



**Full Length Article**

# Capacity for Forest Extension Services in Forests of Selected States in Nigeria

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## ABSTRACT

The study evaluated the forest extension capacity for forest services in selected states with a view to ascertaining the status of tools for extension functions, manpower position, extension activities and benefit accruable to communities within the study area. The result showed that only two states (22.22%) out of the nine sampled claimed to be self sufficient in tools, while the remaining seven (77.78%) grossly lacked them. Manpower situation was very precarious. A total of 545 staff was projected by the sampled states to effectively carry out extension functions, but only 16 staff (0.03%) was available to them. Each of the sampled states had extension activities ranging from one to three and the benefits as enumerated by all states were encompassing. In view of the obvious shortcomings and in order to salvage Nigerian forestry from total decay every effort should be put in place to revamp and strengthen the forestry extension system in Nigeria.

**Key Words:** Forest extension; Capacity; Selected states; Forest service; Nigeria

## INTRODUCTION

Forests are amongst the important renewable natural resource, which have great influence on the environment (Alao & Oguche, 2003). This is in consonance with FAO (1987) who said that the primary benefit of an extension program is that it meets a need, which people have defined for themselves and considered sufficiently important to devote their time and resource to satisfy. In material terms, the need may be for fuel wood; poles or small timber for house building, fodder for animals, fruit for human consumption or sale shade or shelter for people or animals, employment from the manufacture of handicrafts and cash from the sale of surplus produce. However, many of the benefits may be difficult to measure and value. In order for forestry to successfully fulfill these vital roles it must be managed on a sustainable basis. One of the tools for achieving this sustainability is through forestry extension.

Forestry extension aims at providing the necessary education, skill and technical information to enable stakeholders put in place friendly practices that engender forestry development at whatever operational level they are involved in. According to FAO (1987), forestry extension serves as an informal self-development process, because it does not depend on formal teaching or courses of study. Oyebanji (1994) posited that an effective extension service is an essential factor for accelerated development of agriculture in developing economies. This is apt for forestry, because an effective forestry extension would definitely impact on sustainable forestry development.

Forestry extension is usually a unit in the forestry department domiciled either in the Ministry of Agriculture, Forest and Animal Health (Alao, 2005). In addition to the technology transfer responsibilities, the forest extension agent also distribute inputs, handle enlightenment campaigns bordering on best forestry practices and government regulatory functions. The objective of this paper was to look at forest extension capacity in selected states forest services vis-à-vis the status of tools for extension functions, manpower position, extension activities and benefits accruable to communities within the study area.

## MATERIALS AND METHODS

**Study area.** Nigeria is situated between 3° and 14° East longitudes and 4° and 14° North latitudes. The rainfall ranges between 3500 mm in the coastal area and 500 mm in the northern most part of the country. Nigeria has three broad and distinct ecological zones namely the Rain forest, guinea savanna and Sudano-sahelian. Politically, the country is made up of 36 states and Abuja the Federal Capital Territory (FCT).

**Sampling procedure.** Multi-stage stratified random sampling procedure with 25% sampling intensity, which gave nine out thirty seven states of Nigeria including the FCT as sample areas was used for this study. This procedure was used in order to ensure adequate representation of the ecological patterns in the country (Freese, 1962; FAO, 1978; Zar, 1974).

The study was conducted within the Nigerian forest

services using some selected states as sample areas. Precisely, nine states were selected from within the three ecological zones viz Rain-forest zone (Eco-zone I) comprising Cross River (Calabar) Delta (Asaba), and Oyo States (Ibadan); guinea savanna zone (Eco-zone II) made up of Kwara (Ilorin), Benue (Makurdi) and Kaduna States (Kaduna); while the Sudano-sahelian zone (Eco-zone III) is made up of Borno (Maiduguri), Kano (Kano) and Sokoto States (Sokoto). Names in parenthesis are the capital of the respective states. The study was carried out in the sampled states forest services in their office headquarters, which are generally situated in the state capitals. Structured questionnaire and oral interviews were used to obtain necessary information from the Directors of Forestry of these selected states. The mathematical function used to determine the size allocated to each ecological zone was:

$$n_h = \left( \frac{N_h}{N} \right) n \dots\dots\dots(1)$$

Where  $n_h$  = sample size per zone  
 $n$  = sample size (i.e., 9 states)  
 $N_h$  = total number of states in each eco-zone  
 $N$  = total number of states in Nigeria including FCT (i.e., 37).

In this study:  
 $n = \sum n_h = n_{h1} + n_{h2} + n_{h3} = 9$   
 $N = \sum N = N_{h1} + N_{h2} + N_{h3} = 37.$

**Data analysis.** Descriptive statistical tools such as summation and percentage were used to analyse the data.

**RESULTS**

**Extension activities carried out in the study area.** The extension activities carried out in the study area involved basic forestry operations that engendered awareness creation in the minds of the public in order for them to be friendlier with and partake in the benefits inherent in forestry activities (Table I).

**Status of tools for extension functions in the sampled areas.** The adequacy of tools by the sampled states to carry out their extension functions was investigated by this study. The adequacy level, constraints and tools available are clearly shown in Table II. Only two states Cross River in the Rain Forest ecobelt and Sokoto in the Sudano-sahelian ecobelt laid claimed to have adequate tools. All the sampled states in the guinea Savanna ecobelt were bereft of tools to carry out their extension mandate. This is in addition to Delta, Oyo, Kano and Borno States.

**Level of manpower needed to achieve extension functions in the sampled states.** Table III shows the staff requirement needed by the sampled state forest services to actualize their extension mandate. The highest figure of a total of 350 hands emerged from Benue State followed by Kaduna State with 92. A total of 69 professional staff, 156 technical and 320 vocational hands would be required. The total projected staff strength to carry out the extension functions in the sampled states was 545 but the total actual

**Table I. The list of extension activities carried out in the study area**

State	Extension activities
Delta	* Tree planting campaign
	* Seminar with sawmillers
Cross River	* Public enlightenment campaign at community level
	* Seminars/workshops with forest management committees (FMCs)
	* nursery and tree planting techniques with communities.
Oyo	* Local Government Afforestation
	* Schools extension programme
Benue	* To promote rural afforestation programmes
	* To inculcate into the people the habit of planting trees on their own and nurturing them to maturity.
Kwara	* Formation of foresters clubs in secondary schools
	* Assisting farmers in agro forestry practices
Kaduna	* Assisting farmers to raise seedlings on their own by providing the technical skills and some inputs free of charge.
	* Assisting farmers interested in raising fruit orchards/woodlots.
Sokoto	* Awareness campaign through the media warning people about the illegality of encroaching into forest reserves and against bush burning.
	* Distribution of horticultural seedlings to the public
	* Establishment of pilot schemes for woodlots in order to encourage private plantations.
Kano	* Environmental awareness campaign through the mass media
	* Rallies for public awareness and film shows
	* School to school campaigns
Borno	* Printing of bulletins, pamphlets, posters, and stickers on forestry activities
	* Awareness campaign through the mass media.

Source: Field survey, 2002/2003.

number of staff available to them was 16, which is just 0.03% of the projected total. This was dismal indeed.

Only Sokoto and Borno in the Sudano-sahelian zone showed adequacy of staff with 100% each followed by Cross River – 40% in the rain forest zone. Staffing position in the guinea savannas zone of Benue, Kwara and Kaduna was more precarious followed closely by Delta, Cross-River and Oyo in the rain forest eco-zone and better in the Sudano-sahelian zone of Sokoto, Kano and Borno.

**Benefits that the communities enjoy from extension services in the sampled sates.** The benefits enjoyed by the various communities in the sampled states from extension activities are far reaching and all embracing state by state (Table IV).

**DISCUSSION**

There is no gainsaying the fact that the Nigerian forest is fast receding. There is wanton destruction of the forest. According to Ivbijaro (2002) of Nigeria’s 9.61% forest cover, 43.48% have lost to human activities including the use of fuelwood. By the year 2010, Nigeria would have lost an additional 65.16% of its remaining forest land. In effect, there would be no forest remaining at our 50<sup>th</sup> anniversary should our consumption patterns of forest product remain un-checked. In order to avert this gloomy

**Table II. Status of tools for extension functions in the sampled areas**

State	Adequacy of Tools		Constraints	Tools available
	Yes	No		
Delta	-	✓	* Lack of vehicles * Lack of finance * Lack of forestry personnel	-
Cross-River	✓		- - - - -	* Public address system (PAS) * Video on environment * TV sets * One vehicle * Video camera * Camera (photographic)
Oyo	-	✓	* Lack of vehicles * Lack of adequate manpower * Inadequacy of funding	-
Benue	-	✓	* Lack of vehicles and equipment * Lack of public address system (PAS)	* Motor cycles (10 Nos) * Bicycle (5 Nos.)
Kwara	-	✓	* Financial constraints * Lack of fund	-
Kaduna	-	✓	* Lack of tools equipment and vehicles * Lack of manpower * Financial inadequacy	-
Sokoto	✓	-	-	* Radio * Television * Newspaper - The path belonging to Sokoto State government * Projector (1 No.)
Kano	-	✓	* Transport * Finance	* Projector (1 No.) * Vehicle (1 No.)
Borno	-	✓	* Printing and photographic machines broken down * Lack of camera, chemicals and other photographic and printing materials	-

Source: Field Survey 2002/2003

situation, an effective forestry extension should be put in place that borders on forestry extension education delivery, awareness creation, forestry technology delivery among others.

Basically, the extension activities carried out in the study area involve forestry operations that engaged awareness creation in the minds of the public in order for them to be friendlier with and partake in the benefits inherent in forestry activities. This is in agreement with Adekun *et al.* (2006) who said that a well managed forestry extension system would inculcate in all categories of end users of forest products, sound co-existence with forest as well as improved practical knowledge in forest production, management, marketing and conservation.

With the burgeoning population and prevailing trends in socio-economic activities in Nigeria, there is a spiraling demand for wood and other forest products. In order to

reduce these socio-economic pressures on the forest, researchers are oriented towards forestry and forest products utilization and for the use of forest products to be rationalized; research results have to be transformed to the end users of the forest products (Adenuga, 2000). This quest calls for extension activities, which also involve not only the transforming but also the transfer of research technologies to the target audience. Akachuku (1999) stated that in order to maximize benefits from the forest, it is essential to develop the technologies of forest exploitation and wood processing. When the technologies are developed, results of such research findings must also be transferred to end-users, without which research becomes a futile effort. This can definitely be achieved through well organized and equipped extension service. It is pertinent to state that through properly articulated extension service, rural dwellers could also obtain relevant and up to date information on forestry

**Table III. Level of manpower needed to achieve extension functions in the sampled states**

State	Professional	Technical	Vocational	Total	% Available
Delta	11 (1)	4 (0)	2 (0)	17 (1)	0.06
Cross-River	2 (1)	4 (1)	4 (2)	10 (4)	40.00
Oyo	5 (1)	11 (0)	27 (0)	43 (1)	0.02
Benue	20 (1)	80 (0)	250 (0)	350 (1)	0.00
Kwara	1 (1)	3 (0)	4 (0)	8 (1)	0.13
Kaduna	23 (0)	46 (1)	23 (0)	92 (1)	0.01
Sokoto	1 (1)	- (0)	- (0)	1 (1)	100.00
Kano	5 (1)	5 (1)	10 (0)	20 (2)	0.10
Borno	1 (1)	3 (3)	- (0)	4 (4)	100.00
Total	69 (8)	156 (6)	320 (2)	545 (16)	0.03

Source: Field Survey 2002/2003 Figures in parenthesis represent actual number of staff on ground.

**Table IV. Benefits accruable to communities within the nine states**

State	Benefits
Delta	- Establishment of fruit orchards - Creation of awareness about forestry
Cross –River	- Environmental education - Public enlightenment on nursery/plantation technique - Simple forest management concept.
Oyo	- Free distribution of seedlings - Impartation of forestry technology - Improvement of vegetal cover - Future monetary profit
Benue	- Woodlot establishment - Private fruit tree plantation
Kwara	- Awareness creation about forestry and its usefulness
Kaduna	- Establishment of private fruit orchards. - Establishment of private nurseries. - Many are well informed on the techniques of agro-forestry practices - Enhanced financial income especially from task, which has induced many to go into private establishment of Teak plantations.
Sokoto	- Access to free seedlings for planting on their farms - Free technical advises
Kano	- Awareness creation about forestry
Borno	- Distribution of free seedlings - Provision of borehole water for both animals and human consumption - Enlightenment about the state of the environment, agro forestry and agro silvopastoralism. - Use of energy conserving stoves.

Source: Field Survey, 2002/2003

related issues.

## CONCLUSION

The bad state of the Nigerian forest calls for a strengthening of the forestry extension capabilities in Nigeria. This has become very imperative if our forests must be saved from total disappearance. If there is a commitment on the part of all forestry stakeholders, the worsening situation of forestry in Nigeria can be salvaged through a thoroughly reformed forestry extension delivery. In order to achieve this, there must be a policy thrust that

would enhance forestry extension delivery and a clearly spelt out role for the forestry extension unit of the various Forestry sectors in Nigeria. The policy thrust may include:

- Flexibility in the frequency of regular staff training.
- More support on plants and equipment for extension.
- Intensive training of recipients of forestry extension.
- Retraining of forestry field extension workers to be able to deliver optimally.

On the other hand, role of forestry extension unit should among others include to:

- Help in the implementation of government policy in relation to the development of the forestry sector;
- Increase the productivity of the forest with special emphasis on wise resource use.
- Stimulate the adoption of appropriate proven forestry conservation and management practices leading to sustainable forestry development;
- Promote the development of the people thus empowering them to better their lives;
- Provide the necessary service to forestry stakeholders in order to maintain best and friendly forestry practices.

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