Appraisal of Challenges to Sustainable Forest Management in Abia State, Nigeria

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ABSTRACT

The sustainability of the forest estate is largely dependent on the available manpower and proper funding for maximum utilisation and productivity of the forest estate. This study, therefore, examined the challenges to sustainable forest management in Abia State, Nigeria for the period of ten years (2008-2017). Primary data were collected using structured questionnaires and Focus Group Discussion (FGD) with key members of the Department of Forestry in the State. Descriptive and inferential statistics were used to analyze the obtained variables using simple percentages, charts, and correlation. A total of one hundred (100) copies of questionnaires were administered to the randomly selected respondents to investigate budgetary allocation in each year and identify the problems militating against forest service. Results from the study show that there are nineteen (19) Forest reserves in Abia State (Four (4) natural forests and fifteen (15) plantation forest reserves). The highest budget allocation in the past ten (10) years was observed in 2012 with 12 million and the least was recorded in 2017 with 2.3 million with inconsistency in trend within the ten years which could be as a result of government policies and change in the government. The major problems facing forest estate in the State are lack of funding (87%), logistics (96%), staff recruitment/training (62.5%) and lack of consistent government policies from the State government. There is urgent need for proper funding, staff recruitment/training, policies, and federal government intervention for the forest estate in Abia State for sustainability.

Keywords: Challenges, Funding, Forest estate, Sustainability, Training.

I. INTRODUCTION

Deforestation is causing the world's total forest acreage to shrink at an alarming rate. Human actions have transformed wooded lands, making them one of the major causes in global environmental change and one of the major drivers of biodiversity loss that has an impact on rural development. Timber harvesting, conversion to agriculture, road construction, human-caused fire, and a variety of other activities all contribute to the clearing, degradation, and fragmentation of forests [1].

The steady increase in the global population has imposed the enormous pressure on forest resources which has obligated the necessity of its use in such a way that current demand meets the needs of the present without comprising the ability of the future generation [2].

Sustainable forest management is the use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality, and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and without causing damage to other ecosystems [3]. The sustainable management of the forests in Nigeria is crucial for a consistent supply of forest resources for the present and posterity [4]. Varieties of resources abound in the forests of Nigeria and especially in Abia State and they include soil and its mineral deposits, water sources, rock, outcrops, rare landscapes and, in the biological sense, plant and animals in all their various forms. The forest is, therefore, an economic treasure house of resources and if properly managed Nigeria’s forests can supply its people’s needs in perpetuity with all the necessary forest products [5].

The forestry sector is one of the main fulcrums on which Nigeria's welfare was built, thereby making it a very essential part of the country's economy. It ranks among one of the highest revenue and employment generating sectors and serves as a resource base for many forest industries and rural communities [6]. However, the unsustainable exploitation of the different types of forests, either natural or planted, particularly the woody species component and their indiscriminate removal for other non-forest purposes combined with the lack of current forest management plan(s), led to consequential loss of these renewable natural resources where they can grow throughout the country. Therefore, series of sustainable forest management (SFM) intervention efforts have been suggested, adopted, and/or adapted in different instances for managing the remaining and proposed
forests [7].

Ega et al. [4], recently reported some approaches for forest management adopted by the Abia State government in managing State forest reserves which present the need and pathway to potential investment and studies on financial flows. Abia State has 19 forest reserves comprising of four (4) are natural forest reserves and fifteen (15) plantation forest reserves. The forests have been excessively exploited over the years without significantly enhancing their growth, structure, stock, and species density. The exploitation is without regard for sustainability as harvest was consistently very much higher than its growth which is bad for the ecosystem [8]. However, previous, and current state governments have repeatedly stated their contributions to the development of the forestry sector yet no visible sustainable development in the sector. The extent of their involvement in the said funding and contributions to forestry sector development through fiscal appropriations and annual budgets are not known and largely ostensible. Furthermore, information on private investment by institutional investors, commercial banks and export credit agencies is not available and neither is it known how much the Non-governmental organization (NGO) and philanthropy sector contributes to forest financing. On the other hand, it is believed that Abia State forestry sector receives financial assistance either through grant or loan from other institutions (foreign and/or local), bodies, NGOs, development partners and even individuals [4]. This current study was carried out to specifically examine the yearly budgetary allocation and their respective programmes executed as well as identify problems militating against forest administration for sustainable development over the period of 10 years with an aim to suggest possible solutions for sustainable forest management in Abia State, Nigeria.

II. MATERIALS AND METHODS

A. Study Area

Abia is an acronym derived from the initial letters of four groups of people, namely: Aba, Bende, Isuikwuato and Afikpo. These constituted the paramount groups in the state at its creation. At the country's independence in 1960, Abia was originally part of the then Eastern Region. From 27th May 1967, it became a part of the East Central State, created by the then Head of the Federal Military Government, General Yakubu Jack Gowon. On 3rd February 1976, East Central State was split into two states (Anambra and Imo) by the Federal Military Government headed by General Murtala Mohammed who was later assassinated. On 27th August 1991, the Federal Military Government under General Ibrahim Badamasi Babangida carved out Abia State from Imo State, bringing to thirty the number of states in Nigeria. Abia State lies within approximately latitudes 4° 40' and 6° 14' North, and longitudes 7° 10' and 8° East geographically. The state shares common boundaries Ebonyi State to the north, to the south and southwest with Rivers State, Cross River to the east and southeast and Akwa Ibom States accordingly. To the west is Imo State, and to the northwest is Anambra State. The state covers an area of about 5,243.7 sq. km which is approximately 5.8% of the total land area of Nigeria. With its capital at Umuahia, it has seventeen (17) Local Government Areas [9].

Fig. 1. Map of Abia State showing the 19 Forest Reserves in their various Local Governments. Source: [4].

B. Sampling Techniques

The techniques adopted was a random sampling method which data were collected in the study locations using structured questionnaires and focus group discussions with the administrative and technical members of staff of the Department of Forestry, Ministry of Environment, Umuahia in Abia State. One hundred (100) questionnaires were administered to the target groups respectively.

C. Data Analysis

The collected data were subjected into various components under study and descriptive statistics (that is frequencies and percentages, line graphs) were used to represent the results.

III. RESULTS AND DISCUSSIONS

There are nineteen (19) forest reserves in Abia State comprising of four (4) natural forest reserves and fifteen (15) plantation forest reserves. Results of the respondents earlier reported by Agbeja et al. [8], shows that there are more males than females in the study area as 72.0% of the workforce were male and only 28.0% were females respectively. This shows the male / female ratio of approximately 3:1, which was slightly below a ratio of 2:1 observed by FAO [10]. This agrees with the report of Faleyimu [11] findings that forestry activities are men dominated perhaps due to the nature of the work which requires physical strength.

A. A. Budgetary Allocation of Forest Service in Abia State

Fig. 2 shows the budget allocation for the Forestry Department, Ministry of Environment from 2008-2017 in Abia State. From the table, the money is not usually regular for every year, and this is due to the allocation from the Federal Government. According to some of the principal
officers of the Department, they said some of the allocation always come in papers which means that some of the allocations are not seen in cash, and this will definitely affect the sector because there will not be adequate money to prosecute some of the projects. Some of the projects carried are plantation establishment, rising of seedlings for distribution, forest development protection, regeneration and afforestation and re-establishment of forest boundaries beacons/surveys. The highest budget allocation in the past ten (10) years was recorded in 2012 with 12 million and the least was recorded in 2017 with 2.3 million.

Funding for forestry development and forest management in Nigeria relies entirely on annual allocations from government and sometimes NGOs. The State Departments of Forestry are allocated funds each year to cover salary and wages as well as other operational and overhead costs that may arise. Determination of the appropriate level of public spending on forestry sector in Nigeria requires a technically sophisticated analysis of the returns to public spending in forestry vis-à-vis the returns in other sectors, something that is beyond the scope of this paper. The quality of public spending in forestry in Nigeria is dismal and neglected. A careful examination of the pattern of public spending raises questions as to whether the allocation of resources in Nigeria is based on objective and empirical criteria. For example, Famuyide et al. [12] earlier reported in a study of nine states of the country that actual disbursement always fell short of budgetary provision. Specifically, Faleyimu and Arowosoge [13] noted that the total money budgeted for forestry from 2004 to 2008 by Kaduna State Government was N317,490,793.71 while in the actual sense the amount received by the Forestry Department was N241,244,273.48 (75.98%). Out of total revenue of N15,320,228.04 that was generated between 2004 and 2008, only N7,169,243.32 which represents 46.79% was ploughed back for forest regeneration in the State. Alao [14] noted that the total budgetary appropriation in Nasarawa State from 2002-2006 was N186,150,000.00 and only N2,000,000.00 was released during this period; revenue generated stood at N6,583,971.00 none of which was ploughed back into forest sector for development. Similarly, N667,04 million was realized as revenue from 1991 to 2000 in Ondo State and just a paltry sum of N669.91 million (10%) was released for forestry development as against 25% which was agreed under the forestry trust fund in the State [15].

Results in Table I show that 88% of the respondents said programmes executed with budget money not visible again while 12% said it is still visible. It could be that most of the projects executed have disappeared or there are no funds to maintain them. The results also revealed that 95.5% are of the opinion that government instability also affect project to be executed in the state, this because every government comes with a new policy and this in turn affect forestry activities in the State.

**TABLE I: PROGRAMME EXECUTED WITH ALLOCATED BUDGET**

| Variables                              | Responds | Frequency | Percentage (%) |
|---------------------------------------|----------|-----------|----------------|
| Are the programmes mentioned in the budget as executed still visible? | Yes      | 9         | 12.0           |
| Does government instability affect some project executed in the state forest service? | No       | 66        | 88.0           |

Source: (Field survey, 2018).

B. Problems Militating against Forest Sustainability in Abia State

Results in Table II reveal the major problems militating against services and growth of forestry activities in Abia State. According to the responses of the correspondents, the major problem facing the sector is lack of funds which recorded 87.5%. 96% said there is no adequate logistics (Patrol vans, remote sensing equipment and motorcycles) to facilitate surveillance operations within the reserves for sustainable forest management. Also, 69% gave an appeal for the State government to resolve the boundary dispute between two communities (Okwoyi in Umuahia and Amamba community in Uzuakoli) close to the reserves. Also, the results show that 62.5% said there is no actual number of personnel. 64% said most of the members of staff are not performing their duties well, 88% said there is no adequate manpower on ground and 72% agreed that there has been recruitment of staff in the last ten year but very few and mostly non-professionals. The results of this study on the problems militating against forest sustainability are in tandem with report of Edet et al. [16] and Agabeja et al. [8].

Also, results represented in Table III reveals the ranked frequencies for category of Staff that has experienced recruitment in the last ten (10) years, from the ranked result, forest guards had the highest number of recruitments followed by professionals’ staff and the least was found in that of the technical staff. The table also, revealed ranked frequencies of the Category of Staff that they find most difficult to recruit in the last ten (10) years with professionals’ staff being the 1st followed by technical staff and the lowest was found in forest guards. Result for frequency analysis for the factors that can solve the problems facing the staff in the forest service had been ranked. According to the ranking lack of funds from the State government top the problems followed by Staff training with a frequency of 57, frequency of 48 for Federal government intervention, 27 for policy and lease was found in law with a frequency of 3.

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In order to for forest service to achieve their aims, adequate funding is paramount. This was alluded by Gray [17], who said that to become operational in the field and functional in the office, the forestry service will need to devote a large proportion of its budget to materials, supplies and equipment. Alao [18], suggested a way out by saying the capital-intensive nature of the forestry projects and programmes, the very keen competition for government funds and long gestation period will require supplementing the limited government allocations to the subsector and that it could be achieved through external funding and setting up of and or strengthening autonomous and self-sustaining forestry funds, partly recharged from forestry revenue and less dependent on general treasuries. The external funding is much needed to sustain and expand forestry service. The strengthening of public forestry administration is an invaluable tool needed for forestry development and the need for better staffed and administratively and well-motivated trained personnel for effective management of forest estates cannot be over-emphasized. He further reported that there cannot be strong forestry administration without a persistent effort aimed at strengthening other institutional capacities like training, finance, and equipment. This was further corroborated by Pratts-Liaurado and Speidel [19], who posted that strengthening and modernizing forestry administration depends on the persistent efforts in forestry education and training. Alao [18], added to this by saying the persistency should also cover other areas of capacity building as earlier mentioned. Administration is a crucial measure needed for development to avoid disorganization and to ensure effective running of any institution.

Training plays an important role in the sustainable development of the State’s forestry service. According to Ajayi [20] and Riki et al., [21], there must be a continuous and conscious programme of investment in training. This will help them plan ahead by implementing training in any conscious programme for the year and adjustment will be made where necessary.

| TABLE II: PROBLEMS MILITATING AGAINST FOREST SERVICE IN ABA STATE |
|---------------------------------------------------------------|
| Variables | Responds | Frequency | Percentage (%) |
|---------------------------------------------------------------|
| Is there adequate fund for administration progress            | Yes | 9 | 12.5 |
|                                                               | No  | 63 | 87.5 |
| Total                                                         | 72  | 100.0 |
| Do you have adequate logistics                                 | Yes | 3 | 4.0 |
|                                                               | No  | 72 | 96.0 |
| Total                                                         | 75  | 100.0 |
| Is there any special request from the communities concerning proper management of the forest | Yes | 69 | 92.0 |
|                                                               | No  | 6 | 8.0 |
| Total                                                         | 75  | 100.0 |
| Do you have actual number of personnel                         | Yes | 27 | 37.5 |
|                                                               | No  | 45 | 62.5 |
| Total                                                         | 72  | 100.0 |
| All these staff, are they competent in performing their duties | Yes | 27 | 36.0 |
|                                                               | No  | 48 | 64.0 |
| Total                                                         | 75  | 100.0 |
| Does the state have adequate manpower in the forestry services | Yes | 9 | 12.0 |
|                                                               | No  | 66 | 88.0 |
| Total                                                         | 75  | 100.0 |
| In the last ten years, has there been any recruitment of staff in the state | Yes | 54 | 72.0 |
|                                                               | No  | 21 | 28.0 |
| Total                                                         | 75  | 100.0 |

Source: (Field survey, 2018).

In the last ten years, has there been any recruitment of staff in the state?

| TABLE III: CATEGORY OF STAFF THAT HAS EXPERIENCED RECRUITMENT IN THE LAST TEN (10) YEARS |
|------------------------------------------------------------------------------------------|
| Variable | Frequency | Percentage |
| Forest guards | 60 | 100.0 |
| Professional | 24 | 40.0 |
| Technical | 9 | 15.0 |
| Category of Staff that they find most difficult to recruit in the last ten (10) years |
| Professional | 54 | 90.0 |
| Technical | 24 | 40.0 |
| Forest guards | 6 | 10.0 |
| Institutional measures to address the problems |
| Funding | 60 | 100.0 |
| Training | 57 | 100.0 |
| Federal Government intervention | 48 | 80.0 |
| Policy | 27 | 50.0 |
| Law | 3 | 5.0 |

Source: Field survey, 2018.

IV. CONCLUSIONS AND RECOMMENDATIONS

This study assessed challenges of sustainable forest management in Abia State, Nigeria for the past ten (10) years i.e., from 2008-2017. There are nineteen (19) forest reserves in Abia State comprising of four (4) are natural forest reserves and fifteen (15) plantation forest reserves. These reserves are seriously experiencing staff shortage and lack of funding resulting to illegal encroachment of forest lands, farming activities, and also felling of juvenile logs especially from Okwoyi in Umuahia and Amamba community in Uzuakoli local council of the State.

The issue of budget allocation has affected productivity in terms of output because some of the projects which are supposed to be implemented are not done and also the ones on ground that are supposed to be maintained are left out due to lack of funding yet the government receives revenues from the sector. Some of the major problems militating against forest service which are inadequate funding, corruption of Government officials/political will influence, Lack of logistics, encroachment and poaching activities, non – recruitment of staff and inadequate training of personnel’s. Finally, institutional measures needed to solve the problem was also evaluated and the result shows that funding, staff recruitment/training and federal government intervention would go a long way to solve the problems in the forestry services of Abia State for sustainability.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.
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