

DEPLETING FOREST RESOURCES AND QUALITY OF FOREST ESTATES FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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ABSTRACT

Over the years sustainable management of the tropical forest resources has been of primary concern due to its potential impact on biological diversity and importance in maintaining global ecological functions. In spite of its importance, the natural tropical forest has continued to diminish rapidly in Nigeria, thus dwindling sustainable forest management. The quality of Forest estates in Nigeria has been in a deplorable state for so long and unless urgent action is taken to arrest this situation, the present trend could continue to impede sustainable forestry in Nigeria. This paper highlights the status of forest resources in Nigeria, implication for sustainable management and the management of forest estates for sustainable development. It also observed the factors militating against sustainable development and suggested possible ways of mitigation.

Keywords: Tropical forest, forest estates, sustainable development, forest management

Introduction

Nigeria is well endowed with forest resources but the excessive exploitation of these forest resources is a source of concern and threat to the economic, social and environmental importance. The forest, apart from providing a large proportion of the global supply of timber and fuel, also provides a wide range of non-wood products and environmental functions. These products include bush meat, medicine, watershed protection, stabilization of the hydrological regime and carbon sequestration (Aigbe and Oluku, 2012). This forest has been and will continue to play its roles, not only as a source of livelihood and environmental stabilization, but also as a provider of affordable shelter for the rural dwellers. Be that as it may and coupled with the high poverty level of the people, lack of awareness of sustainable land use options, current managerial strategies (Anijah-Obi, 2000) in most parts of the Nigeria forest has highly been mismanaged and relegated to the grass/shrub lands of the Sudano –Sahellian type (Bisong, 2004) with its attendant “boomerang effects” on the people. This article, thus, sets out to highlight the importance of current forest resources management strategies and the way forward vis-à-vis

sustainability of the Tropical High Forest for livelihood, housing and commerce.

Sustainable forest management (SFM) is the management of forests according to the principles of sustainable development (Kevin, 2021). Sustainable forest management has to keep the balance between three main pillars: ecological, economic and socio-cultural.

Successfully achieving sustainable forest management will provide integrated benefits to all, ranging from safeguarding local livelihoods to protecting biodiversity and ecosystems provided by forests, reducing rural poverty and mitigating some of the effects of climate change. Forest conservation is essential to stop climate change (Law and William, 2021). The introduction of sound sustainable forest management in Nigeria could have some socio-economic implications in the short-term such as; decline in the supply of forest products, unemployment in the forestry sector, and reduced revenue from the forestry sector as a result of decline in supply of forest products since the volume of the annual allowable cut need to be lowered to allow the forest to recover. In the long-term, it could result in steady supply of forest products, secured employment, increased income as a result of efficient use of resources, economic stability, economic growth, poverty alleviation, increased in biological diversity and pollution free environment. Benefit accruing from sustainable forestry in the long-term could surpass the short-term cost.

Status of Forest Resources in Nigeria

Formal forestry activities began in Nigeria in 1897, with the creation of a Department of Woods and Forests for the Colony and Protectorate of Lagos, which itself was proclaimed only a year earlier, in 1896 (Lowe 1990). A recent forest resources study carried out by the Federal Department of Forestry (1998), revealed that the forest estate of Nigeria has been very highly depleted. It was estimated that only about 974,674 hectares of the forest reserves is productive while another 2,342,147 hectares of free areas is partially productive (Forestry Development Fund, 1998). The total growing stock in terms of timber volumes is as shown in Table 1

Table 1: High forest gross timber volumes, excluding bark by forest designation and forest types

Forest Land Designation	Forest Type	Area (ha)	Gross Volume (m ³)
Forest Reserve	Lowland Rainforest	788,053	140,682,489.73
	Freshwater Swamp	186,621	24,397,003.35
	Sub Total	974,674	165,079,493.08
Free Area	Lowland Rainforest	905,930	120,742,244.93
	Freshwater Swamp	1,424,995	187,474,508.28
	Mangrove Forest	948,430	212,613.14
	Sub Total	2,342,147	308,429,366.35
Sum Total	Gross Total	3,316,821	473,509,259.43

Source FDF (1998): Forest Resources Study, Nigeria
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Table 2: Status of Forest Cover in Nigeria between 1976 and 1995

Vegetation	1976 (km2)	1995 (km2)	Area of Change	Percentage Change
Undisturbed Forest	29951	12114	-17835	-59.55
Disturbed Forest	14573	18990	4417	30.31
Riparian	7402	5254	-2148	-29.02
Montane	6762	6759	-3	-0.044

Source: FDF (1997)

Deforestation in Tropical Region

Deforestation is the excessive exploitation of forest land. Deforestation is a process whereby a forest land is changed to another use or its cover is removed thus altering the original ecological system of the area (Crump, 1991). The exploitation of forests without accurate statistical data is a related issue of deforestation. The issue of increased deforestation has arisen because of activities of various groups or organizations. They seem to consider the forest as an obstacle in the path of their special interest and development plan. Very little thought is given to examining option on how the resource could be change with minimum environmental impact. In some cases, the loss is greater in economic value than the infrastructure which replaced the forest and costs more to sustain. A number of factors attributed to deforestation in tropical region. Bisong (1999) identified about thirty three factors responsible for deforestation in the tropical rainforest, including income generation, population growth, cultivation, demand for forest products, and wood collection for domestic fuel, logging and grazing.

In the tropical region, agriculture is identified as a major activity that causes deforestation. Presently, 14 - 16 million hectares of tropical forests are converted to agricultural use through farming (Ogboi, 2011). Estimate of deforestation caused by agriculture was

put at 5.9 hectares in the 1970s, of which 4.5 hectare was converted to permanently cleared land (Myers, 1989).

Management of Forest Estates for Sustainable Development

Sustainable forest management is the process of managing forests to achieve one or more clearly defined objectives of management with regard to the production of a continuous flow of desired forest products and services, without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment (ITTO, 1998) Forest Stewardship council (FSC) criteria and principles serve as reference point for establishing standards geared towards sustainable forest management. The criteria emphasizes that in the course of developing standards for sustainable forest management, it should be an open, consensus-based and participatory process, which involves consultation with affected stakeholders. In Nigeria, the huge forest protected area is remarkable. It is evident that the government has been trying to encourage private sector participation in afforestation and reforestation projects through various incentive initiatives. However, the free area zone contains the largest area of merchantable timber resource, but exploitation and encroachment in this area has not been regulated and checked respectively.

This could threaten forest resource security and stability. The forest area network in the protected area seem to be inadequate for interaction of mega fauna such as elephant, wild boar and buffalo, thus could result in their extinction and lowered biological diversity. The extent of reforestation has not kept pace with the rate of deforestation thus, creating a negative balance. This could hitch the continuous flow of forest products and services. There has been very low degree private sector participation and involvement of indigenous community in forest management operation, thus social aspect of sustainability could be suspect.

The Implications of Sustainable Forestry Management

Many efforts at environmental resource management in Nigeria failed because they paid inadequate attention to the various stakeholders involved and their particular interest. In Nigeria today local people are dependent on forest therefore, a form of Joint Forest Management is to be developed. The local communities, the private sector and government are the stakeholders who should cooperate in sharing the burden as well as the benefit. By stakeholders we mean all those who have a stake in the exploitation and management of the resource, including forest dwellers and local farmers, logging companies, forest and other government departments, national and international policy makers and planners. Each stakeholder is expected to have rational but different interest concerning the use and management of forest resources and these differences may be fundamental. Failure to recognize different and potentially conflicting interest of the various groups and what each stands to lose or gain from exploitation or conservation has frequently led to local resistance to policies and development projects, which therefore fail to meet their intended objectives.

Therefore, for development activities to meet human needs there must be a trade-off between development and forest conservation in order for forest to contribute meaningfully to sustainable development in Nigeria. To put this trade-off between development and forest conservation and management, in proper perspective will lead us to the emerging of stakeholder participation in ecologically sound development strategy, which should emphasize harmonization of economic social and environment concern in the process of development.

Factors militating against sustainable forestry development

The emergence of sustainable forestry requires some elements such as legal and policy framework, sustained and optimal production of forest products. Sustainable forestry also requires protection of the environment, and well-being of people to be put in place. If any of these elements is lagging behind it

could have a far reaching effect on the availability and utilization of the forest resources. This could generate disequilibria in the forest ecosystem that may lead to the depletion of the forest resource. Evans (1982) reported that the causes of forest destruction in the tropics are; exploitation for charcoal and fuel wood, urban and industrial expansion, clearance for agriculture, and intensive logging for veneer and sawn timber. Cleaver and Schreaber (1990) reported that rapid population growth and agricultural sector stagnation in sub-Saharan Africa lead to severe environmental degradation. Campbell *et al.*, (1996) reported that the absence of proper definition of property and security of tenure renders forests in sub-Saharan Africa an open access resource, thus encouraging unregulated use of the forest resources. Campbell and Byron (1996) also observed that weaknesses in forest laws and lack of effective enforcement of measures aimed at protecting the forest, threatens the existence of varied forest dependent fauna and flora.

This study identified some factors derailing sustainable forestry development. These are the following:

- Weaknesses in implementation of forest management plan and enforcement of forestry legislation.
- Unclear land tenure and property right
- Inadequate land use planning
- Inadequate information about the forest resource base
- High fuel wood consumption and poverty
- Inefficient use of the forest resources
- Low degree private sector participation in forestry
- Denial of indigenous people's right
- Unequal distribution of benefits and costs for the use of the forest
- Deforestation
- Inadequate protected area network
- Politics.

Recommendations

The following strategies have been proposed aimed at promoting sustainable forestry Nigeria:

The government should make agricultural credit facilities available to farmers especially in the rural areas aimed at increasing agricultural productivity. This could minimise the rate of deforestation, because if productivity per unit land area increases, less land area will be required for agriculture.

There is need for urgent policy reforms and technical innovations aimed at poverty alleviation. Effort should be geared towards efficient use of the available fuel wood by introducing improved fuel wood stoves, which may produce up to 50% savings of fuel wood consumption.

Conflicting issues in tenure and legislation need to be harmonized and streamlined, whereby customary laws are incorporated into formal land allocation laws.

Rural communities should be involved in the management of the forests. Their roles and

responsibilities in the management, conservation and use of the forests resource should be recognized and appreciated, since local communities are often highly dependent on this resource. More areas of the Lowland and riparian forests need to be identified and protected to improve biological diversity status.

The state forestry department should undertake a comprehensive environmental education campaign that reaches all levels of the society, including state forestry staff and policy makers.

Better inventories and better access to, and dissemination of information should be encouraged to improve sustainable forest management.

Training should be provided for state forestry staff in forest management, planning and administration.

Conclusion

Nigeria like other countries of the world has become conscious of the poor attitude of her citizens to environmental management in general and deforestation in particular. It is actually imperative that food and other essentials of life for the increasing population should be provided. But this should not be at the expense of degrading the source of supply of these essentials. The efforts of government at various level in afforestation and tree planting campaign is appreciated and the establishment of the Ministry of Environment which oversee the various aspects of environmental degradation. However, there is still the need for repositioning forestry and forestry management by empowering the agency for effective operation, maintenance and management through adequate funding. The reform agenda of National Economic Empowerment and Development Strategy (NEEDS). Due process and anticorruption crusade and policies of this Administration are steps in the right direction to foster sustainable forestry development in Nigeria.

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