically based management plans for appropriate game reserves for dual utilisation of wildlife for game viewing and game cropping.	This is yet to be in place	FME & FMARD, SMANR, SMEnv
6	Introduction of Biodiversity Conservation Education into the curricula of all tertiary institutions in Nigeria.	Some Institutions have started courses in Biodiversity management and other related fields	FMEd, NUC, NBTE
7	Reviewing and up dating of curricula of Universities which specialise in Wildlife in the light of the reality of Nigeria's declining economy and high unemployment.	Some Universities have carried out reviews of their curricula to enable students specialise in Wildlife management	FMEd, NUC, Universities



Elephant

S/No.	**Actions for Fish Biodiversity Conservation and Development (Inland Fisheries Sub-sector**)	**Level of Achievement**	Executing Agency
1.	Protection of the inland aquatic environment from pollution by oil exploration, agro-chemicals, and pesticides, industrial domestic wastes.	The Federal Government has set up an Agency National Oil Spills Detection and Regulation Agency to quickly respond to issues of oil spill to avoid damage to inland aquatic environment, There is also a unit to address issues of Persistent organic pollutants in the country. There are also researches going on to improve fisheries and conservation.	FME, FMARD, FMPR, SMEnv & NIFFR, NIOMR
2.	Enforcement of appropriate countrywide fishery laws for the inland fisheries, their conservation and sustainable development and management.	The Federal Ministry of Agric is adequately enforcing appropriate fisheries laws in the country	FMJ, FMEnv & FMANR
3.	Encouragement of the private sector to invest in the Distant Water Fishery through: a) Preferential reduction of costs of lubricants and Automotive Gas Oil (AGO) used by licensed fishing trawlers to bring down the cost of fishing operation b) Reduction of duty on imported fishing materials, outboard motor engines, used trawlers canoes etc. in the inshore waters.	All petroleum products in the country are subsidized There is no deliberate reduction in prices of the items mentioned	SMEnv, FMF, FMARD, FMIA, Customs and Excise
4.	Promotion of export of high quality shrimps.	This is done through the National Export Promotion council	FMANR, SMEnv & NEPC
5.	Enforcement of penalties to curb pilferage and exportation of fish and shrimps from trawlers in the high seas.	There are laws that are enforced in this area in the country	FMARD, FMEnv, NIGERIAN NAVY, NPF
6.	Creation of specialised funds kept with a bank for lending at special concessions to fishermen.	There are special government agric loans for the agric sector which are also used for the fisheries sector	NACB, FMARD, CBN, Micro Finance Banks, Commercial and Community banks, Bank of Industry
7.	Encouragement of fish farming at small and large scales through:		
	a) Training of fish farmers	Several training programs have been organized for Fish Farmers in the country either by the government or private concerns	FMARD, NIFFR NIOMR, Private Sector

	b) Provision of simple fish feed pelleting machine to fish farmers and fish feed millers	This has also been made available to fish farmers at affordable prices	FMANR, FIIRO, NIOMR
	c) Provision of fingerling through research centres, government-sponsored fish hatcheries and the private sector.	This has also been made available to fish farmers at affordable prices	FMARD, NIFFR, NIOMR, Private Sector
8.	Establishment of at least 10ha. Fish Farm (with its support hatchery and fish seed service) by all local governments.	Few Local Governments have embarked on this	FMARD, SMANR, Private Sector
9.	Establishment of strong machinery for enforcing of regulations and monitoring catch data.	This has not been too successful	FMARD & FMJ, NPF & NN
10.	Assistance to artisanal fishermen to organise themselves into viable co-operatives.	This has been done for various farming groups in the country	FMARD, NACB NGOs CBOs &Banks
11.	Establishment of industries for the manufacture of (a) Fishing gears (gill nets, lipats, twines, etc.) in Nigeria.	There some private industries that manufacture these items	FMARD, FMI, Bank of Industry, Private Industries
	(b) Construction and maintenance of fishery boat yards.	There exists construction and maintenance fishery boat yards by private concerns	FMANR, FMWH, NIOMR, NIFFR, Private Industries
12.	Training of fishermen to upgrade their proficiency in catching, handling and processing of fish.	A lot of trainings have taken place in the country in this respect	FMARD, FD Fisheries NIFFR,

Research Programmes

S/No.	**Research Actions for Biodiversity Conservation and Development (Ex-Situ Conservation)**	Level of Achievement	Executing Agency
1.	Inventory of ex-situ populations and scientific studies of Wildlife species (plants and animal).	There are some ongoing inventory taking place in the country which have not been completed	Universities FMEnv, FRIN, NIOMR & NIFFR, NGOs
2.	Survey and collection of indigenous fruit trees and other useful plants and creation/extension of arboreta and other germplasm collections.	This has been carried out in the country	FMEnv, FMANR, FRIN, NIHORT, NIFOR, Universities, component NGOs
3.	Establishment of programmes for propagation and development for useful and potentially useful wild plants.	There are program on ground	FMEnv, FMANR, NIFOR, FRIN, NIPRD NIHORT, Universities, NGOs

4.	Collection of Genetic resources and development of appropriate technology for improving food production and pharmaceutical products, including the use of indigenous knowledge and bioprospecting.	Its exists in the country, There are herbal heritage centres for the conservation of medicinal plants and other plants of great value. There is also an Institution utilizing herbs for the development of alternative medicine in the country	FMEnv, FMANR, Universities, NIPRID, FRIN, NIFOR, NIHORT, NGOs, M.M.M Botanical Gardens, Epe, Lagos
5.	Provision of training for schools, NGOs and local communities on seedling production.	It takes place regularly in the country	FMEnv, FMEd, FRIN, NABTEB, FMANR, NGOs
6.	Survey of trees outside forest reserves, and assistance to local people in their management on sustainable basis.	Its ongoing in the country under various programs	FMEnv, FMARD, FRIN, SMANR, SMEnvs
7.	Survey of indigenous knowledge, scientific and economic values of timber and non-timber forest	On going in the country.	FMEnv, FRIN, FRIN, SMANR, SMEnvs

S/No.	**Research Actions for Wildlife Conservation**	Level of Achievement	Executing Agency
1.	Provision of baseline data on Bioversity for planning and management.	There exists base line data but requires review	FMEnv. & FMANR
2.	Comprehensive survey of Nigerian wetlands to determine their significance in terms of biodiversity.	Still ongoing	FME, FMARD, NCF other NGOs,
3.	National Survey and mapping of forests for their preservation as sanctuaries for plants and animal	It exists to an extent in the country but not adequate	FME, FRIN, Oil companies, University Linkage Centres, NGOs
4.	Studies of wildlife species of economic importance for: a) Tourism development. b) Meat production technology and nutrient quality c) Pharmaceuticals d) Cultural heritage.	Ongoing Ongoing	FMEnv, FRIN, NIOMR, NIFFR SMEnv, SMARD, University Linkage Centres, National Parks Services.
5.	Establishment of a separate, autonomous Wildlife Research/Training Institute to cater for and co-ordinate the enormous wildlife research responsibilities.	Yet to be achieved	FME, FRIN, National Parks Service, NIOMR, NIFFR
6.	Establishment of captive breeding centres in each eco-regional zone for endangered species rehabilitation.	There exists some that requires rehabilitation	FME, FRIN, NARP, National Parks Services.

S/No.	**Research Actions for Fish Biodiversity Conservation and Development (Inland Fisheries Sub-sector)**	**Level of Achievement**	Executing Agency
1.	Research on the ecology and genetics of fresh water fish in Nigeria for their biological and genetic improvement and conservation.	On going	FMARD, FME, NIOMR, NIFFR, Universities.
	(b) Collection and preservation of reference specimens of all fish species in Nigerian inland waters.	On going at the Nigeria Fresh water Fisheries Research Institute	FME, FMARD, NIOMR, NIFFR ,University LinkageCentres.
2.	Collection and analysis of fishery statistics	On going at the Nigeria Fresh water Fisheries Research Institute	FMARD, FME, NIFFR, FOS NIOMR.
3.	Establishment of a fishery sanctuary	2	FME, FMANR, NIFFR, NIOMR
	Inventorise, and manage traditional fish sanctuaries in collaboration with original owners	Yet to be achieved	FMEnv, FMARD, SMARD, SMEnv, LGAs, Traditional authorities and CBOs
4.	Studies of the capacity of inshore fishery to assess and implement regimes for management on a sustainable yield basis	On going at the Nigeria Fresh water Fisheries Research Institute	FME, FMARD NIOMR, Private sector
5.	Research on fish genetics and improvement of locally cultured fish species	On going	FME, FMARD, NIFFR, NIOMR, Universities
6.	Establishment of gene pools for important cultured fish species.	Yet to be achieved	FMANR, NIFFR NIOMR.

Future priorities for Nigeria is to adopt measures and capacity to accomplish the present priority and to take a more holistic ecosystem approach to conservation and sustainable use of biodiversity. This will very much be led by the States and relevant institutions to increase efforts around working with other sectors, incorporating social and economic issues, taking a broader landscape or wider countryside perspective and trying to do more for the marine environment. This will be in addition to the more traditional work on the conservation of priority habitats and species, and protected areas.

The implementation of the NBSAP has been constrained by lack of funding.

Other constraints include inadequate human capacity , lack of database and lack of awareness which has caused poor understanding of the importance of biological diversity to the national economy, Uncoordinated approach to the implementation of the NBSAP, Lack of compliance monitoring, Weak implementing Institutions and Weak legislative framework.

Support from international partners will go a long way in addressing these constraints.

One of the critical factor that militated against successful implementation of the NBSAP is lack of awareness on the NBSAP. Even the various institution allocated mandates were not aware of such responsibilities.

The capacity building need for Nigeria are:

i) The reviewing of its biodiversity status,

ii) Enlightenment of Public and private institutions on their mandates in the NBSAP

iii) Raising awareness of biodiversity in non-environment sectors and with the general public, and in particular to increase understanding of the impacts of development activities on biodiversity and the role biodiversity plays in delivering environmental quality of life and key services, such as helping to address climate change issues, flood mitigation, air quality improvements, natural resources such as fish, timber, thatch, etc.

4.3.5 Meeting the 2010 Target

In 2002 the UN World Summit on Sustainable Development endorsed the target agreed five months earlier by the Parties to the Convention on Biological Diversity (CBD) 'to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth'. The is no single agreed measure of biodiversity loss but, within the CBD, Parties have decided to use a broad framework of goals, sub-targets and indicators relating to seven focal areas of the Convention to assess progress towards the 2010 target. Following this lead, Nigeria developed set of indicators to measures her performance in addition to the more specific targets agreed for priority species and habitats as part of Nigeria NBSAP. According to these indicators there has been no improvement in biodiversity conservation and there is great damage to habitats and decline in species. Nigeria has not been able to meet the 2010 target in so many areas, particularly in the reduction of the current rate of biodiversity loss and in reversing it.

There is the urgent need for Nigeria to make financial resources available and make deliberate effort to the implementation the Nigeria NBSAP .

4.3.5 Improving the Convention

The Convention has been a stimulus to scientific endeavour and a focus for capacity building and transfer of resources to parties with weak economy

The aims of the Convention which are conservation, sustainable use and access and benefit sharing, are very significance for human well-being. Not withstanding the above, the Convention has not been able to mobilize Parties to commit funds to its implementation in developing countries. Most developing countries that are members of the party relied solely on the resources provided by the CBD/GEF in their biodiversity conservation programs with little national effort. There is need for a road map particularly for the implementation of the convention by developing countries

Also there is not enough awareness on the Convention at the national level.

More needs to be done to communicate effectively about what the Convention aims to do.

The 2010 target of significantly reducing the current rate of biodiversity loss has proved extremely important in providing a political focus. Unfortunately most developing countries have not been able to achieve these targets but rather struggling with economic survival in the face of poverty. The target should be extended to 2012 with defined road map for developing countries to enhance the achievement of the targets .The targets should have a timescale that ensures continued political focus so that governments will have the consciousness to accomplish the targets. The convention should engage parties in workshops and quarterly review of the targets.

APPENDIX 1: SELECTED PLANTS COMMONLY USED IN NIGERIA

NAM E	PART USED	HOW USED
Aframomum danieli	Ripe fresh fruit pulp and seed	Frui pulp and seed eaten seed raw
Aframomum baumannii	Ripe fresh fruit pulp only	Used as spice in food or chewed as stimulant
Aframomum sceptium	Friut and seed	Ripe fruit pulp and seed eaten raw
Aframomumm elegueta	Fruit pulp and seed	Spice for eating cola nut (peppery taste)
Anchomanes difformis	Rhizome	The rhizome is everywhere (B1) eaten in time of scarcity but only after special preparation
Ancistrophyllum secondiflorum	Fresh terminal bud	Fresh terminal bud is eaten raw
Annonidium mannii	Fruit	The fruit is well fleshed is edible and has a sweet sour taste
Annona senegalensis	Leaves	Leaves are good strengthening food for human and horse flowers are used for flavouring food. Ripe fruits is edible, has a pleasant flavour
Ancrocaryon waneanum	Fruit flesh	Fruit flesh edible with an acid taste, seed-oily and edible
Balanites aegyptiaca	Leaves	The leaves are eaten as a vegetable
Boeerthavia diffusa	Leaves	The leaf is used occasionally as course kind of pot-herb in soup
Canarium schweinfurthii	Fruit pulp	Ripe fruits are soaked in hot water to soften the pulp which is eaten
Carpobia lutea	Fruit pulp	Ripe fruit pulp eaten raw
Ceiba pentandra	New leaves	Used as vegetable for soup by Igbo people
Cerototheca seasamoides	Leaves	Used as soup vegetable and used along with other food stuffs for the sake of its mucilaginous activity
Chrysophylum albidum	Fruit and seed mucilage	Ripe fruit pulp eaten raw
Chrysophylum perpulchrum	Fruit pulp	Sweet fruit pulp eaten raw
Coula edulis	Fruit pulp	Seed kernel ground and used as condiment
Crytosperma	Leaves	The leave are eaten as a Senegalese vegetation in Gabon and young leaves are eaten in Orlu area as vegetable
Deibollia purinata	Seed mucilage	Seed mucilage is suck
Detarium senegalense	Seed kernel	Seed kernel powder used as condiment in soup
Deterium microcarpum	Seed kernel	Seed kernel powder used as condiment
Dlalium guineense	Seed kernel	Seed kernel powder used as condiment
Dissotis grandifolia	Root stock	Mature (dry) fruit pulp is eaten raw. The tuber root

		contains sugar, which is extracted as follows: The roots are washed and half dried in the sun beaten in a mortal and steamed. When cool they are squeezed by hand and the huice obtained is used as substitute for sugar, it also used to produce a fermented beverage.
Emilia sonchifolea	**Leaves**	**Leaves used as vegetable**
Eribroma oblonga	**Seed**	**Seed roasted and eaten**
Garcinia kola	**Bitter seed**	**Seed chewed like cola nut**
Gongronema latifolim	**Leaves**	**Leaves used as vegetable has slight bitter taste**
Gymnema syvestris	Leaves	**Leaves chewed as sugar-free diabetic diet**
Heinsia rinita	Leaves	**Leaves used as soup herb**
Irvingia gabonensis	**Fruit pulp, seed kernel**	**Ripe fruit pulp is eaten mango fruit seed kernel is ground and used as soup thicker. Ground seed kernel used as a soup thicker**
Irvingia wombulu	**Seed kernel only**	**Seed kernel powder used as soup thickener condiment**
Lasinanthera africana	**Leaves**	**Leaves are used as soup herb**
Landolphiaduicis	**Fruit**	**Edible in vegetables taste**
Landolphia hirsita	**Fruit**	**Fruit occasionally eaten**
Landolphia owariensis	**Fruit pulp**	**The fruit pulp is edible and is esteemed in all areas and is recorded as a source of vitamin in various areas. It is fermented to give an alcoholic drink**
Lannea acida	**Yong leaf, fruit pulp**	**Young leaves are eaten in W. Africa fruit pulp is edible**
Monoadora myristica	Seed	**Seed roasted, ground and used as condiment in pepper soup**
Mondora tenuifolia	Seed	**Seed roasted, ground and used as condiment in pepper soup preparation**
Napoleona vogelli	**Fruit pulp**	**Ripe fruit pulp and seed mucilage are sucked**
Parkia biglobosa	**Seed**	**Seed is roasted, ground, mixed with oil and pepper and used to eat boiled yam, coco yam etc. (by Ifunkpa people Cross River State**
Pergulaia daemia	**Leaves and fruit**	**Leaves used as vegetable**
Pentaclethra macrophylla	**Seed kernel**	**Kernel of cooked seed is cliced, washed and allowed to ferment or a few days after which it is eaten as salad or used as condiment in other food preparation. The leaves and fruit are edible and used as spice in soup and other food all over Nigeria.**
Piper guineensis	**Leaves and fruit**	**The dried black berried and the fresh red fruits are used in flavouring soup, rice etc. The leaves taken with food are supposed to improve the chances of conception.**
Portulaca olerace	**Leaves**	**Used as vegetable**
Saba florida	**Fruit**	**Fruit pulp is eaten raw**
Sclerocarpbirrea	**Fruit**	**Fruit juice is boiled down to thick consistency used for sweetening guinea corn gruel only seed kernel is edible**
Sroindela junglafidolia	Fruit	**Ripe fruit is edible**
Sorindela warneckii	Fruit	**Ripe pulp sweet and edible**
Spondia mombin	Fruit	**Ripe fruit fresh edible and in the fruit is fermented into a kind of beer**
Stereopermum kanthiamum	**Fruit pod**	
Trichoscypha	**Fruit pulp**	**Ripe fruit pulp is sweet and is widely eaten**
Tranthema portulacastrum	**Leaves**	**Used as vegetable**
Uraria chamae	**Fruit pulp**	**Ripe fruit is sweet and is widely eaten.**

Parkia Biglobosa(African locust bean tree)

APPENDIX 2: STATUS OF WILDLIFE IN NIGERIA

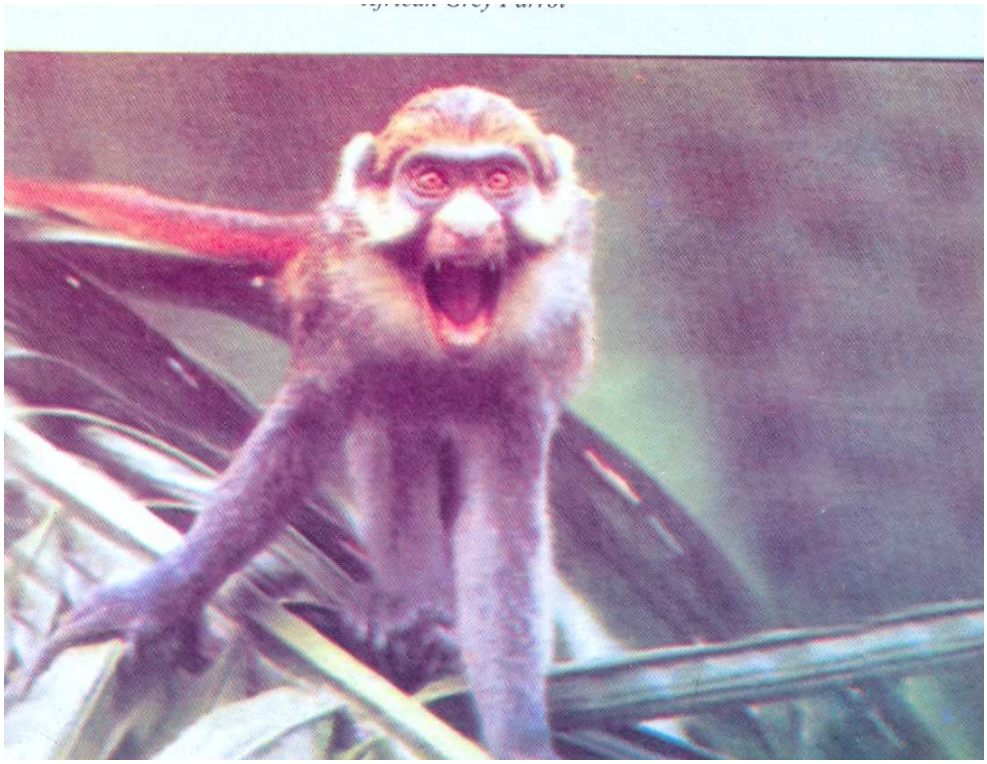
(A) Surveys on the status of wildlife in Nigeria have been few. Hunting and habitat loss have lead to serious impacts on wildlife population. However, the effect of hunting on wildlife populations cannot be easily predicted and assessed. This is because different species react differently to hunting pressure and disturbances as a result of hunting and other human activities. Some species, which have withstood hunting pressure, are they cutting grass *cricetomys spp.* and the giant rat.

(B) The following is a list of wildlife species classified as rare, threatened or endangered

S/NO	ORDER	FAMILY	COMMON NAME	SCIENTIFIC NAME	STATUS
1.	Chelonia	Pteomedusidae	African keeled mud	*Pelosiso carinus*	Endangered

			turtle		
2.			African keeled mud turtle	*Pelusions castaneeus*	Endangered
3.			African keeled mud turtle	*Pelusions nanus*	Endangered
4.			William's African Mud turtle	*Pelusions williamsi*	Endangered
5.		Trionychidae	Abry's flapshell turtle	*Cycloderma aubryii*	Endangered
6.			Namibain flapshell turtle	*Cyslonorbis elegans*	Endangered
7.			Senegal flapshell turtle	*Cyclonorbis senegansis*	Endangered
8.		Dermochelidae	Leatherback turtle	*Dermochelys coriacea*	Endangered
9.		Chelonidae	Green turtle	*Chelonia mydas*	Endangered
10.			Olive ridley	*Lepidochelys olivacea*	Endangered
11.			Hoaksbill turtle	*Eretmochelys imbircata*	Endangered
12.	Crocodylia		Nile crocodile	*Crocodylus Loticus*	Endangered
13.			Slender snouted crocodile	*Crocodylus catapractus*	Endangered
14.			African dwarf crocodile	*Osteolamus tetrapis*	Endangered

African Grey Parrot



The sclater's of guenon

15.	Squamata	Veranidae	Nile monitor lizard	*Varamus niloticus*	Endangered
16.			Monitor lizard	*Varanus exanthematicus*	Endangered
17.		Pythonidae	Royal Python	*Python regius*	Endangered
18.			Rock Python	*Python sebae*	Endangered
19.	Struthioniformes	Struthionidae	Ostrich	*Struthio camelus*	Endangered
20.	Pelecaniformes	Pelethronodae	Pinkbacked pelican	*Pelecanus rufescens*	Endangered
21.	Coconiforms	Adeidae	Grey heron	*Ardea cinerea*	Endangered
22.			Goliath heron	*Ardea goliath*	Endangered
23.			Breen heron	*Bruorides virescens*	Endangered
24.			Purple heron	*Ardea purpurea*	Endangered
25.			Great Egret	*Egretta alba*	Endangered
26.			Little egret	*Egretta garzetta*	Endangered
27.			Cattle egret	*Ardeola ibis*	Endangered
28.			Squocco heron	*Ardeola rolloides*	Endangered
29.			Black-crowned night heron	*Nycticorax nycticorax*	Endangered
30.		Scopidae	Hammercop	*Scopus unbretta*	Terminated
31.		Ciconodae	White stork	*Ciconia ciconia*	Endangered
32.			Abdims stork	*Ciconia abdimii*	Endangered
33.			Saddle-billed stork	*Ephippiorhynchus senegalensis*	Endangered
34.			Marabou stork	*Leptoptilus crumeniferus*	Endangered
35.			Wood ibis	*Ibis ibis*	Endangered
36.		Threskiornithidae	African spoonbill	*Platelea alba*	Endangered

37.			Sacred ibis	*Threskiomis aethiopica*	Endangered
38.			Glossy ibis	*Plegadis falcinelus*	Endangered
39.			Hadada ibis	*Bostrychia hagedash*	Endangered
40.	Falconiforms	Accipitaridae	Nubian vulture	*Aegypius tracheliotus*	Endangered
41.			Rappels griffon vulture	*Gyps ruppellii*	Endangered
42.			White-backed vulture	*Gyps bengalensis*	Endangered
43.			Palm-nut vulture	*Gypohierax angolensis*	Endangered
44.			Hooded vulture	*Neophron monachus*	Endangered
45.			West African River Eagle	*Haliaetus vocifer*	Endangered
46.			Short toed eagle	*Cricaetus gallicus*	Endangered
47.			Marital eagle	*Polemaetus bellicosus*	Endangered
48.			Bateleur eagle	*Terathopius ecaudatus*	Endangered
49.			Common buzzard	*Buteo buteo*	Threatened
50.			Montaguas harrier	*Cyrcus pygargus*	Threatened
51.			Goshawk	*Accipitar genitilis*	Threatened
52.			Sparrow hawk	*Accipitar nisus*	Threatened
53.		Fa;cpmodae	Hobby	*Falco subbuteo*	Threatened
54.			Kestrel	*Falco innunculus*	Threatened
55.		Sagisttariidae	Secretary bird	*Sagittarius serpentarious*	Endangered
56.		Phasianidae	Helmet guinea-fowl	*Numida meleagris*	Threatened
57.			Crested guinea-fowl	*Guttera edourdi*	Endangered
58.			Blue-breasted kingisher	*Halcyon malimbica*	Threatened
59.			Malachite kingfisher	*Alcedo cristata*	Threatened
60.			Pied kingfisher	*Ceryle rudis*	Threatened
61.			Pigmy kingfisher	*Ceryx picta*	Threatened
62.			Senegal Kingfisher	*Halcyon senegalensis*	Threatened
63.		Upupidae	Hoopoe	*Upupa epos*	Endangered
64.		Bucerotidae	Abyssianian Ground Hornbill	*Bucorvus abyssinicus*	Endangered
65.		Ploeceidae	Ibadan malimbus	*Malimbus ibadansis*	Endangered
66.			Black mountain weaver	*Ploceus melanogaster*	Endangered
67.	Primates	Cercopithecidae	Colobus monkey (Guereza	*Colobus polykomos*	Endangered
68.			Olive Colobus	*Procolobus verus*	Endangered
69.			Red-eared Guenon	*Cercopithecus erythrotis*	Endangered
70.			Moustached Monkey	*Cercopithecus cephus c.*	Endangered
71.			Mona Monkey	*Cercopithecus mona*	Threatened
72.			White throated monkey	*Cercopithecus eruthrogaster*	Endangered
73.			Patas monkey	*Erythrocebus patas*	Threatened
74.			Olive baboon	*Papio anubis*	Threatened
75.		Ceropithecus	White hosed monkey	*C. Nictitans*	Extinct
76.			Green (tantelus) monkey	*C. aethiops*	Extinct
77.			Rensiss monkey	*C. preussi*	Extinct
78.			Ground monkey	*C. Poganis*	Extinct
79.			Grey-checked mangabey	*C. albigenia*	Extinct
80.			Red-capped mangabey	*C. torguatus*	Extinct
81.			Drill baboon	*Mandrillus*	Endangered

				leucocphaeus	
82.			Chimpanzee	*Pan troglodytes*	Endangered
83.		Pongidae	Western lowland gorilla	*Gorilla gorilla*	Endangered
84.			Manis gigantean	*Giant pangolin*	Threatened
85.	Pholidota	Manidae	Treep pangolin	*Manis tricuspis*	Threatened
86.			Crested porcupine	*Hystrix cristata*	Threatened
87.	Hystricomorpha	Hystricidae	Brush-tailed porcupine	*Atherurus African*	Threatened
88.			Hunting dog	*Lycaon pictus*	Endangered
89.	Carnivora	Canidae	Side-striped jacka	*Canis adustus*	Rare
90.			Pale fox	*Vulpes pallida*	Rare
91.			Honey badger	*Mellivora capensis*	Rare
92.		Mustelidae	Cape clawless otter	*Aonys capensis*	Rare
93.		Viverridae	African Civet cate	*Civettictis civetta*	Endangered
94.			Cusimanse	*Crossarchus crossarchs*	Rare
95.			Cusimanse	*Crossrchus crossarchs*	Rare
96.			Spotted hyaena	*Crocuta crocuta*	Rare
97.		Hyaenidae	Striped hyaena	*Hyaena hyaena*	Endangered
98.			Serval cat	*Leptailuru serval*	Rare
99.		Feidae	Caracal or desert hynx	*Caracal caracal*	Rare
100.			Leopard	*Panthera pardus*	Endangered
101.			Lion	*Panthera leo*	Endangered
102.			Cheetah	*Acinonyx jubatus*	Endangered
103.	Tubulidentata	Oryeteropidae	Aardvark	*Orycteropus afer*	Extinct
104.	Proboscidea	Elephanitidae	African bush elephant	*Loxodonta Africana africana*	Endangered
105.			African forest elephant	*Loxodonta africana cyclotis*	Endangered
106.	Hyracoidea	Procaviidae	Rock hyrax	*Procavia capensis*	Rare
107.			Three hyrax	*Dendrohyrax*	Rare
108.	Sirenia	Trichechidae	Manatee	*Trichechus senegalensis*	Endangered
109.	Artiodactyla	Suidae	Red river hog	*Potamochoerus aethipicus*	Rare
110.			Wart hog	*Phocochoerus aethipicus*	Threatened
111.			Giant forest hog	*Hylochoerus Meinertzhagani*	Endangered
112.		Hippopotamidae	African hippopotamus	*Hippopotamus amphibious*	Endangered
113.			Pigmy hippopotamus	*Hexaprotodon liberensis helsopi*	Endangered
114.		Tragulidae	Water chevretain	*Hymoschus acquaticus*	Endangered
115.		Giraffidae	Giraffe	*Giraffa camelopardalis*	Endangered
116.		Bovidae	African buffalo	*Cyncerus cafer cafer*	Threatened
117.			Dwart buffalo	*Cyncerus cafer nanus*	Threatened
118.			Mountain reedbuck	*Redunca fulvirufula*	Endangered
119.			Bohor reedbuck	*Redunce redunca*	Endangered
120.			Giant eland	*Taurotragus derbianus*	Endangered
121.			Western hartebeest	*Alcelahpus b. major*	Endangered
122.			Roan antelope	*Hippotragus equines*	Endangered
123.			Korrigum (topi)	*Damaliscus l. korrigum*	Endangered
124.			Western kob	*Kobus kob kob*	Endangered
125.			Bush buck	*Tragelahpus scriptus*	Endangered
126.			Sitatunga	*Tragelahpus spekii*	Endangered

127.			Red-fronted gazelle	*Gazalla rufifrons*	Threatened
128.			Dorcas gazelle	*Gazelle dorcas*	Endangered
129.			Dama gazelle	*Gazelle dama*	Endangered
130.			Yellow backed duiker	*Cephalophys sylvicultor*	Endangered
131.			Red flanked duiker	*Cephalophus rufilatus*	Endangered
132.			Maxwells duiker	*Cephalophus maxwellii*	Endangered
133.			Black duiker	*Cephalophus niger*	Endangered
134.			Blue duiker	*Cephalophus monticlla*	Endangered
135.			Bay duiker	*Cephalophus dorsali*	Endangered
136.			Klipspringer	*Oreotragus oreotragus*	Endangered
137.			Royal antelope	*Neotragus pygmaeus*	Endangered

Appendix III– Information concerning reporting Party and preparation of national report

A. Reporting Party

Contracting Party	**Nigeria**
NATIONAL FOCAL POINT	
Full name of the institution	**Federal Ministry of Environment,** **Mabushi Abuja**
Name and title of contact officer	**Mr. John Auta**
Mailing address	**Federal Ministry of Environment, Abuja**
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CONTACT OFFICER FOR NATIONAL REPORT	
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SUBMISSION	
Signature of officer responsible for submitting national report	
Date of submission	27th August 2010