



**UNITED NATIONS UNIVERSITY
INSTITUTE FOR NATURAL RESOURCES IN AFRICA
(UNU-INRA)**

**RAINFOREST DEGRADATION IN
SOUTHERN NIGERIA:
ROLE OF FORESTRY INSTITUTIONS**



EKEOBA MATTHEW ISIKHUEMEN



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BY

MATTHEW EKEOBA ISIKHUEMEN

UNU-INRA Visiting Scholars Programme

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ABSTRACT

The exclusionary ‘top-down’ and management models that were introduced by the colonial administration in the governance of Nigeria’s rainforest over a century ago have endured till present day in the federal and state forestry services. From the establishment of the Nigerian Forestry Department (FD) towards the end of the 20th century, the post-independence era through to contemporary times; the exploitation of Nigeria’s most diverse forest under the guise of sustainable forest management went through a range of management regimes. Timber Rules, Proclamations and Ordinances are all based on the colonial models. For over a century, the country’s forest policies and institutional frameworks have been designed towards boosting revenues or economic fortunes of the state. Sadly, all forestry policies enunciated in the past, and indeed up to contemporary times, were subsumed within the bureaucratic civil service system that relies basically on ‘fences and fines approach’. Also, is the belligerent and divisive land tenure and land use systems, that were heaved upon the people through Ordinances during the colonial era and also by the 1978 Land Use Act. These policies did not only nationalised all lands in Nigeria authoritatively, but also made excruciating impacts on both the rainforest and the people whose livelihoods are dependent on it. Over time, the rainforest ecosystem has been progressively turned into mere vestiges – triggering irreversible damage to species and ecosystems; and weakening the livelihood systems of forest-dependent populations. While it is imperative to replace the obsolete policies and incongruent institutional frameworks at all levels of government with good participatory governance, intensified efforts should be made towards confronting direct drivers of rainforest degradation (e.g. surge in human population) and other cross-cutting elements in the rainforest degradation equation.

Keywords

Lowland Rainforest, Forestry policy, Land Tenure, Southern Nigeria, Forest Governance.

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ACRONYMS

CBO	Community Based Organization
DFID	Department for International Development
EEC	European Economic Commission
FAO	Food and Agricultural Organization of the United Nations
FD	Forest Department
FDf	Federal Department of Forestry
FEPA	Federal Environmental Protection Agency
FME	Federal Ministry of Environment
FR	Forest Reserve
IGR	Internally Generated Revenue
INRA	Institute for Natural Resources in Africa
ITTO	International Tropical Timber Organization
LGC	Local Government Council
LRf	Lowland Rainforest
MDA	Ministry, Department and Agency
NARESCON	National Resources Conservation Council
NBSAP	National Biodiversity Strategy and Action Plan
NA	Native Authority
NEAP	National Environmental Action Plan
NCCC	National Climate Change Commission
NCE	National Council on Environment
NCF	Nigerian Conservation Foundation
NFDC	National Forest Development Committee
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGO	Non-Governmental Organization
NPC	National Population Commission
NTFP	Non-timber Forest Products
NWFP	Non-wood Forest Products
PES	Post Exploitation System
RSO	Reserve Settlement Officer
SFD	State Forestry Department
SFM	Sustainable Forest Management
TSS	Tropical Shelterwood System
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNDP	United Nations Development Programme
UN-REDD	United Nations-Reduced Emission from Deforestation and Degradation
UNU	United Nations University

1.0 INTRODUCTION

The widespread loss of indigenous trees species and associated ecosystems through the degradation of native forests— aptly described as ‘deforestation crisis’ (Spilsberg, 2010; Newton and Tegedor, 2011), has a direct link with forestry institutions and institutional frameworks at the local and national level. Presently, the buildup and conscious re-awakening of interest at the global level towards resolving the challenges of large scale degradation of forests and associated landscapes is yet to gain currency among government and non-governmental actors in Nigeria. But forestry is no longer about trees; it is about people (Westoby, 1989). As repertoire of biodiversity, the rainforest is clad with bewildering temperament and intricate support systems that shores up the socio-economic, cultural, ethnobotanical and spiritual affiliations and needs of forest-dependent and far flung populations.

To the extent that the rainforest actively drives and regulates nutrient flows and energy balance among the terrestrial ecosystems— providing hordes of important ecosystem services like watershed protection, carbon capture; sequestration; as well as climate change mitigation, so long will the sustainability and wellbeing of both plants and animals (including humans)-by way of life support, be assured. The rainforest is a renewable resource, which can be utilised and still retains its diversity and richness for mankind’s continuing benefits (Whitmore, 1990). But when the resources are “intensively mined” or stretched beyond its elastic limits (Isikhuemen, 2005; Ola-Adams, 1997), this could rapidly turn it into a non-renewable resource and jeopardise its future existence (Gomez-Pompa et al., 1972).

Nigeria’s natural forest, presumed to be 600,000 km² in 1897 when formal forestry administration started in Nigeria, declined to 360,000 km² in 1951 (Fayenuwo, et al., 2011). At Nigeria’s independence in 1960, the colonial administration’s policy of reservation had set aside 9.7 million hectares (ca. 10%) of the country as forest reserves. In the late 1990s it was estimated that only 1.19 million hectares of lowland rainforest remained in the country, with only around 288,000 hectares in official forest reserves (Blasser, et al. 2011). But by 2012, this resource had greatly declined in size and quality to the extent that only vestiges or semblance of the vegetation remained in disparate locations in few southern states of Edo, Cross River, Akwa Ibom, Ogun, Ondo, Ekiti, and Osun States.

For over a century, the regional/state governments and biomass-based subsistence poor who depend on the rainforest for revenue and sustenance of wellbeing have grappled with issues of declining resources occasioned by weakness in extant institutions (Box 1), population increase and other socio-economic challenges. Several authors have blamed misguided and poor implementation and inadequacy of policy for the overexploitation, loss of timber, allied resources and the rapid decline of forest area (Adeyoju, 2005; Amakiri, 1995; Baskarak, 2002; Consteras, 1988). Forestry institutions consist of formal or codified rules which are expressed as statements or enshrined in constitutions (for government and the organized private sector-including Non-Governmental Organisations); or informal rules (norms, code of ethics, traditions, taboos, and sanctions that apply in families, communities, and societies) which guides actions and decisions regarding practices or systems of valuation, appropriation or use, management and conservation of forests and allied resources.

Box 1: Institution and Organisation Defined

Young (1994) defines institutions as “sets of rules of the game or codes of conduct that serve to define social practices, assign roles to the participants in these practices, and guide the interactions among occupants of these roles”. They are “constellations of rights, rules and relationships that define social practices and guide interactions among those who participate in them” (Yound and Underdal, 1997). “Institution is a widely understood rules, norms, or strategy that creates incentives for behaviour in repetitive situations” (Crawford and Ostrom, 1995). According to Singh (1994), “institutions are formal or informal rules about who makes decisions, according to which procedures, what actions are permitted, what information must be provided and what payoffs will be assigned to individuals”. “Institutions may be formally described in the form of a law, policy, or procedure, or they may emerge informally as norms, standard operating practices, or habits” (Pollski and Ostrom, 1999). Mowo, *et al* (2011) posit that ‘formal institutions constitute the written or codified rules such as the constitution, judiciary laws, organized markets and property rights’; while ‘informal institutions are the rules governed by behavioural norms in society, family or community, and include sanctions, taboos, traditions and code of conduct’. But the two concepts ‘institution’ and ‘organisation’ are somewhat fuzzy in the literature since both terms are often used interchangeably (Masum, 2011). According to Uphoff (1986: 8-9), ‘an institution is a complex of norms, and behaviours that persist overtime by serving some socially valued purpose, while an organisation is a structure of recognized and accepted roles.’

Several reports, including ITTO, (2007); World Bank, (2005) have identified

lack of coherent forest policy¹, perverted tenure²/land use systems, illegal logging and harvest of timber as well as Non Wood Forest Products (NWFPs)³, wildfires, encroachment, chronic under-funding and under-staffing of government ministries, departments and agencies (MDAs). Conflicting roles among tiers of government, excessive bureaucracy, absence of reliable data for planning, implementation of forest development and regeneration activities are all critical elements responsible for rainforest loss and erosion of biodiversity in Southern Nigeria.

In most rainforest states, the conversion of relatively intact forested landscape to mono-crop agriculture (e.g. cocoa, oil palm, cassava, etc.) is stimulated by diverse politically-driven initiatives. Unfortunately, the remaining tracts of rainforests or its semblance (under formal government protection or communal control) in the lowland rainforest states of Edo, Ondo, Ogun, and Cross are intensely threatened. Despite the threats of total annihilation of the fragile ecosystem, states with relatively small portions of reserved rainforest, e.g. Lagos (>27 persons per hectare), Anambra (9), Imo (7), are highly inclined to converting the rainforest relics within their domain to other land uses to meet current demands of society (Figure 1).

¹ Policy is a fluid governance tool whose effects are not easily identifiable within the matrix of societal activity. The role of government policy is to achieve a specific pre-determined goal or objective through statements and mechanisms that guides actions in a particular direction, thereby avoiding envisioned negative effects. Policy is not a ‘panacea’ in itself. It is an important element in guiding action towards achieving a certain objective (Chishakwe, 2008).

² Forest tenure is the combination of legally or customarily defined forest ownership rights and arrangements for the management and use of forest resources (FAO, 2008, p3). Forest and tree tenure simply refers to the terms and conditions on which forests and trees are held and used (Bruce, 1986). The set of rights that a person or some private entity holds to forests or trees may include the right to own, to inherit, to plant, to dispose of and to prevent others from using trees and tree products (Fortmann, 1985). It is a social institution (Birgegard, 1993).

³ A simple definition, agreed at the International Expert Consultation on Non Wood Forest Products (NWFPs) held in Indonesia in 1995, defined NWFPs as: ‘goods of biological origin, other than wood, as well as services, derived from forests and allied land uses’ Source: FAO (2009a).

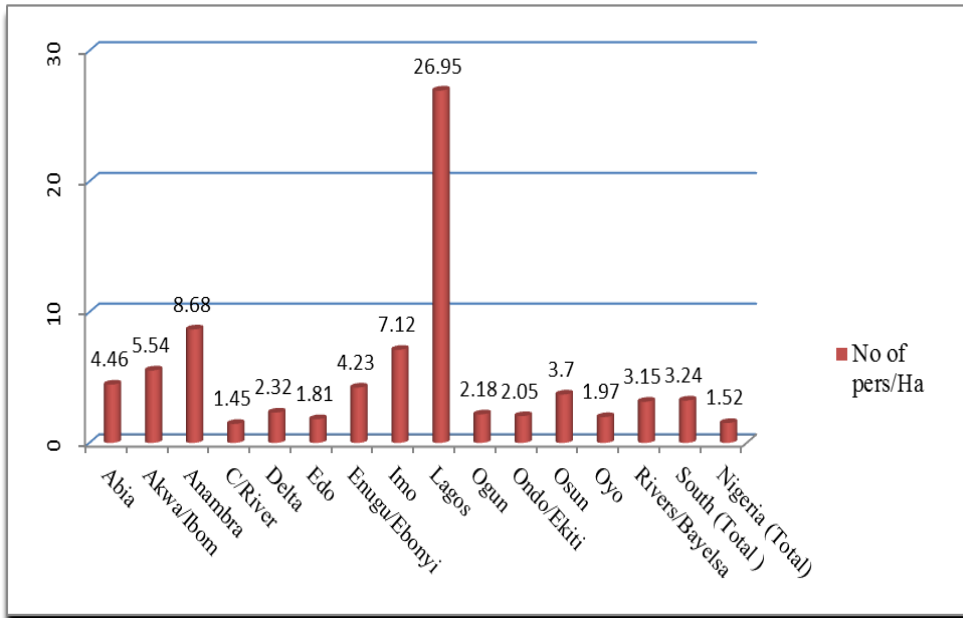


Figure 1: Land area (per capita) in Southern Nigeria (Source: Isikhuemen, 2011)

Since independence, the inability of the federal and state governments to conduct a comprehensive assessment for the purpose of providing reliable information on the condition of the rainforest could be attributed to lack of political will, dearth of funds, corruption, as well as mundane interest of exploiting forest resources to shore up State's revenue. The absence of up-to-date information on forest resources has increasingly compelled the federal government and the rainforest states to fall back on models crafted from spurious and bloated desktop reports obtained from Ministries, Departments and Agencies (MDAs) by international development organisations for planning and decision-making processes. For several decades, majority of the appraisals conducted on the rainforest were outcomes of permutations derived from linear extrapolation based chiefly on remotely sensed (and ground truth) data obtained between 1977 and 1994. By these methods, it was deduced that Nigeria's forest area declined from 13.1 million hectares in 2000 to 11.1 million hectares in 2005 and further to 9.04 million hectares in 2010 (Blaser, et al, 2011).

Furthermore, since the entrenchment of democratic governance in 1999, almost all the multi-million dollar forest regeneration programs initiated in Southern Nigeria and elsewhere in the country were exclusively driven and

implemented by the Federal Government through the instrumentality of its MDAs. Regrettably, almost all the projects that were supposedly executed by the federal government or its MDAs in Southern Nigeria did not make any meaningful impacts or produce the desired results. The reasons for the palpable failure of projects executed directly in Southern States by the federal government are legion: disparate policies and weak institutional frameworks as well as poor synergy and lack of harmony that characterise both Federal and States MDAs. Thus, making authorities pursue incongruent and separate agenda while their personnel work at cross purposes.

This working paper examines past and extant forest policies and various institutions against the backdrop of rainforest degradation in Southern Nigeria. It draws on information assessed from diverse archival sources to elucidate how policies and institutional frameworks at the federal and regional/state levels have helped to shape the rainforest biome in Southern Nigeria from the beginning of the Nigerian FD in 1901 through independence in 1960 to contemporary time.

2.0 METHODOLOGY

2.1 Land Area, Size of Human Population and Location of the Rainforest

Nigeria's land area of approximately 923,770 km² is trifurcated by two major Rivers– Niger and Benue. There are over 250 multi-ethnic nationalities with diverse cultures. The World Bank (2012) estimated the country's population at 162.5 million in 2011, while the 2006 National census reported 140.003 million (NPC, 2009). There are 36 States, a Federal Capital Territory (Abuja), as well as 774 Local Government Areas (LGAs) in Nigeria. Extending from the coastal areas to around 250 km in-land (Ola-Adams and Iyamabo, 1977) - which is a continuation of the western block of the African rainforest formation. It spans continuously from the western to the eastern boundary, which is contiguous with the rainforest block of Cameroon Republic (Onochie, 1979). The biome is a significant component of the Guinea-Congolian regional centre of endemism and the most diverse and productive in terms of timber extractability (ITTO, 2007; World Bank, 2005; Sayer, et al., 1992). The south which constitutes 28% of total land area of Nigeria has a human population of ca. 65 million and density of 324/km² (national average ca. 150/km²). The region is administratively delineated into 17 states (Figure 2) and 355 Local Government Areas/Councils.

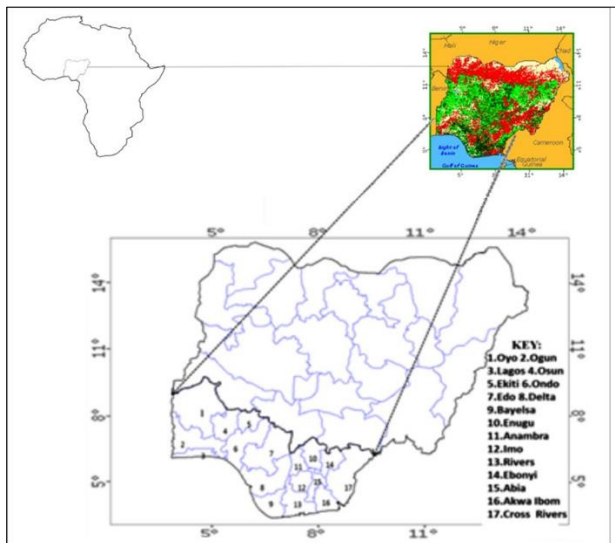


Figure 2: Map: showing Africa, Nigerian vegetation and 17 Southern States (Source: FAO, 2005, cited in ITTO, 2007)

2.2 Geology and Climatic Rainforest Region

The rainforest region is drained by many rivers and perennial streams, including Niger, Ogun, Oshun, Oluwa, Ethiope, Ossiomo, Anambra, Imo, Uyo, Cross River and Qua Rivers (Ojo and Ola-Adams, 1996). The geological formations are mainly the Basement Complex in the northern part, the Eocene in the extreme west, the consolidated and unconsolidated Cretaceous Rock below the basement complex; the Holocene formation along the coast and a patch of Igneous rock at the eastern edge of the rainforest area (Dessauvage, 1975). The mean annual rainfall ranges from 1000mm to as high as 3070mm. Ojo and Ola-Adams (1996) classified the Nigerian rainforest on the basis of rainfall into four main regions: 1) South Eastern, 2) Central, 3) wet Western, and 4) dry Western. Redhead (1971) used economic importance of timber species common to the various sites to characterise the region.

2.3 Data Collection and Analysis

Data was collected from secondary and archival sources, including literature search and the internet. Desktop review of national and state policies, legislations and tenure/land use, and incentive systems were undertaken while supportive information were obtained from maps and official reports as well as published reports/documents.

3.0 RESULTS

The past and existing knowledge of how past and current forestry policies and sundry institutions have influenced, positively or negatively, the Nigerian rainforest which is mostly domiciled in the south, has remained in the realm of conjecture and basically sketchy. For purposes of illuminating the erstwhile and contemporary forest policies and other cross-cutting issues; the findings of this working paper have been arranged using institutions, the different levels of government and time sequence to construct an institutional framework for the Nigerian Forestry Service (Figure 3).

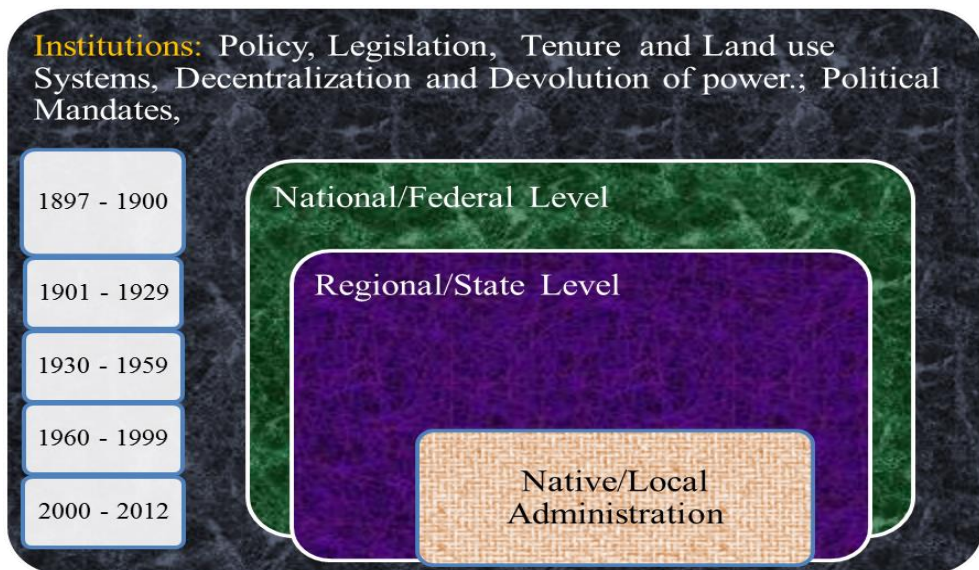


Figure 3: Nigerian Forestry Service in Time Sequence

3.1 Origin of Forestry in Nigeria, 1897–1900

Formal forest administration began in Nigeria in 1897 with the creation of Department of Woods and Forests for the Colony and Protectorate of Lagos (Lowe 1990). During the latter part of the 19th Century, it was obvious to the colonial government that the surging population coupled with the great overseas demand for timber and wild rubber would increase the rate of forest destruction. The craving to protect the forest and ensure uninterrupted supply of timber products to sustain industries in home country gave the colonial administration the impetus to take decisive measures. Thus a body of forestry legislations was instituted to forestall total destruction of the rainforest

through unregulated timber exploitation, rubber collection or slash and burn (shifting cultivation) farming in Southern Nigeria.

3.2 Forest Reservation, Merger of Services and Tenure System Phase, 1901-1929

In the evolutionary history of forest exploitation in Nigeria and elsewhere in Anglophone West Africa, timber was later to become the barometer (economic index) for classifying biomass-based natural resource-rich protectorates, after rubber. Historical accounts indicate that export of timber from most West African countries started early in the 19th Century (Gillis, 1988). However, not much was achieved in Nigeria by the colonial government until the beginning of the 20th Century when the Nigerian Forestry Department (FD) became a statutory authority.

The “Forestry Proclamation of 1901” marked the birth of formal forestry administration in Southern Nigeria. While its primary objectives were the constitution of waste or forest land at the ‘disposal of the government’ and prohibition of the cutting and collection of timber, rubber and similar produce by any person other than the holders of concessions or licensees, it also obliged concessionaires to plant twenty seedlings for every timber tree felled. However, the provision, ‘at the disposal of government’ constituted a serious drawback in terms of interpretation and execution of extant policies.

The interpretation presupposes that ‘no new land could become forest reserves until timber had been cut or rubber collected on them, and a specific order declaring them to be forest reserve passed while the timber exploitation or rubber collection was still in progress’. Besides, such a land would cease to be a forest reserve once timber exploitation and rubber collection had been terminated (Egboh, 1985). Consequently, no forest reserves could be created under the subsisting law and a replacement (new legislation) was instituted in 1902.

3.2.1 Merger of Protectorates and Maiden Silvicultural Rules in Southern Nigeria

Interestingly, the 1902 Ordinance which amended the 1901 Proclamation was programmed to fail from the outset because it unwittingly carried a ‘relief clause’ which provided a cover for local African communities to perpetrate more ecological havoc. The amendment embodied in the Ordinance states: ‘before any order or rule was made, the consent signified

by resolution of the local council of district or province, where the order or rule was made, had to be first obtained'. The African communities were content with the forgoing because of the palpable reprieve: the legislation seriously encumbered the Governor's exercise of its statutory powers, and therefore could not give effective protection to the forests under reservation and trees in off-reserve areas. Consequently, by Order No. 8 under the 1905 Forestry Ordinance, all economic tree species outside constituted forest reserves were put under the control of government. Regardless of the torrent of Proclamations, Rules and Ordinances, not much was achieved in terms of forest protection and reservation, other than mere reorganization of the forest zones in Southern Nigeria (Benin, The Niger– Asaba and Onitsha, Cross River- Calabar).

In the rising confusion resulting from the failure of policy and institutional arrangements, the Forestry Proclamation No. 12 of 1905 was subsequently promulgated; thus repealing the objectionable 1901/02 Ordinance (s); and defining the term, "land at the disposal of Government" as "any land which the Crown had acquired ownership of by conquest, capitulation, treaty or grant". But the first Southern Nigeria Forestry proclamation that took effect from June 1905 did not immediately come into effect in the Lagos Colony and Protectorate until the two southern territories were brought by one political administration in 1906 (Egboh, 1985). The first silvicultural (timber) rule was promulgated in 1906, obliging loggers to plant six seedlings in place of every tree that felled or extend natural regeneration at the same site (Dawkins and Philips, 1998; Okali and Fasehun, 1995). According to Dawkins and Philips (1998), the first sets of plantation development using indigenous species and exotics were carried out in Olokemeji and Mamu in 1909.

It is interesting to note that before the 20th Century, much of the legislation enunciated by the colonial administration were in favour of specific timber species (e.g. Mahogany and Ebony as well as Rubber from tree and non-tree sources) which were the major export commodities in the two protectorates with contrasting stand-alone forestry legislations. But from 1897 through 1900, and up to the merger of the Lagos Colony & Protectorate and Southern Protectorate in 1906, the two forestry services had a difficult time because of the disparate institutional arrangements in place. Egboh (1985) painted a vivid picture of the ultimate result of 'the imposition of a four-year ban on rubber collection in 1899 in the Lagos Colony & Protectorate'. According to Egboh, the foregoing resulted in serious economic losses to the government

but swelled the fortunes of its Southern Nigeria counterpart, where no such legislation was in force. The outcome of the ban was that the law in Lagos was rendered ineffectual because a considerable quantity of rubber collected had found its way into the Southern Protectorate. The end result was the merger of the Lagos Colony & Protectorate and Southern Nigeria Protectorate in 1906 – with the former being officially named ‘Western Province’ after the union.

From the birth of the Nigeria Forest Department (FD) through the amalgamation of Southern Protectorate and Lagos Colony & Protectorate via 1908 Forestry Ordinance, the ‘straitjacket’ policy (which overtly estranged all Africans, including peripheral and enclave forest-dependent communities from participating in decision-making processes and sharing in the management and use of forest resources), held sway. But there is an affirmation in the literature (Egboh, 1985 p. 47) that while local communities passively resisted the various draconian legislations, the ‘Nigerian Press’ persistently attacked and consistently criticized the anti-people policies and legislations. There is a torrent of published evidence that the various forest management policies implemented through sundry statutory instruments– Timber Rules, Proclamations and Ordinances– by the British colonial authorities in Nigeria and elsewhere in Anglophone West Africa from the latter part of 19th through the early part of 20th Centuries, were basically designed to facilitate forest reservation; encourage rubber tapping and timber export to the metropolis in Europe (Adeyaju, 2001, 1979; Enabor, 1981a; Egbo, 1985; Sayer, et al. 1992)⁴.

3.2.2 Silvicultural Rules and the Post-Amalgamation Loose Federation

The Forestry Ordinance of 1916 was fashioned out of that of Burma; and at the formative stage, the Forestry Department was assigned two main tasks, i.e. regulating forest exploitation and establishing forest reserves (ITTO, 2007). But while the legislation mandated loggers to plant twenty-four economic timber trees to replace each tree felled, its uniqueness rests with the fact that it was a first legislative instrument after the amalgamation of Southern and Northern Nigeria (Rosevear, 1954; Kio et al., 1992). In an annual report from the Benin Circle to the Western Nigeria Government,

⁴ Institutional arrangements comprise combinations of rules that establish a set of legal permissions, authorizations and commands specifying certain acts or behaviours that individuals must or must not carry out (Thompson and Freedemberger, 1997). In the context of human-nature interaction, institutions represent the arrangements which people devise to control their use of the natural environment (Bromley, 1989).

Ogbe (1966) reproduced an excerpt of a policy statement credited to the first Director of Forests in Nigeria. Writing in 1918, H. N. Thompson, CMG, and 1st Director of Forests in Nigeria stated that: *“Forests take a long time to mature, and there is always a temptation to exploit them prematurely. The continued carrying out of a well-considered forestry policy and the details of management of reserves must be undertaken by the government, which alone can exercise due discrimination in the proper distribution of forest produce to the agricultural population; can deal impartially with opposing interests of different communities; and can secure that continuity of policy and method, by means of laws and regulations, from generation to generation, which is essential to forest administration. Native administration cannot take a sufficiently far-seeing view, and are tempted to sacrifice the interest of the future to present needs. This principle of state control is enforced even in Europe, in those countries which are most advanced in forestry organization, viz., France and Germany, where communal, municipal and even private forests are under the supervision of government”*.

The decentralised governance system came as a replacement for unitary governance, thus signalling the birth of a loose federation via the “Doctrine of Indirect Rule” in the early 1920s. Prior to the entrenchment of the loose governance system, local communities were allowed only restricted access to few forest items for food or small income generation, known in the forestry parlance as “minor forest products” but now commonly called ‘non-timber forest products (NTFPs) or Non-Wood Forest Products (NWFPs)’. Although information is sketchy on the policy framework for natural forest regeneration, important details of silvicultural experiments conducted by two professional foresters- J. D. Kennedy and W. D. MacGregor, from the mid-1920s through late 1930s, including the former’s efforts at establishing Taungya plantations with indigenous species at Sapoba, near Benin, abound in the literatures (Lancaster, 1960, 1961; Lowe, 1978; Dawkins and Philip, 1998). Dawkins and Philip (1998) reported that the 1906 policy instrument (Silvicultural Rules) that authorised loggers to plant seedlings in place of timber species logged was not successful and had to be replaced by a system of increased royalties to enable the FD undertake silvicultural operations on a large scale in 1925.

Amongst the earlier management rules and Proclamations or Ordinances enacted to regulate forest exploitation and management prior to 1930, the 1927 Ordinance was atypical because it was the first to recognise and underscore the significance of local communities and the need for their

involvement in the conservation and management of forests. But besides being an amendment to the 1916 Forestry Ordinance, the 1927 legislation empowered the local authorities to constitute Native Administration (NA) Forest Reserves, although, with governors approval (Blaser, et al, 2011; Egboh, 1985; Kio et al, 1992; Rosevear, 1954). Moreover, it vested fully, the management of forest reserves in the region and conferred the power to hold all forest and timber resources in trust by the governor on behalf of the stool owners (Blaser, et al, 2011).

3.2.3 Land Tenure Systems

The entire landscape of Southern Nigeria (excluding the Lagos Colony & Protectorate) was administered under the Native Land Acquisitions of 1900 (Famoriyo, 1973) while the Lands and Native Rights Ordinance of 1916 established the formal Land Tenure System in the whole of Southern Nigeria (Adedipe, et al. 1997). The six variants of Tenure Systems recognised during the colonial era in Nigeria include: forest reserve, communal (community) forest, protection (or protected) forest, protected trees, sacred (fetish) grooves and rights of usage (Adeyoju, 1979). However, Osemeobo (1991) asserts that ‘forest’ and ‘game reserves’ are a form of tenure imposed on traditional communal land ownership system. In recognition of the fact that natural resources sustain the rural economies for food, cash and shelter, the interest of forest-dependent communities living within or periphery of the forest reserves were accommodated in the reservation exercise by creating enclaves for them (Egboh, 1985).

The freehold extended to local communities via the 1927 Ordinance to constitute own forest reserves while being restricted to the use of the resources thereof, was arguably a façade intended to divert the attention of local communities. Two major objectives aptly spelt out in the 1927 Ordinance were: creation of more forest reserves with minimal force by the NAs, and the transfer of the expense for the management of any reserves be created since such expense would be borne by the NAs creating the reserves (Egboh, 1985). But when weighed against the plausible proposition by several authors that the regulation was designed to pre-empt any form of resistance from communities whose rich forests were to be constituted forest reserves (cf. Egboh, 1985; Adeyoju, 1979, 2001; Dawkins and Philips, 2008), it is obvious that the use of, and purported role assigned to Reserve Settlement Officer (RSO) were intended to hoodwink local communities to believing that management of forests were in the hands of the people’s representatives when in actual fact the NAs were insulated from the people.

Whether the laws were enforced directly by the Government or indirectly by NAs, the forestry laws restricted the rights of the communities to make use of their lands and the forests.

According to Adeyoju (1979), the existence of a variety of forest land tenure served as an incentive to enable land owners cooperate with the forest service for forest reservation and management. One crucial outcome of statutory and communal tenure systems during that time was that forested land had lower value and was much less attractive economically than other forms of land uses, particularly in the area of livelihood sustenance and service provision (e.g. agriculture). According to Adeyoju (1979), the ultimate aim of constituting reserves in the biodiversity-rich rainforest in Southern Nigeria by the colonial authorities was to conserve biotic resources and to produce timber on sustainable basis to feed home industries; although African communities were made to believe that it was for their interest.

In the Anglophone West African countries and other African biodiversity hotspots that caught the fantasy of the colonialists, diverse policies were introduced to suit the yearnings and economic interest of the colonist's home country. But regardless of the peculiar cultural factors which militated against speedy reservation process and extensive acquisition, the various forestry policies and institutions enunciated by the colonial administration in four countries (Gambia, Ghana, Nigeria, and Sierra Leone), followed the same procedural pattern, particularly in reservation, types of areas to reserve and national forest reservation targets.

In Ghana for instance, the passage of a Timber Protection Ordinance in 1907, which preceded H. N. Thompson's visit from Nigeria to assess the forests of Ghana in 1908, resulted in the establishment of the Forestry Department in 1909 (Okali and Eyog-Matig, 2004). Acheampong and Marfo (2011) reported that "in pre-colonial Ghana (then called the Gold Coast), forests were owned in common by communities (families, clans and stools), but the country's Forest Ordinance of 1927 gave authority to the colonial administration to reserve parts of the country's forests. According to Dawkins and Philips (1998), the history of Ghana's forest can be contrasted with that of Nigeria because of the complexity of the land tenure system; however, reservation could only be done with the cooperation of the chiefs, who, wisely, refused to surrender the ownership of the land.

3.3 Experimentation and Native/Government Administration Phase, 1930 - 1959

The reversal of 'blanket freehold over forestland by government commenced in 1934 with the return, for management purposes, of Benin's forests to the Benin Native Authority while most of the vast areas of land earlier proclaimed as government forest reserves were devolved to their respective councils (Adeyoju, 1979). The first Forestry Act which established a forest reserve system under the regional governments was enacted in 1937. The Ordinance which is regarded as Nigeria's first standard law was not only a classic improvement upon the Forestry Ordinance of 1927; it customarily amended the 1916 Ordinance in addition to facilitating the creation of more forest reserves. Although it became operational in 1938, most instruments used in forest reservation prior to 1937 were formally ratified and subsequently published in official gazette. Rechristened 'Forest Ordinance Cap 75 of 1948' (Egboh, 1985), the instrument became the foundation of all successive policies and legislations in both the national and state forestry services in Southern Nigeria.

3.3.1 *Silvicultural Trials*

With the silvicultural⁵ experiments initiated by Kennedy and Richards (1939), the foundation of much of the silviculture in the Nigerian rainforest was laid (Dawkins and Philips, 1998). Of note among the various techniques introduced by J. D. Kennedy to promote natural regeneration in the forests of Southern Nigeria were Selection Group Method, Transition Method, Walsh System, Line Planting, Post Exploitation System (PES) and Girth Limit Selection System (Dawkins and Philips, 1998; Ola-Adams, 1997; Okali and Fasehun, 1995; Kio, 1978). However, these techniques later formed the basis of more elaborate and/or pilot investigations conducted in elsewhere in Nigeria and other Anglophone West African countries (e.g. Ghana) up to the middle of the 20th century.

3.3.2 The Tropical Shelterwood System (TSS): From Inception

Following a pre-test in 1943, the Tropical Shelterwood System (TSS)

⁵ Silviculture is the art and science of growing or renewing a forest crop or stand by controlling or manipulating the stock, density, structure and composition, in order to assure a healthy final crop at the end of rotation or throughout its lifetime. A silvicultural system consists of the processes and methods applied in the course of establishing, tending, harvesting and/or replacing, re-establishing a stand or forest.

commenced at a time *Triplochyton scleroxylon* (Obeche) had seed year⁶ and seed rain (fruited last in 1936 at Sapoba near Benin City) (S. O. Okundaye, pers. Comm.). The TSS operations in the field consisted of several activities, amongst which were: climber-cutting, exploitation, pre- and post-exploitation cleaning as well as poisoning of “undesirable trees” with sodium arsenite (see Box 2). The latter (*arboricide* and/or tree poison) was highly destructive because at the time the TSS was introduced in the Nigerian rainforest, all trees— other than species regarded as ‘economic’ at the time—including most desirable species (i.e. taxa not currently in use but have potentials for use as demand for timber improves in the future) were killed through frill-girdling and poisoning. According to Kio (2002), when TSS was first introduced in Western Nigeria in the middle of the 1940s, most of the large forest reserves were managed under a 100 year rotation. The working circles were divided into Four Blocks, each with 25 annual coupes. The implementation of initial phase of the TSS in the Western Region was programmed to run thus: 1945–1969; 1970–1994 and 1995–2019.

Nigeria’s forest service under the national authority was at the peak of the first Forestry Development Plan (1945 – 1955) when a Federal Constitution came into force in 1951. The creation of the Eastern, Northern and Western regions under the existing constitution was accompanied by the decentralisation⁷ of the country’s hitherto centralised forestry service and power was simultaneously devolved to the regional authorities, thus invalidating the Forest Administration Plan. According to Egboh (1985), the 1937 Ordinance was subsequently adopted by the Eastern region as Forest Law number 41 of 1955; in Western Region as Cap 38 of 1959; and in Northern Region as Forest Law Cap 44 of 1965/66. Prior to independence in 1960, the application of a minimum size of 25% of total land area was

⁶ **Seed year:** year in which trees or other plants produce abundant seed as individuals or as a stand’ (Cote, 2003).

⁷ The terms “decentralisation” and “devolution” are often used interchangeably, and different authors use them in different ways. Decentralisation can be defined as the relocation of administrative functions away from a central location, and devolution as the relocation of power away from a central location. In this sense, power can be equated with the capacity or authority to contribute to decision-making. While decentralization and devolution may occur at the same time, it is quite possible to decentralise administrative functions without devolving the power to make meaningful decisions. The distinction between these two concepts is important in any discussion of tenure reform. Effective tenure involves “the power to make decisions and set objectives for forest use and management, so meaningful tenure reform involves a realignment of that power (Sources: Fisher, 1999; FAO, 2011).

achieved in only three territories, namely, Benin (Edo State); Owo (Ondo State) and Ijebu-Ode (Ogun State) in Southern Nigeria.

Box 2: Tropical Shelterwood System: Its Prescriptions and Objectives

In 1944, the major forest reserves in the southwest and central were divided into a 25-year periodic blocks (PB) based on a 100 year felling circle, with a quarter of the area given out as concessions. Each PB was divided into 5yr blocks (which formed the coupes), and the exploitation agency was allowed to select the block where it wished to operate first. Allocation of annual coupes which was on leasehold to major forest industries left the choice of the first PB to the leaseholders subject to their nominating the first annual coupes at least five years in advance of logging; and all coupes in the first periodic block within 10 years. Only trees larger than the prescribed girths of 60 – 90cm diameter at breast height (DBH), depending on species were felled – forest reserves being subdivided into numbered square miles (*ca.* 256ha). Its implementation was implicitly designed to convert the forest from its complex multi-species, all-aged structure to a simpler forest made up predominately of a few preferred or "economic" species of more or less the same age class. The objective of the TSS was to enhance the natural regeneration of valuable species before harvesting by gradually opening of the canopy (through poisoning of undesirable trees and cutting of climbers) to obtain at least 100 (one metre in height) seedling per hectare over five years; such forest was logged-over in the sixth year, while cleaning and thinning were carried out over 15 years (Kio, 1978).

3.4 Forest Regeneration and Exploitation Phase, 1960–1999

At the time of Nigeria's independence in 1960, the area set aside as forest reserve was 9.7million hectares (about 10% of the country), which is distributed over 445 forest reserves (Blaser, et al. 2011; Adeyoju, 1979). In the south, the size of reserve land area was 13% (Egboh, 1985). But while the joint management approach (involving government and native authorities) appeared to have contributed significantly to sustainable management of the Nigeria rainforest up to early 1960s; the post-independence period witnessed remarkable changes in forest policy.

Firstly, the 100years long term concession introduced in 1944 (side by side with TSS), was replaced with 50years circle. Secondly, the system of natural regeneration using indigenous species became suddenly unpopular, thus gradually giving way to artificial regeneration with exotic species and plantation establishment. Thirdly, the emerging first generation politicians

(largely dominated by green horns) under self-rule took advantage of their political positions to assemble followers among indigenous entrepreneurs by using the forest reserves as a source of government patronage (cf. Adeyoju, 1975). To this end, forest concessions were deliberately collapsed into shorter rotations (from 100 to 50years) while working plans were allowed to lapse to pave the way for ‘free riders’ in the guise of political supporters, who could hardly muster enough resources to undertake sustainable logging in the fragile rainforest.

By the time Nigeria became independent in 1960, there was, by and large no semblance of federal forest service while the regional governments were in charge of the management and control of forests within their jurisdictions (Adeyoju, 1979). In the ‘fences and fines approach to protected-area management’, the central government writes and enforces laws prohibiting or severely limiting human use of a resource- implying that authority over natural resources is vested in the hands of the central government (Barrett, et al. 2001). During the colonial rule, the Nigerian LRF was to a greater extent sustainably managed, particularly under the dual tenure systems in which power to own and manage Native Authorities Forest Reserves was devolved to NAs. The post-independence military incursion into political governance in the mid- through late 1960s exacerbated the already worsening forest management system and failing institutional arrangements. Consequently, sustainable forest management through long-term concessions was further distorted as the military assumed governance and replaced the erstwhile four regions (Northern, Eastern, Western and Mid-western) with 12 states in 1966.

3.4.1 Annulment of Tropical Shelterwood System (TSS)

Despite its extent of degradation before the Nigerian civil war, the conversion of relic LRF vegetation into other forms of land use continued unabated, thus, exacerbating the dreary condition of the resource in the face of further appropriation and fragmentation. Generally, decentralisation of authority was not accompanied by decentralisation of the ability to generate financial resources through the power to tax or through grants from the federal government (cf. Constreras-Hermosilla, et al, 2008). The military government in southern states descended on the forest estate in order to shore up internally generated revenue (IGR).

According to Kio and Ola-Adams (1988), the commercially logged species

in Nigeria increased from 23 in 1944 to 108 in 1980. Over 200 000 ha of forest was treated in this way between 1944 and the late 1960s before the TSS was abandoned (Okali and Eyog-Matig, 2004). Although several reasons were adduced for the failure and/or abandonment of the TSS, the diverse composition and structure of the West African forests, coupled with the sharp division in ecological and biological features among constituent species, apparently formed the basis of most conclusions reached by forest scientists whose results were supported with assortments of arguments.

Theoretically, the TSS was expected to produce a uniform canopy of regeneration made up largely of classes I and II timber species (White, 1983). Although consideration was not given to ecological features and idiosyncrasy of the different species as well as the palpable differentials in the ecological characteristics of forest types from the outset, the fact that the TSS treatment was applied equally to the different Nigerian forest types – the drier forest (dominated by deciduous species belonging to the families of *Steculiaceae*, *Moraceae* and *Ulmaceae*), the wetter forest (*Leguminosae*, *Miliaceae*), and the wetter forest (*Irvingiaceae*, *Myristicaceae*, *Rubiaceae*) – aptly shows that the system was programmed to fail.

Kio (1976, 1978) and Lowe (1978) blamed the annulment of the TSS on the political exigencies as well as the hasty conclusion reached and blanket prescription applied to different forests. But Neil (1981) attributed it to confusing aims and methods – aims being uniform in all forest types and method tending towards polycyclic felling. According to Schmidst (1996), TSS was abandoned because of exuberant spread of climbers and paucity of regeneration of preferred species and the elimination through poisoning of species whose economic potentials were later to develop into commercial values.

But Ola-Adams (1997) posits that TSS failed because of the blanket application of treatments without regards to the inherent silvicultural, ecological and regeneration requirements and idiosyncrasy of the constituent species as well as the non-replicate nature of the experiments. In Ghana the TSS was first tried as an experiment in Bobiri Forest Reserve in 1947/48 and later expanded to cover other forest types, especially Asenanyo, Benso and Pra-Anum Forest Reserves (Osafu 1970); whereas in Nigeria, it covered most reserved forests in the western region (now Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States) and over 70% of the total forest reserve area in the

Midwest (now Delta and Edo States).

3.4.2 Abrogation of Native Authorities Forests in Western and Midwest Regions

The military putsch of the 1966/7 brought political governance under the control of the military in Nigeria. But no sooner had they assumed power than all the extant policies and institutional frameworks put in place for the sustainable management of the rainforest were dismantled. The Western region (now Ondo, Ogun, Oyo, Ekiti, Osun and Lagos States) and the Midwest region, re-named Bendel in 1967 (now Edo and Delta States) subsequently annulled the dual management system and mandated the Native Authorities to relinquish ownership and vacate governance of the Native Authority and other Government Forest Reserves, hitherto under the latter's control (Adeyoju, 1979). Although the instrument conveying the reversal of authority to government was officially accented to, by the Military authority in Bendel State in 1967, it did not come into operation until 1976.

However, a number of events followed in quick succession resulting in the emergence of new tenurial systems (Adeyoju, 1979; Akinola, 2006). The state governments' decision to encourage the influx of a large number of small forest entrepreneurs in the 1970s evidently put serious pressure on the forest estates; thus the foundation for the ultimate eradication of private sector control and the total collapse of the integrated downstream forest industries was laid (World Bank, 2005).

3.4.3 Creation of Federal Department of Forestry and Funding of Rainforest Projects

Four Development Plans were enunciated between 1960 and 1984; but the first plan spanned 1960 to 1962. According to Adeyoju (2001), the centre piece of governance during the plan periods revolved around a federal constitution, with the federal government and the three regions (a fourth region, Midwest was created in 1963) having separate constitutions. Following the creation of Federal Department of Forestry (FDF) in 1970, Adeyoju (op cit.) averred that a new political vista with national forestry focus came on stream as exemplified in the various projects that were jointly financed by the federal government and partly by international development agencies (e. g. FAO, UNDP, EEC). The funds provided by FAO and UNDP with the Federal Government facilitated an inventory of southern forest resources between 1974 and 1978. Spurred by paucity in the volume of

timber available for local consumption, the federal government placed a ban on export of unprocessed timber products in 1976.

3.4.4 On-site Milling in Southern Nigeria

Prior to the 1980s, as the timber industry began to witness rising drought despite the ban placed on export of round logs earlier in 1986; the fortunes of on-site millers began to flourish just as the integrated timber companies owned by multinationals in Nigeria began to wane. Whereas the history of on-site timber conversion is as old as the history of the Nigerian FD; its modus operandi and the peculiar nature of the business have sustained its tempo over time regardless of the persistent upset on policies and flagrant abuse of extant laws as well as the negative impacts on the ecological integrity of the rainforest. Chainsaw milling – scarcely practised before Nigeria’s independence – came into prominence as quick conversion apparatus, thus succeeding the traditional pit-saw milling (cf. Isikhuemen, 2010) (Box 3).

Box 3: Pitsaw Milling in Nigeria: Origin and Approach

At the time pitsaw milling of timber was introduced in the country, the local people had traditionally cut and converted timber for local use by splitting with simple hand tools. But with the coming of the Europeans, a new and improved method of sawing timber, by means of a manually-operated pitsaw came into use. After a tree has felled, it is cross-cut into twelve to fourteen feet long logs. Then a large pit of about 15ft long, 4ft wide and 6ft deep, was dug close to the logs. Stout poles capable of carrying the weight of each of the logs were placed at intervals across the pit. Each log was in turn rolled over the pit to rest on the poles. The log was then sawn length-ways down to the middle; one sawyer standing on top of the log and the other standing inside the pit. The pitsaw usually long-handled, was then pulled down by the latter and hauled up by the former in a continuous process until the timber was cut into two halves. Each was then sawn up into plants and joists of various sizes required (Egboh, 1985).

During the post-civil war political exigency of the early 1970s, an upsurge in socio-economic demands correspondingly exerted significant demands for timber products with on-site, chainsaw-milled, timber products rising to prominence. Against the backdrop of mounting governance cost, the military government in the rainforest states who were under pressure to shore up internally generated revenue through local sources, swarmed on the forests. In this connection, extant legislations were relaxed and policies sidelined to pave the way for a large number of small concessionaires. This group of

millers (who could be succinctly described as ‘green horn’ in milling business) invariably explored cheaper means and faster option of converting logs on-site; thus milling in situ using chainsaws was made manifest in the fragile rainforest region of Nigeria (Figure 4).



Figure 4: On-site logging with chainsaw (a) and raft of floating logs on a river (author's photograph)

Prior to the 1980s the biggest puzzle that state governments find difficult to resolve is on-site milling with chainsaw- within and outside the forest reserves. In a few rainforest states, such as Cross River, Ondo, Osun, where there are some kinds of special arrangements (policy and codes that apply to chainsaw milling have had to be re-crafted with relaxed penalties) giving consideration to the fact that it provides employment opportunities, sustains rural and family incomes. The diffuse and aggressive nature of marketing chain-saw products in many parts of Nigeria is due partly to the relative ease with which the product is converted and transported; and partly to the prices, which are lower than products from conventional Band-mills (Isikhuemen, 2010). Besides, request for conversion of trees (including privately owned timber species) to specified chain-sawn timber products can be made subsequent to logging/milling and to specific needs of local users/buyers.

3.4.5 Land Use Act of 1978

Until the Land Use Decree of 1978 (Box 4) was entrenched in the country and forced on the populace by the military, the Lands and Native Rights Ordinance of 1916 which established the formal land tenure system in Southern Nigeria was in operation. But 1978 Land Use Act compelled local communities to forfeit the rights and ownership of the land on which their livelihoods depend to the regional/state governments. According to Adedipe et al. (1997), the Land Use Decree was an attempt by the Federal Military

Government to try to correct some of the problems with the existing land tenure regimes, to provide the country with a uniform land tenure system and to ensure equitable and secure access to land for productive purposes. Whereas the Act transferred ownership rights from families and communities to the government, leaving individuals with only use rights, recent pronouncements by courts, including the Supreme Court of Nigeria with regards to tenancy, transfer and sundry interpretations portend that all is not well with the Act in its present form (Aina, et al. 1993).

Box 4: The 1978 Land use (Decree) Act

The Land Use Decree was to ensure easier access to land for government and, ostensibly, for some individuals. Seven of the more important provisions of that Decree include:

1. All land situated in the territory of each state in the country is vested in the Governor of the state. For Southern Nigeria in particular, this means state appropriation of land from families and communities without any compensation except for economic crops and other betterment on the land;
2. All land control and management, including land allocation in urban areas come under the Governor of each state while land located in rural areas becomes the responsibility of the various local governments. Only the Governor can declare parts of the state territory governed by him as an urban area by an order published in the state gazette;
3. All land in urban areas is to be administered by a body known as the Land Use and Allocation Committee which has the responsibility of advising the Governor on the management of urban land; similarly, a Land Allocation Advisory Committee is provided to advise local governments in like manner;
4. All land which has already been developed remained the possession of the person in whom it was vested before the Act became effective;
5. The Governor is empowered to grant statutory certificate of occupancy (C of O) which would be for a definite term to any person for all purposes and rights of access to land under his control;
6. The maximum area of undeveloped land that any person could hold in any one urban area in a state is one half of an hectare; in the rural areas this must not exceed 500 hectares except with the permission of the governor;
7. The consent of the Governor must be secured for the transfer of a statutory right of occupancy through either mortgage or assignment. The consent of the Local government or that of the Governor in appropriate cases must also be obtained for the transfer of customary right of occupancy.

To ensure that this Decree will not be easily abrogated or amended by subsequent regimes, it was made an integral part of the 1979 Constitution and later again of the 1999 Constitution.

Source: Mabogunje (n. d.)

Sequel to the abolishment of long term concession (Box 3) in the 1970s, the last strongholds of managed forest reserves disappeared (World Bank, 2005). However, in Edo State the traditional cutting cycle of 25 years ceased formally in 1994 being the end of Periodic Block (PB) II of 1970–1994 (Box 5). Since then the rainforest has been on a steady decline; putting both biodiversity and the forest-dependent people at greater risk. There is no gain saying the fact that the rainforest ecosystem reached its tipping point thereafter; no thanks to the long-term impact of weak institutions and the consequences of human-induced changes occasioned by unsustainable exploitation.

However, the disappearance of the rainforests would lead, not only to the extermination of a variety of timber products, but also several unknown and uncharacterised species (including wildlife, fruits and variety of leaves, bark and roots that form the vital parts of our culture and ethnobotany). Besides, fertile lands for farming as well as forest vegetation for protecting river catchments and climate amelioration, sustainability of fauna and flora diversity, etc., would not only go but might result in dramatic alteration of the livelihood systems of the populations who depend on the forest and associated resources (Isikhuemen, 2012; Bakare and Oguntala, 1993; Ojo and Ola-Adams, 1996; Okali, 1979).

Box 5: Transition from Long to Short Term Forest Concessions

Allocation of timber resources in Southern States has, since the 1970s, systematically moved away from long-term concession (from 100years to 50years- which was then terminated in 1976 and the implementation of a 25years circle- which also ended in 1994) to short-term (of 5year, before it was termination in 1997), and thereafter 1–3 years operation till date. This prompted the exodus of large and sometimes foreign-owned concessionaires; leaving the forest concessions largely in the hands of local small concessionaires. In off-reserve areas, communities have rights to trees – in respect of which they negotiate freely with timber operators for the sale of such trees. The use of working plans in all forestry services in states have since ceased while timber resources are generally allocated by discretion. In some states (e.g. Ondo and Edo), a committee screens applicants and forwards a list of registered

concessionaires who meet statutory requirements to the commissioner for his final decision. In Ogun State, the allocation is administered directly by the commissioner. These allocations are not based on sound technical considerations but rather on political patronage. An exception to how the state forest services are organized is in Cross River state, which is the only state to have established a forestry commission instead of a department which is domiciled either within the ministries of agriculture or environment. The Cross River Forestry Commission is headed by a board comprising representatives of government and different stakeholders and has (semi-) financial autonomy. Due to a revision of state laws, the Forestry Commission is able to directly access part of the revenue generated from forests with which to manage its programs (Blaser, *et al.* 2011).

While it appears that the polycyclic inheritance of selective logging policy which encouraged the removal of the best species and the resultant mining of the best rainforest species did not only hasten the disruption of ecological processes and habitat loss, the outcomes transcended the forest frontiers to perpetuate the erosion of both livelihood and value systems of forest dependent communities. A consequence of European impact on the humid tropics, whose full extent is only now being discovered include the total disruption and in certain cases the extirpation of whole societies of indigenous people (Fearnside, 1989).

The services provided by the rainforest, excluding the tangible goods, are scarcely captured by any accounting or economic indices for valuing tradable products using requisite market mechanisms. For any nation to address its loss of forests and ensure that its forest estate yields economic benefits well into the future, three fundamental prerequisites must be met. First, a forest law and a basic policy must be written which states the objectives of long term sustainable management of the forest estate. Second, forest regulation or management guidelines and procedures must be written and followed. Third, sufficient financial and human resources must be allocated to the effort to do the job (Gomez-Pompa and Burley (1991).

3.4.6 Tenure Security and Incentive Systems

Tenure security⁸ often serves as the foundation or collateral upon which the

⁸ Tenure security is “a defensible claim to a particular place or thing.” This is also the definition of a “property right.” The terms “tenure” and “property” are often used interchangeably, while rights are generally associated with responsibilities. These definitions illustrate that there are two basic components to tenure security, the particular “bundle of rights” and the matter of whether those rights are transferable, defensible or secure (Ellsworth and White, 2004).

social and personal security as well as cultural survival of forest dependent people is built; it plays a formidable role in who benefits or loses in the competition for economic goods and environmental services provided by the ecosystems; it serves as a pre-requisite for capital investment by governments and businesses; and also plays a formidable role in the structure of incentives that motivates protection or destruction of forests (ITTO, 2011). Security of tenure is recognised as a fundamental requirement to ensuring that resources are managed sustainably; however, duration, assurance, robustness and exclusivity have been identified as the main legal element for securing tenure arrangement (FAO, 2009b). One of the factors that impede sustainable utilisation of forests in many settings is the security of tenure. Individuals who lack secure rights are strongly tempted to use up these resources before they are lost to the harvesting efforts of others (Banana and Gomya-Ssembajjwe, 1998).

The 1978 land use act is not only a barrier to the local population's use of the rainforest and allied resources; it places ownership and right of use at the command and control of state governments. Although incentives traverse tenure, rights and privileges, a resource which has no toll (or characterised by open-access regime) is a disadvantage at two fronts: 1) absence of tenure security, and 2) the long gestation period which hampers returns on investment (Isikhuemen and Modugu, 2011).

But while a higher feasibility of exclusion in association with stronger incentives is needed to nurture, protect, and invest in a particular resource, investment (public or private) in forest and allied resources requires critical and strategic underpinning because of the long gesture which in itself is a disincentive that encumbers investors' interest and participation (Isikhuemen and Modugu, op. cit.; Thompson and Freedemberger, 1997). In the context of nature conservation, economic incentives are concerned with making it more worthwhile in financial and livelihood terms for communities to maintain, rather than to degrade natural resources in the course of their economic activity (Emerton, 2001).

Generally, incentives aim to set in place economic inducements, or positive inducement, for nature conservation; to discourage nature degradation through the use of penalties and disincentives, and to overcome the broader economic forces, or perverse incentives, which underlie biodiversity degradation (Emerton, 2001). Lack of incentive-driven forest management

systems in Nigeria has been identified as one of the major reasons most stakeholders in the forestry industry, potential investors and forest-dependent communities show nonchalance toward embarking on conservation projects or considering investment in forest resources development (Isikhuemen and Modugu, 2011). Recent experimentations with market instrument have shown that market based approaches can provide powerful incentives and efficient means of conserving forest and the public goods they provide while at the same time offering new sources of income to support livelihood needs (Pagiola, et al, 2002).

3.4.7 State Creation and Impact of the Rainforest Ecosystem

When the first set of new states (six in number) were created in southern Nigeria in 1967, policy planners (civil servants and their military gladiators in power) were compelled to take stringent decisions in favour of revenue generation. In the former western state, several instances of purported wrongdoing and aberrations were leveled against local councils culminating in series of probes (Adeyoju 1979). According to Adeyoju (1979), the probes gave rise to three outcomes: 1) the local councils' forestry assets and liabilities were taken over by states, 2) a portion of the proceeds from the management of the forest estates was conceded to them, and 3) the legislations enacted pursuant to the new policy, conferred new set of tenurial interests on the various state governments.

Since 1967, state creation had occurred five times – all under military governance – with dire consequences of wood shortages and fragmentation of the forest estates under reservation (Adeyoju, 1975). Out of the six states originally created from the two former regions and Lagos (Federal Capital) in the south in 1967, nine states were subsequently carved out in 1976, ten in 1987, fourteen in 1991 and seventeen in 1996 (Table 1). Unfortunately, the philosophy behind state creation in Nigeria did not take into cognisance the burden socio-economic and demographic factors would put on fragile and exhaustible resources as well as the negative impact that would be wrought on extant forestry policies and institutional frameworks at the national and state levels.

Table 1: Trends in Creation of Regions/States in Nigeria

Year	No. of Regions/States at National Level	No. of Regions/States in Southern Nigeria	Additional Regions/States in Southern Nigeria
1960	3	2	
1963	4	3	Midwest Region
1967	12	6	South Eastern State, Lagos, Rivers
1976	19	9	Imo, Ogun, Ondo, Oyo,
1987	21	10	Akwa Ibom,
1991	30	14	Abia, Delta, Edo, Enugu, Osun
1996	36	17	Bayelsa, Ebonyi, Ekiti

Source: Wikipedia, 2012

3.4.8 Plantation Forestry in Nigeria

The history of plantation forestry in Nigeria owes much of its credit to the successful trials and establishment of plantations of indigenous to taungya system- by J. D. Kennedy in Sapoba, Edo State, Nigeria. Aside the Tropical System between 1944 and 1960, several woodlots tied to specific projects were established in different locations in Southern Nigeria. In Edo State, among the forest reserves, Ogba Forest Reserve was noteworthy for the establishment of plantation species like *Nauclea diderrichii* for poles and *Cassia* sp. for fuel wood. After independence, large-scale development of plantations of fast growing exotic and endemic species were vigorously pursued with financial assistance coming from international development organisations like the World Bank, UNDP and FAO. At the same time the traditional taungya system and its variant that emphasises plantation establishment through direct planting by staff was carried out in most rainforest States. Generally, the area of timber plantations established in Nigeria increased from 3000 ha in 1961 to 150,000 ha in 1978.

In the early 1990s, the federal military government set aside the 1976 ban placed on log export without prior notice of retraction. To the chagrin of policy makers and stakeholders in the forest industry, the flood gate on forest exploitation, including creaming of plantations (particularly *Tectona grandis*) was flung open to European and Asian timber speculators and businessmen, thus making logging, including export of unprocessed logs an

all comers' affairs. Figure 5 is a black afara (*Terminalia ivorensis*) plantation, which is one of the oldest manmade forests established through taungya system in Nigeria.

The hardest hit rainforest states were Edo, Ondo, Osun and Ogun, where the military governors/administrators threw caution to the wind by opening up all planted forests for exploitation irrespective of age or size. Thus long-term forest concession were brought to abrupt end while extant policies and legislations were discountenanced to provide leverage for extra departmental committees to carry out statutory responsibilities without due diligence. For example, between 1992 and 2012, the military and civilian authorities in Edo State set up and assigned statutory roles to 24 extra-ministerial committees in the forestry sub-sector. Experience over the years has shown that the engagement of extra-departmental committees who lack requisite expertise often results in procedural clog to effective forest administration (Isikhuemen and Modugu, 2011).



Figure 5: Relic of man-made forest in Edo State (E. M. Isikhuemen)

Between the early 1990s and 2000, much of the planted forests which had become matured in Southern Nigeria were aggressively harvested by military fiat, thus setting the pace for large-scale illegal logging of relic stands that completely decimated the entire man-made forest estate. The sizes of forest plantation and total number of forest reserves on state basis in Southern Nigeria are shown in Table 2.

Table 2: Planted Forests and Forest Reserves in Southern Nigeria

S/No.	State	Area of Plantation (Ha)	Total Area of Forest Reserve (Ha)
1	Abia	4505	8224
2	Akwa Ibom	2282	30216
3	Anambra	3828	36405
4	Cross River	14508	271611
5	Delta	4015	88109
6	Edo	21525	597551
7	Enugu/Ebonyi	13752	39980
8	Imo	1253	1580
9	Lagos	1049	10147
10	Ogun	39882	275821
11	Ondo/Ekiti	32086	305541
12	Osun	9264	91268
13	Oyo	6745	169173
14	Rivers/Bayelsa	231*	48557
	Total	154,925	1,974,192

Adapted from: FORMECU (1999); *Alao and Sale (2005)

Box 6: National Forest Service

Following the transformation of the Federal Environmental Protection Agency (FEPA) into a new Ministry of Environment in the last quarter of 1999, the Natural Resources Conservation Council (NARESCON), the apex conservation body which was merged with FEPA in 1993, became a department in the newly established Federal Ministry of Environment (FME). The Federal Department of Forestry (FDF) was transferred to this new Ministry under a Presidential directive while the Department of Conservation and Wildlife Management was later merged with the Department of Forestry. Under the present arrangement, the FME operates through several Departments whose activities are coordinated by the National Council on Environment (NCE) (the highest environmental policy formulating organ in the country) chaired by the Minister of Environment. The National Forestry Development Committee (NFDC) which is the highest advising organ and responsible for policy initiation and co-ordination in the forestry sector, has membership comprising: Federal Director of Forestry (Chairman), State Directors of Forestry and Heads of Research Organisations in both Governments and Universities with Forestry Departments. The National Environmental Action Plan (NEAP) and the Forestry Action Plan are currently being implemented interdepartmentally in the Ministry of Environment. The FDF co-ordinates a forestry activity nationally; mandates are: formulation of

policies, administration and coordination. It plays advisory role to the State FDs; supports the execution of federally funded projects and is responsible for relations with international development agencies (ITTO, 2007).

3.5 Recession Phase from 2000

Prior to the turn of the millennium, the discernible slack in staff productivity and competitiveness owing to the warped organisational frameworks and institutional arrangements, which consistently fuelled the clamour for juicy positions by staff at both the national level and state services had reached a crescendo. However, attempts by some state governments to introduce changes only created a rapid build-up of personnel at the directorate cadre. The gains inherent in the current glut in the senior management cadre in most state FDs could ordinarily leverage schedules crucial to augmentation of staff productivity, building result oriented forestry services and institutionalising good governance; but unfortunately, over-ambitious and egocentric officials rather turned it into a mechanism for hobnobbing and lobbying for accelerated promotion and/or placement in juicy positions.

3.5.1 Institutional Arrangements in Federal and State Forestry Services

The Federal Government is exclusively responsible for the control, protection and management of all National Parks in the rainforest region (Cross River National Park in Cross River State, Okomu in Edo State and Old Oyo in Oyo State) while the State Governments have the constitutional prerogative over all other protected areas– forest reserves, game reserves and sanctuaries. The line of command in the federal forestry service (Box 6) is fairly different from the line of command in the State Service; the distinction being the final reporting authority. The federal forestry service runs an administrative system where the line of command terminates in the office of the minister who is responsible to the president. However, in the State Forestry Service, it ends with the Governor. Presently, most state forestry services have multiple Directors at the helm with several professional and technical personnel down the line who are responsible to them. A Director or Directors in the state forest service report (s) through the Permanent Secretary to the State Commissioner for Agriculture and Natural Resources or Environment (depending on where the Department is domiciled).

3.5.2 Nigeria's New Forest Policy and the burden of Enabling Forestry Act

A 2002 participatory review of the 1988 Agriculture Policy led to the

approval in 2006 of a new national forest policy, the first stand alone and not to be subsumed within the policy of another sector (ITTO, 2007; Agbeja and Verinumbe, 2006). Nigeria's demand-led policy which is intended to expand the country's forest estate from 10% to 20%, has the following goals:

- a) Expansion and consolidation of the forest estates through sustained yield management,
- b) Conservation and protection of the nation's environment,
- c) Forest regeneration,
- d) Waste minimisation: introduction of retrofit machines and recycling technology,
- e) Control and protection of forest vegetation from wild fire and establishment of grazing reserves,
- f) Introduction of incentive-driven private forest development and community forestry,
- g) Establishment/Development of multi-utility forest for specific uses,
- h) Creation of employment opportunities in the forestry sector,
- i) Introduction of agroforestry systems as well as peri-urban forestry,
- j) Cooperation with neighbouring countries as well as international development partners.

As broad as the national forestry policy is, unfortunately, the basic instrument of authority over the management of Nigeria's forest estate is the Forestry Act. Regrettably, Nigeria is one of the three countries in Sub Saharan Africa without a national forestry law (FAO, 2010).

According to Pfaff and Robalino (2012), conservation and development needs can only be sensibly balanced once spatial variation in policy impacts is understood; otherwise the result could be development policies with large conservation losses for small economic gains, as well as conservation policies that generate large economic losses for small conservation gains. Nigeria's forest law which has been in preparation for several years to provide legal backing to the new forest policy is yet to be passed, however, in August 2010 it was presented to the Federal Ministry of Justice before going to the National Assembly for approval (Blaser, et al. 2011).

In the absence of a national forestry code, both the federal and state forestry services have suffered serious neglect and misappropriation of funds because political job-seekers collude with rent-seeking bureaucrats to create and use

ad hoc agencies (Federal level) and task forces/monitoring teams (State level) which lack the requisite expertise to carry out statutory responsibilities reserved for designate MDAs with technical bias.

3.5.3 Assignment of Statutory Roles to Agencies and Task Forces

One negative bequest that the military handed over to its civilian successors was the act of ‘coercive governance’ with penchant for use of agencies and task forces/monitoring teams to carry out statutory functions requiring high technical expertise. Unlike their military counterparts, politicians in plum managerial positions often appoint their cronies/hangers-on to head the agencies or appointed as members of task forces/monitoring committees. Ironically, since the 1980s, there has been a serious institutional crisis in governance occasioned by unwarranted dilution of roles and responsibilities between the executing authority (Agencies and Task Forces) and the MDAs (whose staff provide endless ‘yeoman’s services to ‘desktop contractors’ engaged by the politicians).

The adequate management of this complex network of interactions, with multiple government agencies having power and responsibility over the management of forest resources, is administratively demanding and imposes severe stresses in countries where the overall institutional infrastructure is weak (Contreras-Hermosilla et al, 2008).

The Federal Environmental Protection Agency (instituted by FEPA Act, 1992) was established in the first instance because of the toxic waste that was dumped in Koko town (Koko port) in Warri South Local Government Area in Southern Nigeria in 1988. Although FEPA was later to transform into a full-fledged Federal Ministry of Environment (FME), most forest conservation projects undertaken at the federal level from the inception were chiefly executed by agencies through contract awards to third party contractors.

Invariably, these agencies which find themselves in the execution of statutory responsibilities for which they hold no competitive advantage or parade any expertise are apt to working at cross purposes or in conflict with constituted authorities (e.g. Ministry of Environment). For example two important agencies– National Environmental Standards and Regulations Enforcement Agency, established by NESREA Act, 2007 and Ecological

Fund Office (Box 7) in the Presidency, established by the military in 1981– have found themselves invariably embroiled in executing same or similar institutional functions reserved exclusively for FME.

Sadly, these agencies, which cannot be held accountable in the event of failure to deliver results– because both the Nigerian constitution and 2006 National Forest Policy clearly stipulate that forests are under the jurisdiction of states, are barely present or functional at State and Local Government levels. The NESREA Act (Part II; 7c) ‘empowers the agency to enforce compliance with guidelines and legislation on sustainable management of the ecosystem, biodiversity conservation, and the development of natural resources’.

Box 7: Ecological Fund as Slush Fund:

Regulating the disbursement of the ecological funds would help Nigeria in containing the forces of nature

In a move ostensibly designed to check perceived abuses in the disbursement of the Ecological Fund, the National Assembly is set to introduce a law to curtail the President’s discretionary power over the Fund. Chairmen of the Senate Committee on Public Accounts and House of Representatives Committee on Environment have expressed displeasure at the recklessness that pervades the disbursement of the Ecological Fund.

For instance, the Senate Committee has uncovered a litany of misdeeds in the application of the funds which include the spending of N154.9bn on projects not related to the environment. In 2002, the Fund disbursed N928m for non-ecological projects just as N728m was given as a grant to the Presidential Research and Communication Unit. In 2003, N1.9bn also went to non-ecological programmes out of which N800m was given to the Ministry of Aviation for the renovation of the Aminu Kano Airport and N150m to Kaduna State Government to manage sectarian crisis in the state. The sum of N2.1bn went to non-ecological expenditures in 2004 and N2.77bn was spent in 2005. In 2006, a total of N16bn was spent as grants to Yobe and Ogun States for road constructions while in 2007, N24bn was spent on the rehabilitation of the Shagamu expressway by the Ministry of Works. In 2008, the sum of N5.7bn was advanced to the Ministry of Agriculture to fight food shortages which was said to be imminent at the time. In 2009, a total of N44.9bn was spent by the Federal Government to fund its third quarter spending warrant while in 2010; N34.6bn was withdrawn from the fund for “treasury management” by the Federal Government. Last year (2011) N22bn was withdrawn and shared out to some states and local governments, while N2.078bn has been withdrawn this year

(2012) towards the building of the 2nd Niger Bridge, although there is nothing on ground to justify the purported expenses. The list is indeed, endless.

Such is the abuse of the Ecology Fund that officials of both the federal and state governments now see essentially as a slush fund to be deployed for all manner of things. For instance, the former Governor of Plateau State disclosed in 2006 that he diverted his state's N1.6bn share of the Ecological Fund to the 2003 general elections campaign of the ruling People's Democratic Party (PDP). At the end, the federal and state governments have reportedly misused about N400bn meant for redressing ecological problems over the past 10 years; most of it spent buying vehicles and servicing other dubious projects. At a time, the forces of nature are raging and Nigeria seems to be at the mercy of the environment, it is imperative that the Ecological Fund be deployed strictly to tackle such challenges. With several billions of Naira going into the fund annually from two per cent of the monthly allocations of the federation account and another one per cent from the derivation account, there is need for a more serious regulation. The National Assembly's proposed intervention is therefore a welcome development.

Source: This Day Newspaper of 22/10/2012:

<http://www.nigeriamasterweb.com/paperfrmes.html>

3.5.4 Decline in Forest Reserve/Land Area Ratio in Rainforest States

Although most states have experienced significant reduction in the size of reserved rainforest areas (e.g. Edo, Ogun, Oyo, Anambra, Ekiti, Ondo, Ogun, Osun and Oyo) (Figure 6), the relic rainforest under any form of government formal protection in most States are merely re-growth forests, fallows or vegetation mosaic. Regrettably, the residual or semblance of fairly intact forest is increasingly threatened by different human-related stressors. In the past, many forest reserves were intensively managed for timber production, but today, a significant number has been completely deforested, de-reserved and encroached upon – leading to a serious contradiction of impudently classifying non-forested landscapes as 'forest reserves' (Isikhuemen, 2012; Blaser, et al, 2011; ITTO 2006).

But while the rainforest under formal protection in most states has suffered accelerated decline, in Edo State the degree of loss is enormous– the biome recorded a significant decline from 29% (being percent of total land area) in the 1970s less than 8% by 2010 (Isikhuemen, 2011; Isikhuemen and Modugu, 2011). Figure 6 shows the estimated reduction in forest reserve/land area ratio in southern states. The current forest reserve/land area ratios were derived from data extrapolated from Isikhuemen, 2011; ITTO, 2007 and World Bank 2005.

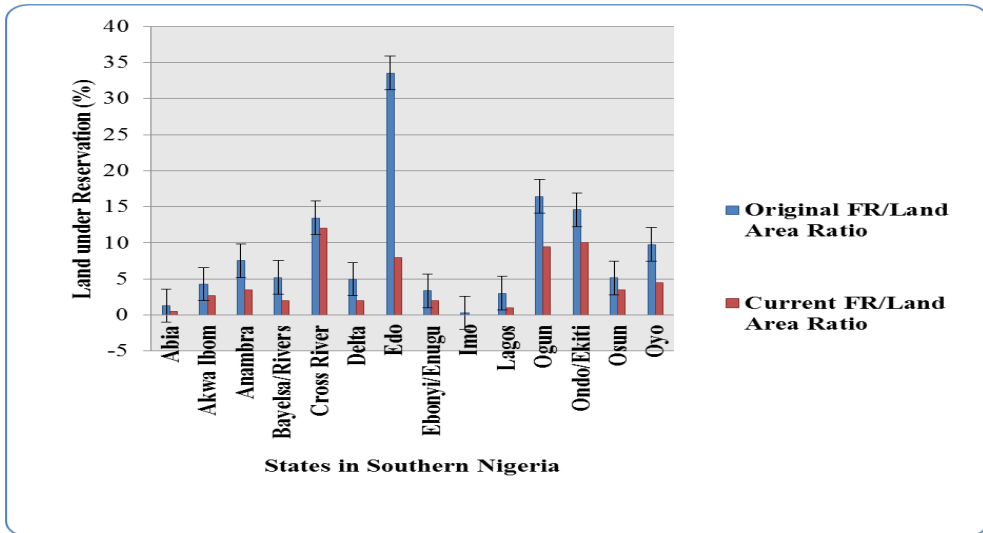


Figure 6: Change in Forest Reserve/Land Area Ratio in Southern States of Nigeria (Source: Isikhuemen, 2011; ITTO, 2007; World Bank, 2005)

3.5.5 Collapse of Long Term Concession System and Rainforest Decline

The extant short rotation allocation (1–3years return period) which came into force in Edo State in 1997 was in the end of the 5th cycle (1997–1999; 2000–2002; 2003–2005; 2006–2008; 2009–2011) in a matter of 14 years; implying that the fragile rainforest ecosystem was hardly allowed time to recover (Isikhuemen and Modugu, 2011). The return time of 1–3years rotation after initial exploitation in Edo and most rainforest states has been described as highly injurious to ecosystem health (Isikhuemen, 2005); it differs significantly from the rotation operational in Liberia (25years); Ghana’s 40years (Blaser, et al. 2011), Cameroon (30years) and 25–50years in Congo (ITTO, 2006).

The extent of logging damage generally increases with logging intensity (Hendrison, 1990). Felling 2.6 trees ha⁻¹ in Bura Forest Reserve in Ghana resulted in logging disturbance of 13% (Agyeman, et al. 1995); whereas 5.7 trees ha⁻¹ in Sapoba, Nigeria resulted in 50% damage (Redhead, 1960).

3.5.6 In Search of Good Governance and Participatory Forestry

At the national level and in most of the rainforest states, the institutional arrangements in place lack both the organisational framework and

competencies to conserve, manage and rehabilitate the declining non-renewable rainforest resources. Forestry line ministries, in many decentralisation efforts, have created or strengthened their local offices; but forestry, by and large, has not gone through a democratic decentralisation (Ribot, 2010) in Nigeria. Successful conservation institutions at whatever scale must possess:

- Authority, ability, and willingness to restrict access and use;
- Ability to offer incentives to use resources sustainably (which in some cases may mean no use at all);
- Technical capacity to monitor ecological and social conditions; and
- Managerial flexibility to alter the array of incentives and the rules of access so as to cope with changes in the condition of the resource or its users (Kremen, et al. 1994; Ostrom, et al. 1999).

The few institutional changes that have taken place in most southern states' forest services (e.g. Edo, Delta, Ondo, Ogun) since the entrenchment of democracy in 1999 were the de-concentration of staff which had build-up within the management cadre and the transformation of the State Forestry Department from single- to multi-directorate.

While most forest services, battle with dearth of staff, particularly professionals and technicians in the lower cadre; unfortunately, very little attempts have been made to enshrine good governance system by way of decentralisation and devolution of authority to communities and other non-governmental actors. But conventional wisdom holds that the 'fences and fines' approach to protected-area management, which vests authority over natural resources in the hands of government, has not worked in low income countries' (Barrett, et al. 2001).

In the entire south (with the exception of Cross River State whose forestry service is under a quasi-autonomous Commission) (Box 8), state forestry services still carry out their functions in line with the provisions of the pre-1960 provisions. According to ITTO (2007), in the lowland rainforest states of southern Nigeria, forest management is neglected in pursuit of revenue objectives; rather than provide incentives for forest management, increased utility and revenue generation, the exploitation system create short-cut and perverse incentives that impair efficient forest management.

Under the 'fences and fines' approach, the empowered government writes

and enforces laws prohibiting or severely limiting human use of resources (Barrett, et al. 2001). Protected areas are predominantly natural areas, safeguarded by laws and customs, where species and ecosystems are conserved for current and future generations (Stuat, et al. 1990).

Box 8: Cross River State: Nigeria’s model for REDD+ Programme

In Cross River State, the Eastern Nigeria Forest Law and Regulations of 1956 (later revised in 1960), were still operative until very recently. Since 1999 significant strides have been made towards entrenching SFM through diverse community-based programmes. The State Government declared a moratorium on timber extraction in 2008 for the purpose of exploring new environmental finance mechanisms to further protect the forests, with a priority focus on enhancing the livelihoods of forest-dependent communities and rural dwellers (UN-REDD, 2011). During 2010-2011, the country took the first, tangible steps towards REDD+ by creating the first REDD+ coordination and consultation structures, both at Federal level and in Cross River State. The Federal Government, with Cross River State embarked on preparing, consulting and validating a national REDD+ readiness programme– i.e. the present Nigeria REDD Readiness Programme (2012-2014) – which was first presented at the sixth UN-REDD Policy Board in March 2011, and subsequently approved at the seventh UN-REDD Policy Board in October 2011, with an allocation of US\$ 4 million (approximately 650 million Naira) (Nigeria’s REDD Readiness Programme, 2011). Cross River State is regarded as the pioneer, state-level model because of the manifest political leadership and good forest resource governance. The State’s Forestry Commission operates an inclusive and transparent system with membership cutting across other stakeholder groups. In entrenching SFM in Cross River State, several international development agencies (e.g. DFID, Ford Foundation, World Bank, etc.) and Local Non-Governmental Organizations, like NCF participated actively in crafting institutional arrangements as well as in designing benefit sharing models. They also built bridges and linkages thus facilitating access to internal and external funding agencies. The benefit sharing ratio of 80% (government) to 20% (community) for proceeds from government established plantations; 70% (community) to 30% (government) for proceeds from products obtained from community forest while the formula for the products obtained from the forest reserve is shared equally between the government and communities (Babalola, 2009). The returns from harvest by private plantation owners are shared in the ratio 80% (owner) to 20% (government) (Otu Ibor, *pers. comm.*).

For over a century in Nigeria, the ‘straitjacket’ forestry policies that overtly estranged peripheral and enclave forest-dependent communities from participating and sharing in the management and use of forest resources has

been in force in Southern Nigeria. But the colonial forest management paradigms constructed on hierarchical, top-down bureaucracy have since proven to be too rigid to restrain the challenges posed by population and other cross cutting issues, including extreme climate events and associated externalities.

Misguided policy⁹, population and socio-economic pressure, intensified and uncontrolled exploitation are critical elements driving rainforest species erosion and habitat (Isikhuemen and Modugu, 2012; Amakiri, 1995; Baskaran, 2002; Contreras, 1988). In the contemporary world, foresters and their forest ecosystem manager colleagues are adapting to a more humble facilitator and negotiator role of assisting citizens of a democracy in developing long-term public forest goals and broad parameters of management options (Kennedy, et al. 1998). It is therefore expedient to construct decision framework for forests that incorporates the best science, local experience and traditional knowledge (FAO, 2012a).

Considering the prevailing condition of the rainforest which has been poorly managed over the years amidst contentious tenure system and weak institutional arrangements, nothing is more likely to further decimate the resources than retaining perverse and outmoded institutions. In the recent past, some attempts made by state forestry authorities were focused on de-concentration at the top echelon (management cadre) in state services by creating roles and offices for staff to handle specific activities or programmes, without any commensurate adjustments in institutional frameworks.

Decentralisation could be horizontal (that is, dispersing power among institutions at the same level) or vertical (which is more important, and allows power of the central government to be delegated downwards to lower

⁹ Policy is a fluid governance tool whose effects are not easily identifiable within the matrix of societal activity. The role of government policy is to achieve a specific pre-determined goal or objective through statements and mechanisms that guide action in a particular direction, thereby avoiding envisioned negative effects. Policy is not a 'panacea' in itself. It is an important element in guiding action towards achieving a certain objective. All policy situations are governed, for better or for ill, by institutional arrangements that are specific to the demands of a particular time, place, and people. These arrangements are deliberately crafted (or circumvented) by individuals and groups in order to make interaction more predictable by removing uncertainty and reducing risk. Source: Chishakwe (2008).

ties of authority) (UNDP, 1993). While it appears that the perverse institutions at the national and state levels have hastened the disruption and loss of significant portions of the rainforest, there is no doubt that its relics might ultimately disappear. The failure of the centralised forest management system to foster sustainable management and achieve an equitable distribution of benefits from forest reserve management both for national development and improvement of community livelihood triggered the current search for alternative approaches to forest management (FAO, 2012b).

Three domains of forest management– governance, regulatory frameworks; and tenure– are critical to community and private sector involvement in forest resources management but government must tackle the substantial reduction in the size of the forest bureaucracy and the recognition that state-controlled forest management has contributed significantly to serious forest degradation as well as exclusion of people living in and around the forests (Gilmour, 2012b).

4.0 CONCLUSIONS

In Nigeria today, there are hundreds of environmental policies and legislations just as there are organisations operating at the national and sub-national levels. Yet, the nation's environment is in complete ruins. The rainforest ecosystem is at the brink of extinction in most southern states, particularly in areas experiencing surge in human population. This is aggravated by the fact that the same 'fences and fines approach' which were introduced by the colonial administration since 1901 still apply in majority of the 17 Southern States till date. However, the only state where there is a noticeable significant change is Cross River State which has moved from the civil service (single line command) bureaucratic system to the 'nested governance' paradigm by devolving authority to an autonomous commission which is shouldered with the responsibility of handling all forestry issue in the state.

The fact that the forest and allied resources are constitutionally under the jurisdiction of state governments which have disparate policies and legislations to manage their forest is a serious disadvantage to collaborative and harmonious working relationships among government and non-governmental actors. The failure of most federal-government funded forestry projects in the past might be attributable to the incongruent institutions which apply at the various levels.

The 'exclusionary principles' which tended to alienate local government councils and the non-governmental actors from participating in the planning and decision making processes, might have contributed immensely to erosion of species as well as the fragmentation and degradation of the rainforest ecosystem. While anthropogenic stressors like unsustainable logging; de-reservation for agricultural intensification and community expansion, encroachment by permanent tree crop (e.g. cocoa) farmers is increasingly on the rise. A greater proportion of forest vegetation within and outside forest reserves has been transformed into fire-climax or semblance of forest re-growth.

5.0 RECOMMENDATIONS

There needs to a system in place to resolve the ecological crisis wrought on the rainforest ecosystem in Southern Nigeria by several years of exploitation. Waste management also demands serious institutional reforms and interventions at the government and non-governmental level.

To build an inclusive forestry service with national outlook, the federal government should set the ball rolling by restructuring the forestry sub-sector. A national forestry commission should be established through a constitutional provision or an act. Government should decentralise all responsibilities for which it has no particular expertise or competitive advantage. The 1916 tenure systems and obnoxious land use act of 1978, which were hoisted on the people by the colonial administration and the military government, should be reviewed to pave the way for inclusive and participatory forestry governance.

An appropriate review of existing institutions and crafting of new institutional arrangements will ultimately put an end to all obsolete and disparate policies/laws at the federal and states level. Finally, tenure review and appropriate decentralisation and devolution at the different tiers of government are good governance instruments that will be adequate to drive the rehabilitation and restoration of Nigeria's vanishing heritage.

Specific interventions and institutional reforms recommended for the different tiers of government and non-governmental actors in Nigeria include:

Federal Level

- Devolve power, full-scale, to lower levels of government.
- Review Land-use Act and make tenure Systems eco and people friendly.
- Define and mainstream specific forestry roles for communities, non-governmental actors (including the private sector and civil society).
- Institutionalise good governance system at all levels of government; define and assign specific roles/responsibilities to non-state actors, particularly in areas where the former lacks the necessary expertise or cannot muster enough comparative/competitive advantage.
- Harmonise and streamline environmental institutions and build leverage among MDAs and non-governmental organisations, including the private sector and local communities to usher in CBFM system and private forest development.

- Review extant forestry policy/code.
- Restructure National Forestry Service (establish National Forestry Commission).
- Scrap or re-designate all agencies (e.g. the office of Special Ecological Fund in the Presidency) which do not possess the expertise to manage special funds as well as intervention funds from development organisations or the capacity and organisational flair to undertake highly technical environmental projects like conservation and rehabilitation of degraded and fragmented forests.

State Level

- Establish Forestry Commission.
- Introduce reforms in forest policies/codes.
- Revert to long-term concession of 25–50years.
- Mobilise resources for the development of new forest estates in highly degraded and marginal areas.
- Incentivise community forestry programmes and private sector cooperation.
- Develop participatory schemes for (a) private sector involvement in the rehabilitation of depleted forest estates; (b) private forestry programmes in off-reserve areas.
- Devolve power, full-scale, to lower levels of government; mainstream the private sector, civil society and communities into participatory forestry programmes.
- Plough back a significant portion of revenues derived from the exploitation of forest and allied resources.
- Build inter-sectoral and inter-ministerial linkages among states and MDAs

Local Government Level

- Political decentralisation and power devolution by States will bring government closer to the local people through LGAs.
- Develop incentive-driven policies to engender communities & private participation in forestry.
- Introduce village level agroforestry systems/practices and farm forestry.

Private Sector Involvement

- All levels of Government should build synergy by providing the enabling environment and institutional frameworks that will engender the participation of stakeholders- in government and non-governmental sector, to get involved in forest resources governance at the local levels.

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