

Assessment of Forest Products' Utilization among Rural Dwellers in Osun State, Nigeria

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Abstract

This study assessed the level of utilization of forest products by rural dwellers in Osun State Nigeria. It specifically described the socio-economic characteristics of the rural dwellers involved in utilization of forest products and determined the level of utilization of the forest products. Multistage sampling procedure was used in selecting a total of 240 respondents from four local government areas. Structured interview schedule and Focus Group Discussion (FGD) guide were used to collect quantitative and qualitative data respectively. Data collected were analysed using descriptive tools such as mean, frequency counts, percentages and standard deviation; and inferential tools such as Chi-square and Correlation analyses, as well as content analysis for qualitative data. The mean age of the respondents was 47.08±11.67 years, while the mean total annual income was ₦360,012.71±₦3000.59 respectively. Furthermore the mean level of utilization of forest products was 257.99±71.66. The type of organization ($\chi^2 = 128.693$), ethnicity ($\chi^2 = 42.616$) and the major occupation ($\chi^2 = 13.882$) were associated with level of utilization of forest products at $p \leq 0.01$ and $p \leq 0.05$. Age ($r = 0.172$) and total income ($r = 0.222$) significantly correlated with level of utilization of forest products at $p \leq 0.01$. In conclusion, there was a moderate level of utilization of forest products in the study area. It was therefore, recommended that specific forest policies be put in place to ease access, control and maximum use of forest products.

Key words: Forest products; Level of utilization; Rural dwellers

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INTRODUCTION

Forest remains one of the most important resources, which supports nature for ecosystem stability through habituating numerous flora and fauna species with numerous benefits. Forest products are natural resources, which have many inherent advantages when viewed from an environmental perspective – they are renewable, recyclable, biodegradable and carbon-neutral. They are truly sustainable (Bradley, 2001; Olatunji, 2012). According to Centre for International Forestry Research (CIFOR, 2006) dry forests provide a range of foods (from bush meat to fruits and mushrooms) for human nutritional requirements and numerous medicines to prevent and cure several illnesses.

According to Food and Agriculture Organization (FAO) (2018), there is quantitative evidence to show that forests are being managed more sustainably and that forests contribute to achieving Sustainable Development Goals (SDGs) relating to livelihoods and food security for many rural poor, access to affordable energy, sustainable economic growth and employment, sustainable consumption and production, and climate change mitigation, as well as sustainable forest management. The people left furthest behind are often located in areas in and around forests. The livelihoods and food security of many of the world's rural poor households depend on vibrant forests and trees. Evidence points to around 40 percent of the extreme rural poor – around 250 million people – living in both forest and savannah areas.

Access to forest products, goods and services is crucial for the livelihoods and resilience of the poorest

households, acting as safety nets, especially during difficult times. Some studies suggest that forests and trees may provide around 20 percent of income for rural households in developing countries, both through cash income and by meeting subsistence needs. Non-wood forest products (NWFPs) provide food, income, and nutritional diversity for an estimated one in five people around the world, notably females, children, landless farmers and others found in vulnerable situations (FAO, 2018). Forest industry has undergone profound changes since 1990s, with industry-level consolidation and the rise in international investments being the most noticeable features of this process (Zhang, Toppinen, & Uusivuori, 2013).

Empirical evidences from developing countries including Nigeria indicate that forest products play a significant role in rural livelihoods, particularly for the rural poor. Almost a quarter of a billion people live in or around the dry forests of Sub-Saharan African regions (CIFOR, 2008). Furthermore, most people depend on the forests for building materials, food, and land on which to grow crops, fuel wood, non-wood products, rear animals and many other things. The reliance of rural people on natural resources for survival leads to depletion of resources and exacerbating environmental stress (Abebe, 2011), and as such there is a need for sustainable drive towards the use of natural resources.

Statement of research problem

FAO/DFID (2001) noted that the materials which the people derive from forests and trees include; subsistence goods such as fuel wood, medicines, wood for building, rope, bush meat, fodder, mushrooms, honey, edible leaves, roots, fruits, etc.; goods for sale:- all of the above goods, arts and crafts, timber and other wood products; income from employment both in the formal and informal sectors; and indirect benefits such as land for other uses, social and spiritual values, environmental services including water shed protection and biodiversity conservation inclusive. It therefore follows that the totality of all these goods and services derived by rural households from the use of trees and forest resources is what has kept them in a state of good welfare for years despite their level of poverty (Adedayo *et al.*, 2010). However, with established concerns on the importance of forest and trees, there is still a dearth of empirical evidence on level of forest products' utilization by rural dwellers in Osun State.

Objectives of the study

To describe socio-economic characteristics of rural dwellers involved in the utilization of forest products in Osun State.

To determine the level of utilization of forest products in the study area.

Hypothesis of the study

In line with the above objectives the following hypothesis was tested in the null form:

Ho: there is no significant relationship between the socio-economic characteristics of the respondents and their level of forest products' utilization.

Methodology

This study was carried out purposively in Ife/Ijesa agro-ecological zone of Osun State, Nigeria because of the availability of natural open forests. Multistage sampling procedure was used to select respondents. At the first stage, four rural local government areas (LGAs) having natural open forests were purposively selected viz: Ife South, Atakumosa East, Obokun and Oriade LGAs. At the second stage, three rural communities from each of the LGAs were randomly selected making up to 12 communities. At the third stage, twenty respondents were purposively interviewed in each of the rural communities through snowball sampling technique to give a total of 240 respondents. Structured interview schedule and Focus Group Discussion (FGD) Guide were used to collect quantitative and qualitative data respectively. Data collected were analysed using descriptive tools such as mean, frequency counts, percentages and standard deviation; and inferential tools such as Chi-square and Correlation analysis, as well as content analysis for the qualitative data.

Results and Discussion

Results in Table 1 reveal that majority of the respondents (69.6%) were aged between 30 and 60 years, while few of them (18.8%) and (11.7%) were above 60 years and below 30 years respectively. The mean age of the respondents was 47.1 ± 11.7 years. Contrary to the findings of Odebiyi and Ogunjobi (2003) majority of exploiters of non-timber forest products (NTFPs) were within the age group 31-40 in Odeda Local Government Area of Ogun State, the study reveals that majority (69.6%) of the users of forest products in the study area were within the age group 30-60, indicating that a good number of the people involved in the utilization of forest products were both active youths and the weak adults respectively.

Results in Table 1 also show that majority of the respondents (64.2%) had between 6-10 household members with a mean household size of 7 ± 2.19 . Results in Table 1 similarly reveal that 0.8%, 92.1%, 0.4%, 2.5% and 4.2% of the respondents were single, married, separated, divorced and widows/widowers respectively. This indicates that majority of the respondents were married. The result of this study is in agreement with Adedokun and Akinyemi (2003) that most of the rural dwellers who engaged in forestry activities were married in Ogun State. The results in Table 1 further show that 28.8% and 17.1% of the respondents had between 6-10 years, and above 12 years of formal education respectively with a mean of 6.61 ± 6.12 , while 12.0% of the respondents had between 1-6 years of formal education. This indicates that majority of the respondents had primary education. The findings in this study corroborate Adedokun and

Akinyemi (2003) assertion that most of the people involved in forestry activities in Ogun State had formal education.

Table 1
Distribution of respondents by their socio-economic characteristics

Variables	Frequency	Percentage
Age (Years)		
<30	28	11.7
30-60	167	69.6
61+	45	18.8
Mean	47.08	
Standard deviation		
Religion		
Christianity	153	63.8
Islam	87	36.3
Marital status		
Single	2	0.8
Married	221	92.1
Separated	1	0.4
Divorced	6	2.5
Widow/widower	10	4.2
Household size		
1-5	79	32.9
6-10	154	64.2
>10	7	2.9
Mean	6.59	
Standard deviation	2.19	
Literacy		
No	100	41.7
Yes	140	58.3
Years of formal education		
0	100	41.7
1-6	30	12.5
7-12	69	28.8
>12	41	17.1
Mean	6.61	
Standard deviation	6.12	

Source: Field survey, 2015.

Level of Utilization of Forest Products

The results in Figure 1 show that many of the respondents (54.6%) had moderate level of utilization of forest products, while 45.0% of them had low level of utilization of these products respectively. Similarly, just 0.8% of the respondents had a high level of utilization of forest products. The mean score for the level of utilization of forest products was 257.61±71.66, using equal interval; signifying a moderate level of utilization of forest products. According to Joshua (1996), forest resources may be under-utilized today but may have future value in terms of scientific, educational, commercial, environmental and other economic uses. This finding indicates that despite the use of forest products, they are generally under-utilized to their maximum potentials in Osun State. The excerpt from the FGD guide session held in Iperindo community, Atakumosa East LGA buttressed the findings:

We make use of forest products once we enter the forest because the forest is big enough and we trade in them too because forest resources are very important to our welfare needs. Although we still face the issue of access to and use of forest. (Participants.)

The excerpt from the FGD guide session held in Olode community in Ife South LGA also buttressed the findings:

We use forest products to complement our primary occupations to support our livelihood in as much as the forest is open to get these products. Although we still face the challenge of access, control and use of forest. (Participants.)

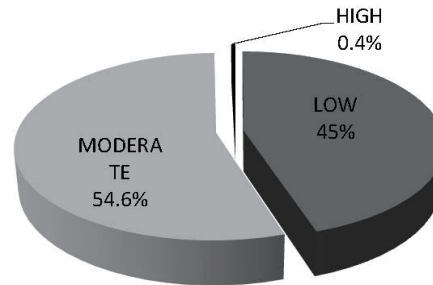


Figure 1
Distribution of respondents based on their level of utilization of forest products Source: Field Survey, 2015

Hypothesis testing

Ho: There is no significant relationship between the socio-economic characteristics of rural dwellers and their level of utilization of forest products.

Results in Table 2 show the relationship between nominal socio-economic characteristics of rural dwellers and their level of utilization of forest products. The results show that type of organization ($\chi^2 = 128.693$, $C = 0.591$), major occupation ($\chi^2 = 13.882$, $C = 0.234$), and ethnicity ($\chi^2 = 42.616$, $C = 0.388$) were significantly associated with level of utilization of forest products at $p \leq 0.01$, $p \leq 0.05$ and $p \leq 0.01$ respectively. As these highlighted socio-economic characteristics represent some viable indicators of social status, it could be supposed that the social status of the respondents is significantly associated with their level of forest products' utilization.

Table 2
Results of Chi-square analysis between socio-economic characteristics of male and female respondents and their level of utilization of forest products

Variables	χ^2 value	Degree of freedom	Contingency coefficient (C)
Sex	1.217	2	0.071
Religion	2.533	2	0.102
Marital status	11.890	8	0.217
Educational level	3.237	8	0.115
Type of organization	128.693**	8	0.591
Position in organization	5.954	4	0.156
Major occupation	13.882*	6	0.234
Minor occupation	4.971	10	0.142
Ethnicity	42.616**	6	0.388

** - Significant at $P \leq 0.01$ level

* - Significant at $P \leq 0.05$ level

Source: Field Survey (2015).

Results in Table 3 show that at $p \leq 0.05$, age ($r = 0.172$) and total income ($r = 0.222$) of the respondents and their level of utilization of forest products significantly correlated. This implies that age of rural dwellers and their level of income influenced their level of utilization of forest products in the study area. That is, the higher the age and total income of the respondents the more their level of utilization of forest products and vice versa.

Table 3
Results of correlation analysis showing the relationship between socio-economic characteristics of respondents and their level of utilization of forest products

Variable	r	p-value
Age	0.172**	0.007
Household size	0.082	0.206
Years of education	0.099	0.126
Total income	0.222**	0.001
Number of years in community	0.076	0.243

** Correlation is significant at the 0.01 level (2-tailed).
 Source: Computed from field survey, 2015

Conclusions and recommendations The type of organization, major occupation and ethnicity significantly associated with the level of utilization of forest products. Also, age and total income of the respondents and the level of utilization of forest products significantly correlated. Similarly, there was a moderate level of utilization of forest products in the study area. It was therefore, recommended that sound forest policies be formulated and implemented in ensuring the availability of forest products so that such resources are easily accessed, controlled and utilized to their maximum potentials.

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APENDIX

PHOTOGRAPHS OF SOME FOREST PRODUCTS UTILIZED



Figure 2
Loading of Timber Products



Figure 3
Timber Products and Sawmill Equipment



Figure 4
Property Hammer and Some Non-Timber Forest Product



Figure 5
Some Non-Timber Forest Products