

EVOKING THE KNOWLEDGE OF TREE TENURE IN THE HUMID TROPICS: A REVIEW OF DIMENSIONS IN AGRO-PLANTATION SYSTEM IN NIGERIA

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ABSTRACT

This paper explored the natural situation of trees, concept, potentials and importance of tree tenure, tree and land tenure, types of tree tenure, problems of forest reservation in south eastern Nigeria and the way forward. The tropical rainforest of Nigeria occupies 9.7% of the total land mass of 98.3213km², but is the most densely populated and source of Nigeria's bulk timber. In the natural situation no nutrients is lost due to a balanced nutrient recycling and there are slight variations in temperature light, humidity, and characteristic meet groups. The concept and importance of tree tenure borders the fact that much of life on earth owes its' existence to trees. Land and tree ownership rights are largely governed by customary tenure rules and these rights are rarely revoked. Land tenure does not necessarily mean tree tenure. Trees may be owned privately, communally or by government. Each of these forms of ownership have their advantages and disadvantages. In private/individual tree tenure, trees are owned by planting, inheritance, gender, purchase/lease and culture. Communal tree tenure involves full ownership, restricted ownership, village squares and evil forests/sacred bush. Government tree tenure is through acquisition and maintenance of forest resources at the local, state or federal levels. Some of the challenges of maintenance forest reserves include diseases and pests, wild fires, poaching, village/community participation, poor budgetary allocation among others. A proper knowledge of tree tenure is a must if trees are to be managed scientifically in such a way that their productivity is sustained.

Keywords: Tree, Tenure, Humid tropics Agro-plantation

INTRODUCTION

The South eastern agro-ecology of Nigeria accommodates a lot of tree varieties such as palms, coffee, cashew, pear, kola, orange, guava, mango, kola, plantain, banana, mahogany, gmelina, obeche, African star apple, bread fruit, oil bean etc. The activities around tree and fruit crop production and their processing are the cornerstone of environmental and food sustainability. This is as a result of the multipurpose role which trees play in the protection of the environment through carbon assimilation and release of oxygen and at the same time provide feed, fodder, fuel wood, food and shelter for man and livestock. Tree tenure consists of rights over tress and their products which may be held by different people at different times (Fortman 1985). These rights include the right to dispose of the tress, the right to exclude others from the use of the tree and the tree products.

Carter (1995) reported that the tenure and usufruct rights may be determined by a variety of factors other than the tenure of the land on which the tree is growing: whether or not the tree was planted (and if so, by whom), the use of the tree (particularly whether commercial or non-commercial) and the species. Furthermore, other factors affecting who has a tree include the nature of the tree, the nature of the use, and the nature of persons or group (Fortman, 1985). Land owners and tree planters tend to be advantaged in terms of their rights to trees while those with temporary claims to the land and in some cases women tend to be disadvantaged.

TROPICAL RAINFOREST OF NIGERIA

The tropical rainforests of Nigeria occupies 9.7% of the country's total land mass of 983,21km² but is the most densely populated and source of Nigeria's bulk timber (Jonathan *et al.*, 2009). It is home to an enormous number of plants animals and microbes (Sciences Clarified 2008). The world's tropical rainforests is home to two thirds of the world's plant species (ISA, 2005; Learning about forests, 2008), is most complex of the world's ecosystems in terms of both physical structure and tremendous biodiversity of species which they support (Science Clarified 2008, Rain Tree, 1996). In a natural situation, no nutrient is lost or gained, due to balanced nutrient recycling. Microbes quickly breakdown organic matter from fallen trees or leaves and other dead animals, so the stored nutrients are made readily available for reuse with minimum delay (Science Clarified, 2008). Secondly, the condition in the tropical rain forest are heavily influenced by availability of light; most of the sunlight is effectively filtered by the forest canopy. Less than 10% of the sunlight which reaches the canopy reaches the ground below, darkness prevails at the forest floor, trees grow tall and straight and have a wide umbrella like shape due to competition for sunlight and ground beneath the rainforest has sparse vegetation cover. Thirdly the vegetation is structured both spatially and vertically hence there is stratification of vegetation vertically for maximizing efficiency of the forest process.

CONCEPTS OF TREE TENURE SYSTEM

Tree tenure is very important because of the immense roles that trees play in different aspects of our lives. Much of life on earth owes its existence to tree (ISA, 2005). Trees are vital nurturing force (Dam, 2009). Some trees can live up to 1000 years like giant sequoias of California (ISA,2005). Trees provides fire wood, timber, fruits, medicines, wild vegetables, fodder for animals, shade, materials for various purposes. They also fulfill different ecological roles such as securing water sources, preventing soil erosion, enhancing soil fertility, providing habitat for various animals that are also be valuable (game, bees, etc). Furthermore, they are effectively the lungs of the environment; they take carbon dioxide (CO₂) in the atmosphere and release oxygen (O₂) through photosynthesis resulting in the reduction of the green house gas load and bringing down the effects of global warming (Wikianswers, 2009). They filter get buried in the soil eventually provide fossil fuels like coal, gasoline etc. Among all, trees have an indispensable role in bringing rain to the earth (Wikianswers. 2009). Trees occupy an important role in literary history of any region, culture or country on this planet, in Christianity's beginning the apple tree set the stage for explosion of man from Eden in the Old Testament; in the old Babylonia epic of Gilgamesh-written 2000BC, the Cedar was the dwelling place of the gods in Tolkien's "Lord of the Rings" the ant are large trees come to life. Indeed, without trees, there will be no paper for our books (Dam, 2009). Trees are important in agriculture, soil conservation, nutrient recycling and apiculture, wild life conservation, education and research, tourism as well as the supply of raw material for industries. When one tree is harvested for timber for short term gain or benefit, the medicinal plant, nuts, oils and other important sustainable resources that thrive in the delicate ecosystem of the tropical rainforest are destroyed (Rain Tree, 1996). Timber extraction not only alters the forest structure but influences tree species spectrum by removing economically valuable species and destroys other species in the process (Ted, 1997). Trees provide life itself (Dam, 2009). The study of ownership of trees and their products is of great importance in managing, conserving and consuming tree benefits while still maintaining a balance in the ecosystem and causing minimum damage to the environment. Evans (1991) reported that rights to trees are not always clear and confusion or uncertainty over who can cut what and when can be a major disincentive in social forestry programmes.

TREE TENURE AND LAND TENURE

Tenure is a matter of "rights", the rights which are held in land and trees. The study of tenure in the examination of the nature of these rights, their origin, their operation and how they relate to a multitude of other matters including planting and conservation of trees (FAO, 1989).

Network for environmental and sustainable development in African defines land and tree tenure systems as law and regulations modern and traditional regarding the ownership and accessibility of land and tree resources in any given country. Furthermore the most controversial issues related to land in almost every country in West and Central Africa revolve around ownership and access to land (NESDA 2000). Land and tree ownership are largely, governed or determined by customary tenure rules and these rights are rarely revoked (Tonye *et al*, 1990; Degrande *et al*, 2006). Tenure is a "bundle of rights". Particular combination or "Bundle" of rights in resources are recognized by law and customs in particular combination or "bundles" of rights in resource are recognized by law and customs in particular societies. People affected usually have a name for recognized tenures; "ownership" and "usufruct" are example of western tenures while some third world countries use land or tree under "freehold", "lease hold" and other tenure forms. Other cultivate under indigenous land tenure systems (FAO, 1989) Tenure on land and trees affects tree cultivation among farmers. Its effect on tree planting and conservation varies from place to place depending on the nature of the tenure arrangement, and on a variety of other factors. No tenure arrangement will encourage farmers to plant trees for which product there is no need, or where rainfall cannot sustain them (FAO, 1989). People assume that trees are part and parcel of the land on which they grow. They are "Fixtures" and like buildings are assumed to be owned by whoever owns the land. But rather trees, like minerals and water can be an object of rights separable from land on which they are found. Secure land tenure does not necessarily mean secure rights over trees (Carter,1995). Many tenure systems confer property rights on standing trees quite deferent from the land on which they stand (Carter, 1995).

A tree tenure regime may distinguish between planted trees and wild trees, even where the ownership of land is one determinant of tree ownership, the species of the tree may be subject to particular tree tenure which affect the outcome (Obi, 1988). Rights in trees may also be distributed among several individuals, often according to the provision of labour and other factors (Obi, 1988; FAO, 1989)

POTENTIALS OF TREE TENURE SYSTEM

They provided West African commercial cocoa farmers with liquidity for wide variety of purpose, allowing their trees to serve as security for loans since they could not legally mortgage their customary tenure rights (FAO, 1989). Where there are weak individual rights in land whether because shifting cultivation is still practiced or for the other reasons, tree tenure may provide the requisite security of expectation (FAO, 1989). Where some class of individuals is disadvantaged in terms of land rights for example women who hold land only as their husband' wives, tree tenure may provide the necessary incentives through security of tenure in trees themselves.

In socialist states, where nationalization of land may have diluted farmer's incentives to plant trees, perhaps tree tenure can provide the needed security and incentives (FAO, 1989).

TREE TENURE TYPES

Private Tree Tenure

(i) Ownership By Planting

A report on classification of tree tenure issues in Igbo land of Nigeria showed that if economic trees are self sown, they belong to the owners of the land on which they grow. But if they are planted by man, they are the property of the person who planted them; it makes no difference on whose land they were planted nor is it material that the permission of the land owner was not obtained before planting was done (Fortman, 1985).

In Nsukka area of Enugu State, *Irvingia garbonesis* (Agbono) tree is mostly planted and owned by women who harvest the fruits and manage the trees (Ugwu 2009, personal communication). In Isialangwa area of Abia state, trees are owned by individuals on whose land they are found irrespective of the planter. If an economic tree is found on land jointly owned by the lineage, and the land is shared, the planter for goes the tree or may chose to cut it down (Njoku, 2009, personal communication). In some part of humid West Africa, increased tree planting is a sign of increased privatization as it is traditionally a sign of ownership. Trees with spiritual significance like *Newbouldia leavis* (Ogirisi) and Abosi are usually planted along borders or boundaries to solve boundary disputes. In such cases they are owned by planters or people who worship in shrines under them (Ucheagwu 2009. Personal communication).

(ii) Ownership By Gender

Tree ownership in eastern Nigeria is also determined by gender. In Orlu are of Imo State, trees like African pear (*Dacryodes edu'is*) mango (*Managifera indica*), Oranges (*Citrus sinensis*). Oil bean (*Pentachlethra macrophylla*) African bread fruit. (*Treculia Africana*), Oha (*Pteracarpus moulbraedi*) African star apple (*Chrysophyllum albidium*) are regarded as owned by women and are therefore harvested for and managed, by them, irrespective of the planter (Ucheagwu 2009 Personal communication). According to Fortman (1985) and Urim (1995), women do not own trees in Biase land of Cross River State, reason being that women are not responsible for building family houses for which the lumber was needed. Furthermore, they don't need to fell trees. It is therefore fact that women do not own or mark trees. In some areas of Imo State, oil palm is owned and managed by women, but in other areas like Ikeduru and Mbaise areas, oil palm can be owned and managed by both men and women (Nzenwata Personal Communication 2009).

In Mbano area of Imo State trees are generally owned by men except the Oha tree (*Pteracarpus moulbraedi*) and African bread fruit (*Treculia Africana*) (Osuji, 2009 personal communication). In most parts of Igboland, Kola (*Co/a nitida*, *Cola acuminata*) and bitter Cola (*Garcinia cola*) are owned by men even though they may be harvested for and managed by women. In Ohafia area of Abia State, Agbono (*Irvingina garbonesis*) tree, is owned by women (married) who mandate both their daughters in-law and daughters to harvest and used at will even their daughters have been married out (Lekwa, 2009, personal communication).

(iii) Ownership By Inheritance

Tree tenure can be by inheritance either individually or collectively by lineage members. In Biase land of Cross River State, a strategy of resource discovery allows some lineage members to secure exclusive rights over some land resources found in the forest, such rights are reported to the lineage members who approve right of exclusive ownership to the founder (Urim, 1995). Trees found in the forest by individuals are owned by simply cutting a mark so that whoever sees the mark knows that the tree has already been claimed and will not attempt to claim ownership. When the tree is old enough to give good lumber, the owner meets the lineage members, gives them a bottle of wine and gets their permission to cut the tree. Should a person die before his tree is ready/or cutting, ownership is automatically reverted to members of his household (Urim, 1995). In most parts of Igboland, trees owned by men passed down from one generation to another. In Orlu area, when a woman is first married into a family, one of the first thing her mother in-law does is to show her family land and oil palm trees (Udah, 2009 Personal Communication). In Egiano clan of Cross River State lineage members can own as many trees as possible while in Igbadara clan, no one is permitted to own more than two trees and any one who marks a tree category of tree to the lineage. After this, he is permitted to fell the tree or trees (Urim, 1995).

In Ohafia area of Abia State, individually owned trees are African oil bean (*Pentachiethra macrophylla*), oranges (*citurs sinensis*), African pear (*Dacryodes edulis*), coconut (*cocos nucifera*), Mangoes (*Mangifera indica*), Kola (*Cola nitida*, *Cola acuminata*), cocoa (*Theobroma cacao*) and Raphia palm. These trees are also passed down from generation to generation by individual lineage members (Lekwa, 2009, personal communication.)

(iv) Ownership by Purchase/Lease

Trees can be owned by purchase or lease. When a land is transferred from one person to another either by leasing or selling, it does not necessarily carry with it any right or interest in economic trees growing on it among the Igbo of Nigeria. However today in the absence of express agreement to the contrary, the vendor, pledge or leasor of the land retains full rights over all economic plants on it including the rights to go on the land in question for the purpose of enjoying those rights e.g. harvesting the years crops (FAO, 1989). In another instance, a tree may be purchased temporarily in order to harvest it (especially fruit trees,) during which time the buyer has exclusive right over the fruit of the trees till the harvest is complete. After this, the ownership is reverted back to the owner or seller. In some cases, land is bought together with the economic trees growing on it and under such circumstances the value of such land is higher, depending on the type of economic trees growing on it Hence trees can be purchased temporarily or permanently.

(v) Ownership by culture

In some parts of eastern Nigeria trees can be owned by cultural attachment e.g, in Igboland. The umbilical cord of a new born baby may be buried and a tree planted at the spot. This makes the child the legal owner of the tree, though it is managed by the parents till the child is old enough to harvest the proceeds (Obiefuna, 2009, personal Communication). According to Obiefuna (2009 Personal Communication), trees can be given as parting gifts to loved ones by parents, in laws, close friends, etc; in which case, the trees are regarded as being owned by the people to whom they are given.

Trees can also be pledged to individuals for one reason or the other for a period during which time the ownership of the tree is relinquished to the person(s) to whom it is pledged. Large trees like Iroko or Obeche are owned only by lineage, extended family or even the entire community (in Orlu area) and the proceeds are shared by cognate family members (Udah, 2009; personal communication). Trees can also be owned by individuals or co-operate bodies in form of plantations e.g. oil palm plantations in Mbaise, rubber plantation in Oguta, cashew plantation in Okigwe areas of Imo State (Udah 2009, personal communication) and cocoa plantation (Degrande *et al.*, 2006) Other privately owned trees are *Pisium guagava*, *Persea Americana*, *Treculia Africana*, *Adansonia digitata*, *Tamarindus indica*, *Biotryperum parkii*

ADVANTAGES OF INDIVIDUAL/PRIVATE TREE TENURE

- (a) Trees that would ordinarily be randomly felled are protected for many years.
- (b) It limits the number of trees owned by individuals (in the case of Agwagune people), and regulates access to trees
- (c) It cuts down the incidence of tree depletion (Urim, 1995)

DISADVANTAGES

- (a) It affects resources available for doing community projects. The villagers end up buying their own forest trees from individual or in the alternative development levies are imposed on taxable adults .married women or on age grade associations (Urim, 1995; Obiefuna, 2009, personal communication).
- (b) It fosters private accumulation and inequality hence the common right which all had to material resources reverts to control by individual households.

COMMUNAL TREE/FOREST TENURE

"Communal tree/forest tenure" comprises in all forms of possession and full right ownership of trees and forest lands by formally constituted groups of people or local communities. This definition includes firstly possession and ownership of forest trees and forest lands by community government such as towns, villages and local authorities. Secondly it includes trees on forest land that are possessed or owned by recognized non-governmental groups of people such as tribal and customary organization (FAO, 1989).

Community forest are also referred to as "commons" or village "wood lots" (FAO, 1989). The community may also be a lineage, a village an age-set, religious body, or a co-operative. Members have rights

to utilize land or trees concurrently or sequentially as individual producers and the group also has right to exclude non-members from the resource. The trees that are growing on communal forest reserve are the joint property of all eligible members of the land owning group (Fortman, 1985). Individual's rights therein are limited to freedom to act in common with others in accordance with recognized rules pertaining to harvesting and an appropriation of the produce and these rules vary from place to place. Customary laws on communal lands gives local the rights to use the trees for the fire wood, fell trees for construction and collect other forest products as well as rights for fishing, hunting and grazing, or clearing of forests for communal agriculture (Ted', 1997).

REGULATIONS FOR MANAGING COMMUNAL FORESTS

The most effective and pragmatic frame work for the utilization of communal forests and trees are rules and management prescriptions that have been agreed upon by the community, subject to approval by the competent governmental services (FAO, 1989). Some rights of prevailing forest laws which acknowledge the interdependence between rural people and their forest environment includes;

- i. The use of trees, shrubs, dead wood and branches for firewood;
- ii. The felling of trees for construction timber and fence posts;
- iii. Collection of forest produce from trees such as bark, latex, gum, resin, fruits and nuts
- iv. The collection for forest product other than trees such as medicinal or edible plants e.g. vegetables, fibres of trees, climbers, copal honey, stone, laterite and limestone.
- v. The practice of grazing in open forest and wood lands and the use of branches and leaves fodder e.g. leaves of *Alchomea cordifolia* (ububo) for feeding small ruminant goat and sheep in eastern Nigeria.
- vi. Rights of way and water usage rights.

FORMS OF COMMUNAL TENURE

- (a) **Full ownership:-** This is used to mean ownership that entitles the community to the use of and the benefits from the forests and trees which include with, at least a matter of principle the possibility of granting harvesting license and permits to grant land leases and to exchange or sell forest lands. The use of fully owned communal forest is, however, subject to numerous rules and limitations as determined by the forest and/or general administrative legislation (FAO, 1989).
- (b) **Restricted Ownership:-** Here customary title is formally recognized but practical powers to alienate, manage and exploit the forest are narrowly circumscribed. The ownership of land may be recognized but not timber rights for example. The management and tree harvesting authority may be vested in the State Forestry Agency and revenue from forestry may not be fully paid to the customary owners (FAO, 1989).
- (c) **Customary usage Rights:-** In practical terms restricted ownership may include right to cut timber, pasture livestock and clear and cultivate land, but they are frequently limited to removing fallen trees and non-timber forest products. The holders may or may not receive a share of the fees from commercial exploitation (FAO, 1989).
- (d) **Communal Shrines/Taboos:-** Trees are also owned in form of communal shrines. These shrines are managed by designated priests or worshippers of the gods or deities represented by such shrines. Trees found in such lands or forests are regarded as sacred and belonging to the gods, hence they are not harvested by any members of the community. The oha (*Pteracarpis moulbraedi*) tree for instance in certain parts of Imo state is used for idol worship. Under such circumstances, it is not harvested because it is believed that it belongs to the gods. Generally, in such forests, harvesting of vegetables, timber and even fire wood is forbidden because such an act is regarded as a taboo by community members or worshippers of such deities.
- (e) **Village Squares: -** Communally owned trees also occur in village squares in which case they are owned by all members of the community. They may be harvested or exploited by any member of the community irrespective of the planter.

- (f) **Evil Forest/Sacred bush:** - No forest is evil except it is declared so by man (Udah, 2009 Personal communication). In Umuneke, Obazu area in Imo State, a so called evil forest existed until about 2007 when some Christians destroyed it. Another example is the popular Okija shrine in Anambra State and many other forests where villagers worship their deity (goddess of the sun, moon, land or thunder). Tree found in such forest are regarded as sacred and therefore harvesting them is also a taboo. The reason being that the oracle lives in the shrine. Access into such forests is only given to the worshippers, the priests and their servants (Anene, 2009, personal communication).

Advantages

- (a) Grazing is under control
- (b) There exist a clear rules and efficient institutions able to solve ownership and management conflicts.

Problems of communal forest lands and wood lots

- (a) Group dynamics: Poor maintenance and adherence to rules,
- (b) over exploitation of forest resources
- (c) Tree depletion, and indiscriminate harvest of other forest products.
- (d) Destruction of the ecosystem
- (e) Lack of adherence to rules made by the clan or the community (Gausset. 2007).

GOVERNMENT TREE TENURE (FOREST RESERVES)

When the government of any country constitutes a forest reserve, the trees which occur in such forest reserves automatically belong to the government (either at Federal or State Level) (FAO,1986). The forests may be natural forests, sheltering biological resources and genetic diversity of great value or it may be managed for commercial production, with areas periodically cut or replanted. However, permanent forests lands may be classified according to certain functional uses such as production, protection and recreation (FAO,1989).

A forest reserve is a place which has been legally and definitely demarcated and set aside for the growth of forest in perpetuity. In Nigeria, government forest legislation provides for the constitution of government forests reserves and native authority or local government forests, which include the woody and non-woody species that occur in forests. Both categories have the status of permanent forests tenure, but other forests lands may be declared to become government protected forests, or a native authority or local government council forest (FAO, 1986). Two main forestry policy principles were enunciated as a component of the 1946 -1955 development plan published in 1945: (a) To preserve the climatic and physical condition of the country, and control, maintain and rehabilitate the vegetation; (b) To ensure the supply in perpetuity of all forms of forest produce to satisfy the wants of the people. The most recent National Forest Policy was published in 1988 and the contents were essentially an update modification of the 1971 forest policy. The overall focus of the policy was to achieve self sufficiency in wood products and to conserve wild life with the help of the following guidelines:

- (i) Consolidation and expansion of Nigerian" forest reserves to 20% of the total land area;
- (ii) Sustained yield management of forests;
- (iii) Regeneration of forests and the creation of plantations;
- (iv) Reduction In waste from fire wood processing;
- (v) Promotion of private forest reserves and forestry;
- (vi) Provision of employment;
- (vii) Conservation of biodiversity through the establishment of national parks and game reserves;
- (viii) Promotion of integrated forest industries and the development of secondary forest products;
- (ix) Encouragement of agro-forestry;
- (x) Development of more efficient uses of alternative energy sources;;
- (xi) And co-operation with other nations in forestry.

Nigeria's total forest area in 1990 stood at 14,387,000 hectares. But in 1995 it stood at 13, 78000 hectares with a total change, 1990-1995 of 607,000 hectares (i.e-0.9%) (Adedoyin, 2005). Further more, 205 plant species are endemic in Nigeria, with highest degree of endemism in the lowland forest of the south eastern Nigeria which has 128 of these endemic species (Eboh and Ujah, 2000).

This rich biodiversity has threatened by extensive farming, flooding, erosion, urbanization, industrialization excessive oil exploration, lack of relevant data base, inadequate manpower and equipment, poor law enforcement and conservation of natural forests into tree plantations (Eboh and Ujah, 2000). Also, Nigeria has 445 forest reserves, I strict nature, I biosphere reserve, greater than 20 natural regeneration investigation plots, greater than 200 permanent sample plots, 32 game reserves/sanctuaries, 3 fish parks and 6 national parks (Eboh and Ujah, 2000). There are 500 viral species, 55 bacteria, a few protozoa, 848 fish species, 200 lower plant species, 5,103 higher plants 247 mammalian species, 839 avian species, 648 fish species, 109 amphibian specie , 77 molluscs, 10 annelids, 304 insect species, 1134,200 plankton and 135 reptilian species, which have been found and documented (Adedoyin, 1995). This great biodiversity can be better preserved by proper tenural laws on trees which form a vital part of the ecosystem.

ROLE OF FEDERAL STATE AND LOCAL GOVERNMENT IN FOREST CONSERVATION AND MANAGEMENT IN EASTERN NIGERIA

The Federal government through the Federal Department of Forestry (FDF) formulates the national forestry policy, supports execution of federally founded projects, exercise advisory function to the state forestry departments and is responsible for the relations with forest development agencies.

The State Forestry Departments (SDFS) manage the forest and its resources (Eboh and Ujah, 2000). The roles of the local government differ from north to south. In the north local governments have some responsibilities in forest conservation and management while in the southern and eastern parts of Nigeria there are virtually no responsibilities. But in Ohafia area of Abia State, they give licenses to individuals for timber harvesting in some state owned forest reserves (Lekwa, 2009 Personal Communication).

Table 1: Some forest reserves in Nigeria

State	Forest Reserve
Imo	Ohaji Ezealor
Anambra	Osamiri Akpata
Enugu	Akwari-ani Agu-Obu-Owa Ude
Edo	Iguobazuwa Sakpoba Okomu
Delta	Ologholo – Emu Urho Ebue Ivi-Ada-Obi
Rivers	Lower Orash Okwango Stubbs Greek
Cross River	Afi River
Abia	Obibia Obaku
Ogun	Oba Hills
Oyo	Ijaife
Lagos	Omo Oluwa
Ondo	Idanre

Bayelsa Akure, Akure Ofosu
 Kastina Edunamon
 Jibiya Kaukara Sadamu,
 Makoda Manisa

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Total area in Nigeria under both nature and plantation forest in the 1990s

TABLE 2:

Forest Types	Area (Km ²)	% of the Country
Natural forest	46,542.14	5.04
Forest plantations	1,573.00	0.20
Teak plantation	1,156.00	0.10
Total	49,271.14	5.34

Source: Popoola, 2008

Problems of forest reservation in Nigeria

(a) **Diseases and pests:**

There have been few incidences of insect pest attack on forest trees in government owned reserved due to lack of available data. However, Eboh and Ujah (2000) reported that in Akwari - Ani forest reserve Enugu State, 25% of the Gmelina spp were lost due to incidence of root knot nematodes

(b) **Wildfires:**

Eboh and Ujah (2000) also reported that wild fire is a major problem in forest reservation in Eastern Nigeria. These wild fires are ignited by illegal hunters on yearly basis.

In fact 75% and 25% of tree. Species are been lost in mamu-river and Akwari-Ani forest reserves respectively,

(c) **Poaching:**

Majority (75) of forest guards in two forest reserves agreed that the incidence of access to farmland within these forest reserves is high while the remaining 25% say it is low 25% (11.975 ha) of forest reserve area has been converted to farmland in Mamu-River forest reserve (Eboh and Ujah, 2000). This is also the case in many forest reserves in other parts of Eastern Nigeria.

(d) **Enforcement of laws and regulation:**

The management of many forest reserves have been found to be unable to enforce properly the laws/regulations guiding the utilization of forest reserve resources. The obstacles militating

against the enforcement of rules/laws include lack of enough manpower, inadequate funding and inadequate logistics.

(e) **Availability of management plan and up-to date inventory:**

In many forest reserves in eastern Nigeria, no management plan has been developed, though some forest reserves claim the availability of management plan

(f) **Village/community participation and conflict**

Zonal forest officers in some forest say that villages/communities are not involved in the management and decision making concerning forest reserves. This may be one of the underlying factors that breed conflict once in a while. These conflict also have been attributed to apposition of the local community/village to forest reserve laws/regulations and, most of the time, the inability of the government to pay royalties to these villages/communities.

(g) **Reforestation programme:** Apart from natural regeneration and deployment of forest reserve rangers, very little practical action is being taken by government over the years to ensure genetic conservation of commercial or endangered tree species.

(h) **Annual forest Reserve budget:** The state zonal forestry officers in most states of eastern Nigeria rate the total annual budget as inefficiently insignificant: This problem has been confirmed as the most single factor responsible for most of the challenges facing forest reserves.

CONCLUSION

Tree tenure consists of rights trees and their products. Tree tenure is important because of the immense role that trees play in different aspects of our lives. The study of tree tenure is the examination of the nature of these rights, their origin, their operation and how they relate to other matters including planting and conservation of trees. Tree tenure has the potential to provide security for loans and other incentives. Private, communal and government tree tenure are governed by certain rules, and all have their advantages, disadvantages and regulations. However, they share common points and require strong institutions able to solve such conflicts. Further studies need to be conducted therefore for better understanding of the concept and potentials of tree tenure and resolution of the problems associated with it.

RECOMMENDATIONS

Trees and forests should be owned and managed scientifically in such a way that their productivity is sustained. When ever possible integrated forest management should be practiced to maintain the ecosystem to offer better socio-economic options that would lead to an adequate and acceptable quality of life for those who depend on the ecosystem and at the same time maintain biological diversity. A greater role for community and marked actors in forest tenure and governance and deeper attention to the factors that lead to effective tree governance beyond ownership patterns is necessary to address future forest/tree tenure challenges. Farmers should be encouraged to plant and own trees which they can harvest the produce. Communities should be involved in decision making and management of forest reserves because any forest reserve managed by government is unsustainable. Tenure of trees on private and communal basis are characterized by different problems and constraints but they share common points and require strong institutions, able to solve such conflicts. Government should allocate greater percentage of the national budget to reforestation and proper maintenance of government owned forest reserves.

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