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Analysis of Extension Services in Forest Conservation in Ogun State, Nigeria.

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Abstract
The study to analyze extension services in forest conservation was carried out in Ogun State, Nigeria. The objectives were to identify extension services in forest conservation, examine perception of forest officers on effectiveness of extension services in forest conservation and identify constraints hindered extension services in forest conservation. Multistage sampling technique was undertaken following the state ministry of agriculture delineation of forest reserves across the state. A total of 68 forest officers were selected for the study. Data were analyzed using descriptive statistics. Result shows that 83.8% of the forest officers were at their active age that fall between 31-45 years with high literacy level, 48.5% had between 11-15 years in service, 26.4% had between 5-10 years in service. Extension services rendered in forest conservation include education programme that emphasized forests officers knowledge related to forest conservation discipline with mean value of (2.73), create awareness through publication in relation to forest conservation with mean value of (2.60). Majority of the forest officer agree that extension services in forest conservation were effective, and major constraints to extension services in forest conservation were mentioned by forest officers. Therefore, the conservation of forests depends on how effective extension services are, for the forestry extension services to be effective the challenges facing the service must be seriously considered and funding of forestry extension programme should be such that has political will by given better materials and service as supportive provided for extension agents.
Key words: Extension, Services, Forest, Conservation, Ogun State.

1.Introduction

The importance of the environment and forest ecosystem to human survival can never be over stressed (Agbogidi and Ofuoku 2007). Human depend on the relationship with the environment for safety, health and survival (Foskett and Foskett, 2004). Forest play an important role in the water cycle carbon sequestering, also as a genetic bank and source of food, they stimulate rainfall, protect soils from erosion and regulate the flow of river and stream water (Agbogidi and Eshegbeyi, 2008). Deforestation and degradation of tropical forests in many parts of the world are negatively affecting the availability of forest resources and services. Tropical forests are disappearing fast while the number of people depending on them grows steadily (Agbogidi and Ofuoku, 2009). It is worthy of note, that as environmental services are degraded and users become affected, people become more environmentally conscious and will want to protect the environment (Pepper, 1996) cited in (Agbogidi and Ofuoku, 2009). Agbamu (2006) cited in Agbogidi and Ofuoku (2009) posited that knowledge and skills have always played an important role in economic growth with education and labour productivity is greatly enhanced.

In other to do this effectively there is need for a substantial investment in education and research by governmental policy makers, non- government bodies as well as the private sector participation including extension services for forest conservation and protection (Agbogidi and Ofuoku, 2009).Onumadu, et al (2001) cited in Agbogidi and Ofuoku (2009) maintained that extension education is a voluntary out of school education programme for adults comprising relevant content derived from researches in the physical, biological and social sciences that synthesized in to a body of concepts principles and procedures. Forestry extension programmes are designed to meet the needs of small- scale farmers, through agro-forestry technology conservation of small- size log and wood processing technology, scientific information about biodiversity and new concept in forest conservation and protection (Onumadu, et al 2001). This can only be achieved with aggressive forestry extension (Agbogidi and Ofuoku, 2009).

Forestry extension programme involve training activities for communities through short- term courses, field visits and practical demonstration in specific areas and disciplines including tree tending techniques, maintenance of hand tools, sustainable harvesting practices of forests of forest products and interrelationships of the forest components (Eke, 2001, Agbogidi and Ofuoku, 2009). All groups of forestry personnel need one form of training or another to enable them face the challenges for sustainability. Education in forestry has to shift from forests in isolation to the relationship between forest and society, with attention to other land users and diverse users groups as obtainable in Netherland and Iran (Bartelink et al 1996) Mehran and Elham 2011).Training could be regarded as extension tips which could be greatly explored as a communication methods where Agricultural

Development Projects (ADPS) collaborates with other institutes to organize such training in which some of the activities including publication of story book in relation to protection of forests for children, the public fair in relation to importance of forests, installing educational posters in the public place, given presents to students in natural resources week, supplying educational posters in relation to protection of forests and deforestation of forests organizing educational courses for forest dwellers in relation to preventing occurrence of fire outbreak and presentation of play in relation to protection of forests and other activities (Farhadian, 2000, Abedi, 2004, Mehran and Elham, 2011).Forests cannot be protected and conserved unless extensionists demonstrate to the local people that they can make a reasonable livelihood from the forests on a sustainable basis. Ogunwale et al (2006) Agbogidi and Ofuoku, (2009) posited that forestry extension will enable the populace to know that forests will be better enjoyed by sharing their benefits, if it's sustainably managed. Onumadu, et al (2001) Adeodun et al (2005) cited in Agbogidi and Ofuoku, (2009) reported that environmental forestry coupled with an aggressive extension education stands out as the best option for combating environmental degradation. As such, this study seeks to analyze the extension services in forest conservation in the study area. Specifically the study describe selected socio- economic characteristics of the forest officers, identify extension services in forest conservation, examine the perception of forest officers on extension services in forest conservation and identify constraints hindered extension services in forest conservation.

2 .Materials and methods

The population for this study was the forest officers in Ogun State. The Ten (10) forest reserves in Ogun State are: Omo[1] forest reserve in Ijebu North Local Government Area, Omo[2] forest reserve in Ijebu East Local Government Area, Olokomeji forest reserve in Odeda Local Government Area, Aragunda forest reserve in Abeokuta North Local Government Area, Ilaro forest reserve and Edun stream forest reserve in Yewa South Local Government Area, Aworo forest reserve, Egua forest reserve and Ohungbe forest reserve all in Yewa North Local Government Area and Imeko forest reserve in Imeko- Afon Local Government Area.

Multistage sampling technique was used by first purposively selected four forest reserves that are rural based namely, Omo[2] forest reserve ,Olokomeji forest reserve, Edun stream forest reserve and Imeko forest reserve. From each of the selected forest reserve 17 forest officers (forest guards) were randomly choosing from the list of staff collected from department of forestry in the state ministry of agriculture making a total of 68 forest officers selected for the study. Data were collected by the use of pretested (using the test- retest method) questionnaire to elicit information from forest officers in the selected forest reserves. Descriptive statistics were used to analyzed the data, such include frequency counts, percentages, mean and ranking were used to describe selected socio- economic characteristics of forest officers, perception of the forest officers on effectiveness of extension services in forest conservation and constraints hindered extension services in forest conservation. Perception of forest officers on effectiveness of extension services in forest conservation was measured on 5 points likerts- type scale, in which the scale was depicted Strongly agree =5, Agree =4, Undecided=3 effective=1. With cut off mean of (2.0), any mean value equal/greater than ($\geq$ 2) is effective, while mean value less than ($<$ 2) is not effective. While constraints hindered extension services on forest conservation are measured on 3 points scale, in which major constraint=3,minor constraint=2, not a constraint=1.The higher the score of the forest officer on this scale, the higher their perception of constraints to extension service in forest conservation.

3.0 Results and Discussion

3.1Socio – economic attributes of forest officers

Table 1 show that high percentage (83.8%) of the forest officers are within the age group of 31- 45 years, while 16.2% are above 46 years of age with mean age of 39.3years. These findings seem to indicate that forest officers are in their active age. Also 100.0% of the forest officers had formal education. This implies that literacy ability of the forest officers enable them to understand the services rendered by extension officers on forest conservation. It is also evident from Table 1 that 73.5% of the forest officers had worked in Aragunda forest reserve, 72.1% had worked in Olokomeji forest reserve and 63.2% had worked in Edun stream forest reserve. This implies that forest officers might have worked in all the Ten (10) forest reserves in the study area. About 48.5% of the forest officer had between 11 to 15 years in service, 26.4% had between 5 to 10 years in service, 14.7% had between 20 to 25 years in service while only 10.4% had between 26-30 years in service with mean years of service of 12.8years.This implies that forest officers' had many years of service in forestry.

Table 1 Socio- economic attributes of forest officers'

Variables	Frequency	Percentage
Age		
31-35	12	17.6
36-40	27	39.7
41-45	18	26.5
46 and above	11	16.2
Total	68	100.0
Mean	39.03	
Educational qualification	Frequency	Percentage
Secondary school certificate (O/L)	03	4.4
Tertiary institution certificate (OND, HND, B.SC)	65	95.6
Total	68	100.0
Forest reserve worked before*	Frequency	Percentage
Omo[1] forest reserve	38	55.8
Omo[2] forest reserve	20	29.4
Olokomeji forest reserve	49	72.1
Aragunda forest reserve	50	73.5
Ilaro forest reserve	29	42.6
Aworo forest reserve	34	50.0
Edun forest reserve	43	63.2
Egua forest reserve	29	42.6
Ohungbe forest reserve	36	52.9
Imeko forest reserve	24	35.3
Years in service	Frequency	Percentage
5-10	18	26.4
11-15	33	48.5
20-25	10	14.7
26-30	07	10.4
	68	100.0

Source: field survey 2012

*** Multiple responses**

3.2.Extension services in forest conservation

Table 2 shows that forest officers indicated organize natural forest resources conservation week among students as effective extension service with mean value of (2.86) and ranked 1st, education programme that emphasize forest officers knowledge in other related forest conservation disciplines as effective extension service with mean value of (2.73) and ranked 2nd. Furthermore, in table2 presentation of Television, movies, radio, programme for public in relation to forest conservation was also indicated as effective by forest officer with mean value of (2.64) and ranked 3rd,create awareness by distribution of hand bill, pamphlet as effective extension service with mean value of (2.6), and ranked 4th,. This implies that some extension services indicated by forest officers are effective due to the mean value greater than cut off mean (2.0), while encourage forest officers to visit other countries to observe practices in conservation of forest and adopt information on modern equipment to use by forest officers in protecting themselves and preventing poaching of forest resources are indicated as not effective extension services due to mean value (1.54, 1.41) less than cut of mean and ranked 9th and 10th respectively. This implies that extension services rendered in forest conservation in the study area are effective. These findings agree with Mehran and Elham (2011) who found that high rate of mean scores indicated that extension education methods were very effective in protection of forests.

Table 2 Perception of forest officers' on effectiveness of extension Services in forest conservation

	Extension service	Mean	Rank
1	Create awareness by distribution of publication (hand bill, flyer pamphlet) for rural public in relation to forest conservation	2.60	Effective 4th
2	Installing educational posters in the public places in relation to forest conservation	2.12	Effective 8th
3	Educational courses for forest officers in relation to conservation of forests	2.16	Effective 7th
4	Information on modern equipment to use by forest officers in protecting themselves and preventing poaching of forest resources	1.41	Not effective 10th
5	Encourage forest officers to visit other countries to observe practice in conservation of forest and adopt	1.54	Not effective 9th
6	Education programme that emphasize forest officers knowledge of forest ecology anthropology forest pathology forest economics and many other related forest conservation disciplines	2.73	Effective 2nd
7	Dissemination of information in relation to public participation in forest conservation	2.55	Effective 5th
8	Teaching forest dwellers in local language in relation to forest conservation	2.25	Effective 6th
9	Organize natural forest resources conservation week among students and award prize	2.86	Effective 1st
10	Presenting television, movies, and radio programme for public in relation to forest conservation.	2.64	Effective 3rd

Source: Field survey 2012.

3.3 Forest officers' perception of extension service

Table 3 reveals how forest officers reacted to 3 positive and 2 negative statements about the effects of extension service on forest conservation. About 61.8% of the forest officers strongly agree that extension service enable them to render their service better than before. This implies that skills acquired make them perform better and able to support the range of activities involved in developing and sustain all forest resources. This agree with Madumere (2003) who reported that field foresters need to be equipped with new tools for rapid rural appraisal and techniques for conflict resolution as well as market research. Also about 57.4% strongly agree that extension service in forest conservation has reduced the rate of forest destruction. This may due to the fact that, information disseminated by extension officers to the forest resources dependants and other public members on how to sustain forest resources for effective and successful forest and environmental conservation. This conforms to Rogers (1971) who opine that forestry extension improves forest by enhancing the knowledge attitudes and skills of the forest population. Also agree with Agbogidi and Ofuoku (2005) Reid et al (2006) who maintained that forestry extension is a veritable instrument for food security and environmental protection and conservation, according to them investment in forestry research has a multiplier effect that can improve the lives of the people by providing job opportunities and other services. They further emphasized that forestry extension could made the public know that planting and conservation of natural trees provide valuable crops, timber, soil conservation, crop shade, wind breaks and wild life habitats and rural communities could lean that forest resources should be used sustainably by using and re- using the forests as against the current unsustainable practice indulged in by most rural inhabitants. Moreover, 57.4% strongly disagree that extension service resulted to retrenchment of some forest officers. This might due to the fact that extension service on forest conservation help the forest officers on how to interact with the public member on sustainable forests conservation practices and give them more recognition in environmental protection activities. This finding conform with Madumere (2003) Agbogidi and Ofuoku (2009) who stated that field foresters needs to understand disciplines that earlier generations of foresters mat not have emphasized including forest ecology, anthropology, forest economics forest pathology. These can only be achieved by forest extensionists who will also help to improve the relationship between forest services and rural communities.

Table 3: Forest officers' perception on extension services (N = 68)

Statements	SA	A	U	D	SD
Extension service in forest conservation has reduce the rate of forest destruction.	57.4	26.5	5.9	4.4	5.9
Extension service increase forest officer knowledge in forest conservation.	**44.1**	38.2	10.3	2.9	4.4
Extension service results to retrenchment of some forest officers.	-	-	14.7	27.9	57.4
Forest officers are able to render their service better than before as a result of extension service.	61.8	20.6	11.8	4.4	1.4
Public member were restricted in their frequency of entering the forest for collection of forest resources.	42.6	25.0	13.2	7.4	11.8

Source: Field survey 2012

Note: SA = Strongly Agree, A = Agree, U – Undecided, D= Disagree, SD= Strongly Disagree

3.4 Forest officers perceived constraints to extension services in forest conservation

Table 4 shows that 82.4% of the forest officers perceive the statement inadequate funding of extension services in forestry as a major constraint. Indicating that extension service on forestry has not been properly funded like extension service in crop production, livestock and other related agricultural discipline this is in line with Adeyeye and Azeez (2006) who reported that forestry extension programme needs adequate funding to ensure successful extension service delivery. Also conform to Agbamu, (2005) who opine that poor financing of extension programme has been a long standing problem facing the services. Also 79.4% considered the statement instability of government and changes in political offices as a major constraint. They opine that these factors has made the forestry extension service as non- important, those in governance only have the knowledge of agricultural extension, forgotten that forestry is part of agricultural practices. This agree with Agbogidi and Ofuoku (2009) who stated that what a particular government administration may consider important may not be included in the programme of another government, because various governments are more driven by immediate economic projects compared to long time ones. Also Eke, (2001) reported that each government regime had its own development scheme with various extension programme tied to the different development scheme and the frequent change in policy and institutional arrangement in extension in Nigeria led to extension programme instabilities. When viewed with 76.5% that also perceived inadequate number of forestry extensionist as major constraint. This implies that the number of forestry extension workers that provide service to the forest related population is insufficient. This result conform with Agbogidi and Ofuoku (2009) who stated that the main reasons for poor management of forest resources is the lack of professional and managerial capacity, which could be updated with relevant curricula. Also the numbers of forestry extensionist are grossly inadequate when compared with the large number of the people who require their services. Even the few trained personnel are not given enough incentives to boost capacity building in Nigeria.

Table 4: Forest officers' perception of constraints to extension services in forest conservation

Statements	Major constraint	Minor constraint	Not a constraint
Inadequate number of forestry extensionist.	52 (76.5)	11 (16.2)	5 (7.4)
High population in rural dweller needs of extension services.	49 (72.1)	14 (20.6)	5(7.4)
Inadequate funding of extension service in forestry.	56 (82.4)	11 (16.2)	1 (1.5)
Instability of government and changes in political offices.	54 (79.4)	13 (19.1)	1 (1.5)
Inadequate payment of extension agents' salary.	46 (67.7)	14 (20.6)	8 (11.8)
Lack of incentives and support to forestry extension services.	38 (55.9)	20 (29.4)	10 (14.7)
Poor logistic support for field extension agents' .	43 (63.2)	18 (26.5)	7(10.3)

Source: Field survey 2012

Figure in parentheses are percentage

4. Conclusion and Recommendation

This study has revealed that majority of the forest officers' were at their active age with high level of education. They had worked in all the forest reserves in the study area, even with more than five years in service. The extension services in forest conservation include create awareness by distribution of hand bill, flyer to rural public, install- educational posters in relation to forest conservation, education courses for forest officers, encourage forest officers to visit other countries and teaching forest dwellers in local language in relation to forest conservation. It was revealed that majority of the forest officers' agree that extension services was effective in forest conservation, even though very few of them are undecided and have negative feeling (disagree) respectively towards the effectiveness of extension services in forest conservation. The constraints to

extension services in forest conservation include inadequate number of forestry extensionists' high population of rural dwellers that needs extension services, instability of government and poor logistic. The conservation of forests depends on how effective extension services are, for the forestry extension service to be effective, the challenges facing the service must be seriously considered. Also funding of forestry extension programme should be such that has political will to perceive forestry extension as a priority area, therefore better materials and service back up should be provided for extension agents and Government and non- governmental organization investment is also highly required in sustainable forest conservation practices through extension services

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