



## Protected areas for environmental sustainability in Nigeria

\*<sup>1</sup>IMASUEN, O.I.; OSHODI, J.N.; ONYEObI, T.U.S

<sup>\*</sup>. Geology Department, University of Benin, Benin City

<sup>\*\*</sup>. Shiloh Healthcare Inc., Chicago, IL, U.S.A.

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**ABSTRACT:** This paper is focused on protected areas for environmental sustainability in Nigeria. It has examined what protected areas are the meaning, especially as defined by the International Union for the Conservation of Nature (IUCN). A thorough investigation was done to identify the areas that were and are still protected in Nigeria. In this regard we have identified some parks and other areas of special interests within our environment that may have been preserved for aesthetics and environmental sustainability. The historical background of protected areas in Nigeria was examined particularly in relation to the development drive and industrial growth. Attempt was then made to determine if the country has lost its bearings with regards to the role of cultural heritage and the natural environment. In this respect, comparisons were made between the modern cities/towns and the old ones in Nigeria. The role of the traditional knowledge in environmental sustainability was also examined. We then considered the status of protected areas and environmental sustainability. Finally we are suggesting guidelines for the next level which is the necessary steps urgently needed; that is “strategies for protected areas”©JASEM

The International Union for the Conservation of Nature (IUCN) defines a protected area as “An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources and managed through legal or other effective means”. Protected areas are special places which are established and designated for the protection of important cultural or natural values, Kuiper (1997). They have always been part of human culture and from the beginning of time people have associated certain places with special values and protected them from disturbance or exploitation. These include religious, spiritual and cultural places; in recent years, parks and natural areas have been added.

Despite industrial development and technological advancement of today there are parks, heritage and cultural sites as well as “green areas” in cities like London, New York, Toronto, Chicago etc. These and other areas of special interests within the environments have been preserved or protected for aesthetics and environmental sustainability. For an example, in Cook County of Illinois State, U.S.A, there is a big forest preserve (Plate 1) which had long been protected and maintained for recreation and tourism within the city of Evanston, U.S.A

Most Nigerians who have travelled to London, New York, Toronto and other cities around the world, must have surely admired the artifacts and all other

natural features that have been preserved in those cities. In other words most Nigerians will enjoy relaxation and recreation at the parks, yet they do little or nothing to preserve the cultural heritage or protect the natural environment in Nigeria. In many Nigerian cities and towns; most of what we may have had as cultural wealth or natural environment had been wiped out in the name of industrial growth or advanced civilization. There are hardly parks, green areas or places designated for recreation in most of the cities and towns in Nigeria.

### MATERIAL AND METHOD

In the colonial days there were many parts of Nigeria that were protected and designated as forest reserves. Also before the coming of the colonial masters our indigenous people had areas that were preserved or protected. There may have been a shrine, a sacred structure or something of cultural heritage in the area that necessitated the protection of the area against farming, hunting, trapping, timber cutting and other human activities. In some places, for example, in Igbo land, there were forests called “evil forest” (Oke Ohia) which were protected against farming, hunting and other related human activities. In a village in Edo State where I (Imasuen) grew up in the sixties there was a huge forest on the West side where farming, hunting trapping and other related human activities were forbidden. It was called “Ugbo Uwen Owun Ora” meaning the forest of Uwen and Ora, the gods the people worshipped.

\* Corresponding author: Email: isaacokpes@yahoo.com

There was a special time of the year when the worshippers usually go to the shrine, housed in the forest, to perform their traditional ceremonies. Although the shrine was located in a small house but a large forest area was reserved for the sacred site. This certainly was their own way of conservation of a natural habitat. Whether it was known and/or unknown to our indigenous people, the protected forest areas had for many years prevented erosion, landslides and other hazards in the area. This had also contributed to environmental sustainability since a number of wildlife and biodiversity were preserved by the practice.

The first forest reserve in Nigeria was created in 1901, with the promulgation of the Forestry Ordinance and creation of a Forestry Department ran by Conservators of forests. Under most of the forestry laws and edicts, the Federal and State governments are empowered to declare and protect the resources of forest estates from illegal exploitation. Concessions for logging were granted and reviewed by State Forestry Departments, Bendel State Government of Nigeria (1977).

However, the oil boom years of the 1970's saw a massive increase in construction activity which prompted the demand for both construction and furniture timber. With this growth of the oil industry came increasing mining activities, and increasing demands for farmlands and timber to export overseas; people then started clamouring for dereservation of forest reserves and the sacred lands. Also with the industrial growth and the so called "advanced civilization" and politicization of the traditional laws, the traditional rulers began to revoke the custom and practice of forest or land conservation. The progression of corruption in the Nigerian government as well as the usurping of power by military dictators, paved way for people to encroach on the forest reserves. Gradually the reserves and sacred/cultural heritage sites are disappearing. During geological field mapping exercise done by geologists in most of the communities all over southern Nigeria we found that the local people now build small huts for their shrines in the villages instead of the protected forest areas as was the practice in the past.

#### STATE OF PROTECTED AREAS

Available data indicate that there are about 9.1 million km<sup>2</sup> of total forest area which are protected in Nigeria. This constitutes about 9.9% of total land, Dada et al (2006). The locations of the forest reserves in Nigeria are as shown in the map (Figure

1) while the areas of forest reserves and forest plantations by state are indicated in Table 1.

Since 1956, a number of National parks have been established in Nigeria. A detailed summary of the 9 (nine) prominent ones are shown in Table 2.

**Table 1: Forest Reserves and Plantations by State**

State	Area of Forest Reserve (ha)	Area of Forest Plantations (ha)
Abia	8,700	2,051
Adamawa	10,011	2,374
Akwa Ibom	31,857	25,800
Anambra	32,457	5,332
Bauchi	840,280	1,200
Benue	60,175	2,234
Borno	582,820	432,052
Cross River	610,129	19,000
Delta	78,506	2,000
Edo	482,047	150,000
Enugu	8,524	7,498
Imo	1,525	1,160
Jigawa	92,000	3,000
Kaduna	613,484	6,146
Kano	77,702	2,186
Katsina	245,100	18,900
Kebbi	340,289	17,750
Kogi	540,360	5,000
Kwara	460,350	6,000
Lagos	12,579	2,000
Niger	756,906	4,956
Ogun	273,118	35,000
Ondo	337,336	27,153
Osun	86,057	6,381
Oyo	336,563	8,031
Plateau	402,500	6,800
Rivers	25,500	231
Sokoto	602,631	10,943
Taraba	10,011	1,359

Figures not available for Yobe  
Zamfara is included in Sokoto figures.  
Adopted from Dada et al (2006).

**Table 2: National Parks in Nigeria**

Park	Date Established	Area (Km <sup>2</sup> )
Yankari	1956	2250
Kainji Lake	1979	5380
Cross River (Oban Division)	1988	1906
Cross River (Okwangwo Division)	1991	4000
Old Oyo	1991	2512
Gashaka Gumti	1991	6402
Chad Basin	1991	1320
Okomu	1999	181
Kamuku	1999	1211

(Source: Dada et al, 2006).

However, a recent country wide study of Biological Diversity in Nigeria reported thirty – three (33) existing National Parks/Game reserves occupying a total area 4,293.778 ha constituting 4.65 percent of the total land area. The same study also indicates there were 445 existing gazetted forest reserves which make up about 10.3 percent of the total land area (Table 3). There are eleven (11) additional national biotic communities/biogeographic provinces which are currently not protected or represented in the National Parks/reserve system or sites listed in the table.

**Table 3:** National Parks/Nature Reserves/Gazetted Forests.(As Per IUNC Categories)

In-Situ Habitat/ Ecosystem	Total Number	Total Area (ha)	Percent of Total Land Area	Biodiversity Value/Role/Function
Existing National Parks/ Game Reserves	33	4, 293,778	4.65	Conservation of genetic resources. Education and training. Recreation/aesthetic values
New / Proposed National Parks/Game Reserves	13	371	0.40	Conservation of genetic resources. Education and training. Recreation/aesthetic values
Existing Ramsar sites (wetland)	3	47,200	0.05	Conservation of genetic resources. Education and training recreation/aesthetic values
Existing gazetted Forest Reserves	445	9,651,800	10.3	Conservation of genetic resources, supply of raw materials for industrial/ commercial purposes Education and Training

Modified from FEPA (1992)

There are also a number of Zoological and Botanical gardens that can be maintained as National Ex – situ conservation facilities in

different parts of the country.

Some of the typical forest reserves in Nigeria as reported by Erebor (2003) are:

Shasha River forest reserve in Ogun State

Omo forest reserve in Ogun State

Sakpoba forest reserve in Edo State

Okomu forest reserve in Edo State

Mamu River forest reserve in Anambra State

Afi River forest reserve in Cross River State

Oba Hills forest reserve in Oyo State

Sanga River forest reserve in Plateau State

Anara forest reserve in Kaduna State

Zamfara forest reserve in Sokoto State

Although not well documented there is also Opanda forest reserve near Abejukolo in Kogi State where there is an ongoing study which will among other things determine the Biodiversity value, role and functions. A reconnaissance survey covering the entire perimeter of this reserve indicates that there has been a significant disturbance as evident by hunting, farming activities in some areas as well as uncontrolled timber logging (Plates 2&3). However, there are prospects for the development of some tourist attraction sites in this reserve. It should be mentioned here that many rainforest communities, for example in Brazil, host ecotourists and/or vacationers who focus on nature study and outdoor activities that have minimal ecological impact – as a way to attract tourism to their region while still preserving their fragile rainforest home land. The Opanda forest reserve still has such potentials.

#### **SOME ENVIRONMENTAL ISSUES**

Of the protected areas in Nigeria the forests are the most environmentally important. The forest is defined as a large area of land covered with trees and bushes, either growing wild or planted for some purposes. Some of the importance or uses of the forest include (i) It is the home for wild animals like

antelopes, monkeys, elephants snakes etc (ii) The wood of the trees provide planks for making furniture, pulp for making paper and match sticks (iii) Forest trees help to prevent soil erosion, and also serves as wind breaks which prevent wind erosion and desert encroachment (iv) Forests provide mechanical herbs for traditional medicine (v) Forest beautifies the environment and also serves as centre for tourist attraction (vi) Forest helps in the purification of the air by removing carbon-dioxide (during photosynthesis) and adding oxygen (during respiration) (vii) Forest provides employment for people including the forest guards, saw millers and the forest lawyers.

While the forests have many important uses only proper management will ensure the continuous supply of forest products and environmental sustainability. The important management techniques are (a) Forest regulation (b) Selective exploration (c) Deforestation (d) Regeneration (e) Afforestation and (f) Taungya system.

In Nigeria forest regulation laws are promulgated in form of decrees, edicts and bye – laws to prevent people from exploiting the forest at will in order to help to conserve or preserve forest trees. Some of the regulations are: (a) Encouraging people to plant trees (b) Prohibition of bush burning, the cutting down of timber trees except with an official permit and the cutting down of trees in a forest reserve. (c) Harvesting of an under-aged tree, i.e. the tree could only be harvested when it is about 20 or 25 years old. (d) Discouragement of illegal felling of trees.

Environmentalists have estimated that Nigeria loses 3000ha of vegetation per year through tree – felling, bush burning and general desertification. Invariably about 96% of the country's pristine forests have been cut down in the past four decades (IRIN, Aug. 1999). There is also a disturbing environmental report that of the total forested land area in Nigeria there is a deforestation rate of 4000km<sup>2</sup> per year, while about 30 million tonnes of soil are washed away in Nigeria

every year due to soil erosion, (Dada et al 2006). Desert encroachment in Nigeria is currently placed at 0.6km every year by the same report. Skoup and Company (1986) reported that between 1956 and 1986, Nigeria was losing on the average about 23,000 ha of the gazetted forest estate per annum through government dereservation alone. They gave examples of 21,500 ha dereserved in Bauchi State between 1979 and 1986 and 18,410 ha dereserved in the then Bendel State. The Tiga dam and the resettlement of the displaced people took 7,000 ha of the Rurum Forest reserve while another 12,260 ha were destroyed for other dam construction projects in Kano State.

The Ajaokuta forest reserve in Kogi State lost about 18,390 ha for the Steel Development Company. In Niger State the resettlement of people from the Abuja new Federal Capital Territory claimed at least 27,330 ha of forest reserves. Added to all these are the toll taken by the NEPA national grid and the NNPC pipelines and other infrastructure throughout the country.

Unfortunately, the loss of forest reserve is largely responsible for accelerated erosion and the development of extensive gullies in various parts of the country. Notably, Agulu-Nanka in Anambra State, Ihitenansa in Imo State and Ankpa in Kogi State are the most hard-hit areas. The loss of forest reserves is also synonymous with the destruction of wildlife habitats and has drastically reduced animal populations, their productivity and species diversity while rare species are being threatened with extinction.

The Federal Administration has in the recent past, especially during General Ibrahim Babangida's regime, issued directives against dereservation of the country's forest reserves. But a wide gap remains between directives and enforcement on the ground. One other major issue is the absence of a uniform forestry laws in Nigeria to provide a common basis for forestry resource management.

With the foregoing environmental issues there is urgent need to intensify strategies for protected areas to ensure environmental sustainability in Nigeria.

*Strategy for protected areas* Some organizations like the Nigerian Conservation Foundation (NCF) have contributed immensely in educating the Nigerian populace about biodiversity conservation, NCF (2007). It is, however, impeding that viable strategies are also put in place for protected areas.

When in place and implemented, they will certainly pave way for environmental sustainability in Nigeria.

A protected area strategy for Nigeria will be a plan for the identification, selection and designation of protected areas in Nigeria. It will be the guide book to be used to map out a network of protected areas in the country. There is a need to define a vision for protected areas in Nigeria that balances our environmental needs with our economic ones.

The strategy will be developed and implemented in a coordinated, open and participatory manner. For it to be effective the process will involve the cooperation between all the levels of government; federal, state, local government, traditional councils, NGOs and local communities. Public and stakeholder participation will also be very important while a Protected Areas Strategy Advisory Committee will be established at the initial stage of the process.

Throughout the process of developing and implementing the Protected Areas Strategy; opportunities will be created for meaningful public participation. This can be achieved through workshops, distribution of handbills, open houses, public meetings, community consultation and meetings with interested groups.

*Conclusion* : This write up has shown that in the past we had places in most localities in Nigeria, that were designated as forest reserves and/or protected areas. Even before the coming of the colonialists, our indigenous people had their own areas that were protected. They varied from one place to the other, some had forest reserves which were protected from farming, hunting, fishing and other related human activities. In the villages there were places designated for recreation and some were preserved for religious and traditional values.

The British colonial government established a number of forest reserves throughout Nigeria dating back to 1901. But with the growth of the oil industry; increasing mining operations as well as increasing demands for farmlands and timber to export overseas there came pressure and clamour for dereservation of the forest reserves. The traditional or culturally preserved lands were also not spared as some of the traditional rulers began to revoke the practice of protecting sacred or cultural heritage sites.

The consequence of the foregoing is the depletion of forest reserves and the disappearance of cultural heritage sites, natural habitats and ecological damage

Hence there is a dare need to establish strategies for protected areas. A call is therefore being made for the development and implementation of Protected Areas Strategy for Nigeria. It is suggested that the strategy should be developed and implemented in a coordinated, open and participatory manner. Therefore it will involve the scientific community, governments, councils, industry, non-governmental organizations and the public. It is expected that the strategy must identify priorities for protection, give

guidance as to how the selection of protected areas can be balanced with other interests and set clear goals and commitments.

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(Developed by Benin, Ero, et al 2006)



**Plate Plate 1:** Edge of Cook County Forest Reserve (in Evanston, IL)



**Plate 2: Opanda Forest Reserve**



**Plate 3:** Another section of Opanda Forest Reserve

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