



## ANALYSIS OF SUSTAINABLE PRACTICES FOR FOREST RESOURCES AVAILABILITY IN SOUTHWESTERN NIGERIA

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### ABSTRACT:

Utilization of forest resources should be done with utmost dedication to aligning with government and other stakeholders' regulations and policies on forest exploitation. With sustainable management, forests can provide a perpetual stream of income and subsistence products, while supporting other economic activities in Nigeria. Multi-stage sampling technique was used in selecting respondents while data were obtained from 340 respondents using interview schedule. Descriptive statistical tools used were frequency counts, percentages and weighted mean score (WMS) to analyze the collected data. Results revealed that both male and female engage in forest resources utilization with a mean age of 51.1 years; mean years of 21.3, mean of 7 household members in the study area with majority being literate with a mean of 10.0 years spent in school. Enlightenment of rural dwellers about the benefit accrue in conservation of forest areas and Provision of improved welfare schemes for forest workers were indicated by all the respondents as sustainable practices known by them that could enhance the sustainability of the forest and the resources in it. Bribe collection by forest guards, deforestation without afforestation, lack of technical know-how on modern sustainable techniques by rural households and instability of government policies on forest resources were major problems that hinder the adherence to the sustainable practices to ensure continuous availability of forest resources. This study established that forest resources are a dominant resources available for utilization in the Southwestern part of Nigeria and rural dwellers are aware of various sustainable practices that could ensure the continuous availability and prevention of extinction of the resources for human use in the region though they still encounter problems that hinder the utilization of the known sustainable practices. It is therefore recommended that, welfare package for forest workers should be of utmost priority with hazard allowance that will serve as a relief package for the workers as this expected to make them desist from bribe collection and other sharp practices.

### KEYWORDS:

SUSTAINABLE, PRACTICES, AVAILABILITY, FOREST RESOURCES.

### INTRODUCTION

As cited in Eririogu *et al.*, (2015), natural resources are either renewable (able to be replenished in the course of natural events within the limits of human time) or non-renewable. The use of resource implies that there is one or more tangible or intangible benefits derived from the resource. Resource use is either consumptive or non-consumptive, while indirect use values such as, soil and water conservation, genetic resources, landscape aesthetics, are also recognized (Eririogu *et al.*, 2016). Consumptive use involves the removal or withdrawal of all, or part of the natural resource from its origin (biotic and non-biotic), non-consumptive use refers to the passive or non-use value of resources (Eririogu *et al.*, 2016).

Forests provide a full suite of goods and services that are vital to human health and livelihood, which is called ecosystem services (United State Department of Agriculture (USDA), 2014). The goods and services are of

high importance to human and the ecosystem. For

example, forest stores carbon, preserves soil and nurtures a diversity of species (Olufemi and Ameh, 2013). Healthy forest ecosystems are ecological life-support systems and provides habitat for wildlife. Forest provides humans with wood, which are exported and used in all parts of the world for production and construction. Forest provides hydrological services to agriculture, moderates the quantity and quality of surface water available for irrigation and also controls sedimentation of irrigation infrastructure (Center for International Forest Research (CIFOR) 2014). Forest serves as watershed: rivers running through forests are kept cool and from drying out (Merit Nation, 2014). Forest provides employment to people such as forest guards and those involve in lumbering (Iwena, 2012) and provides a source of income for individuals as well as a source of generating revenue for government. Forest accounted for 0.50% of gross domestic product (GDP) in Nigeria in 2012 (National Bureau of Statistics (NBS), 2013). History has, however, shown that with human mismanagement and over-exploitation, forest and other renewable resources can either be degraded or

entirely lost (United Nations University Centre (UNUC), 2014).

Meanwhile, utilization of forest resources should be done with utmost dedication to aligning with government and other stakeholders' regulations and policies on forest exploitation. With sustainable management, forests can provide a perpetual stream of income and subsistence products, while supporting other economic activities (Neumann and Hirsch, 2000; Verweji *et al.*, 2009; Watson and Albon, 2011) in Nigeria. Since extension services and stakeholders (such as governmental organizations, non-governmental organizations, individuals, traditional leaders, etc) have not concentrated on the enlightenment of rural people in the utilization of forest resources optimally, it is expected that rural people might encounter constraints such as lack of storage facilities, inadequate knowledge about the usefulness of the forest resources amongst others, in the utilization of forest resources. Therefore, this study analysed sustainable practices for forest resources availability in Southwestern Nigeria. The study describes the socio-economic characteristics of the respondents; identified the sustainable practices known by the respondents and investigate the problems that hinder sustainable practices utilization in the study area.

## METHODOLOGY

The study was carried out in Ondo, Osun and Oyo States from the Southwestern part of Nigeria. Multistage sampling technique was used for the selection of respondents used for the study. Purposive selection was employed to select two (2) agricultural zones that have proximity to forest vegetation in the respective states and this amount to a total of six (6) agricultural zones employed for this research work. Furthermore, random sampling technique was used to select three (3) extension blocks from each of the selected agricultural zones to make a total of eighteen (18) extension blocks used for this study. The fourth stage of sampling involved random selection of two extension cells from each of the randomly selected extension blocks. The selected cells in Ondo State includes Abusoro and Igodan from Okitipupa extension block; Bamikemo and Ojowo from Ileoluji/Okeigbo extension block; Asantan-Oju and Igbado from Ondo West extension block; Ipinsa and Olokuta from Akure South extension block; Isuada and Ogbese from Owo extension; block, while Ebo and Eti-Oro were selected from Akoko South West extension block. From Osun State; Eti-Oni and Ikeji-Arakeji were selected from Oriade extension block; Aba Owode and Ilahun from Obokun extension block; Aba-Ijesha, and Idi-Obi from Ife South extension block; Wasinmi and Ayetoro from Irewole extension block; Idi-Iroko and Oloba from Iwo extension block while Asa-Ajagunlase and Asamu/Ilemowu were selected from Ola-Oluwa extension block. Lastly, in Oyo State, Onidoko 1 and Oni Gbodogi were selected from Oluyole extension block; Apata and Afeefu were selected from Ibarapa Central extension block; Ajofolowo and Gaa-Oro from Ibarapa North extension block; Bale Sagbo and Sagbo-Ile were selected from Iseyin extension block; Aba Sakin and

Aba Ogun were selected from Atiba extension block; while Aba-Sakutu and Eleje were selected from Oyo West extension block. This makes it a sum total of thirty-six (36) extension cells that were used for this research work. Random sampling was used to select 30% of respondents in each of the chosen thirty-six extension cells across the extension blocks. The total number of respondents interviewed in each of Ondo, Osun and Oyo State were 110, 91 and 139, respectively. Hence, a total of 340 respondents were used for this research work.

## RESULTS AND DISCUSSION

### SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

Table 1 reveals that above average (54.4%) of the respondents were males while 45.6% were females. This result is an indication that males engage in the utilization of forest resources than male in the study area, though it is obvious they both engage in the use. The little discrepancy might be due to the type of forest resources available in the forest for the rural habitants to utilize. This result is in line with the findings of Ayanwuyi (2013), where more than half (53.3%) of the forest users were males. The result is also in line with the findings of Ogundele *et al.*, (2012), where male dominates the utilization of forest products/resources in Ini Local Government Area of Akwa Ibom State, Nigeria. Meanwhile, this result is against the findings of Chidiebere, *et al.*, (2017) where it was revealed that 71.6% of the female sex utilizes the forest compared to the male counterpart. It is revealed in the table that 35.3% and 34.4% of the respondents were above 60 years of age and 41-50 years of age while 13.2%, 9.1%, and 7.9% were between the ages of 51-60, not more than 30 years and between 31-40 years of age respectively. The mean age of the respondents across the three states selected was 51.1 years. This result implies that the respondents are mature, energetic and are still economically active which can influence their level of thinking about ensuring the sustenance of the forest resources and prevent it from going into extinction. This result corroborates the findings of Mbani (2015), where middle-aged men and women dominated forest product activities in his study titled contributions of forest resources to rural dwellers income in the Enugu State of Nigeria. The result of the present study also agrees with the findings of Nzeh *et al.*, (2008) and Akanni (2013), who indicated in their study that those engaged in the harvesting of forest product were middle-aged people who have various family responsibilities.

More than half (57.9%) of the respondents have between 6-10 members in their household while 30.6% and 11.5% indicated not more than 5 members and above 10 members in their household respectively. The mean household size in the study area was revealed to be 7 members. This result is an indication that Southwestern people have a fairly large household size and this might be attributed to the dominance of arable crop production in the zone which influences the respondents to have more

members in their household to shoulder the responsibility of farm labour to be used for agricultural activities. The fairly large rural household size in the study area is expected to influence the rate of utilization of the forest resources by the respondents to complement their feeding structure/used as a sweetener and to improve their income through the sales of collected forest resources. This result corroborates with the findings of Mbani (2015) where the mean rural household size of the respondents in his study was found to be 7. Also, the finding of this study is in agreement with Ajake and Enang (2012) who reported that increasing household population accelerates the dependence and the use of forest resources. Though a very large family size may constitute a social burden, larger families use their labour resources to advantage in farming and harvesting forest resources.

Furthermore, above average (57.4%) of the respondents spent between 7-12 years in school; 18.5% and 15.9% spent above 12 years and not more than 6 years in formal school respectively while only 8.2% do not have formal education. The mean years spent in school by the respondents was revealed to be 10.0 years. This result is an indication that the majority of the respondents were educated though with low educational status. It can be deduced from the result that the literacy level of the respondents is low in the study area because the mean years (10.0 years) spent in school is an indication that the majority of the respondents did not finish secondary school education. The importance of education and high literacy level is needed to optimally utilize the forest resources collected as this will have an impact on the form of utilization and the sustainability methods used to preserve the forest resources from going into extinction. Townson (2012) emphasized that excessive exploitation of forest resources is greatly attributed to the high rate of illiterate population prevalent in the rural communities that always refute possible measures to moderately exploit forest resources to an acceptable rate. In a similar view Kumar (2012) stressed that low literacy among the rural population tends to limit their ability to understand the

dangers of excessive forest resources exploitation, they only based their activities of forest resources collection on economic gains and to improve the dwellers' income.

This result disagreed with the findings of Mbani (2015) and Ajake and Enang (2012) where a significant number of rural dwellers (40.15%) had no formal education. Meanwhile, the study agrees with the findings of Ogundele *et al.*, (2012), where a majority of the respondents were literates and knowledgeable of the usefulness of forest resources.

Lastly, 44.1% of the respondents indicated 21-30 years as the number of years accumulated in the collection of forest resources while 30.3%, 22.4%, and 3.2% indicated not more than 10 years, above 30 years, and between 11-20 years as the number of years accumulated in forest resources collection respectively in the study area. The mean years accumulated by the respondents were revealed to be 21.3 years. It is posited from this result that forest resources collectors are equipped with a wide horizon of experience to be dynamic and well-grounded in the forms and utilization of forest resources collected. This result is an indication that the respondents were experienced in the collection of forest resources. This implies that their level of utilization of forest resources should be optimal. A large number of years garnered in the collection of forest resources is expected to influence their form of utilization of forest resources, income realized from forest resources collection, and sustainable practices employed to prevent the extinction of forest resources. This result is in line with the findings of Mbani (2015), where he had 20.74 years as the mean of the number of years of experience the respondents had in the collection of forest resources.

Hames and Vickers (2011) also agreed that years of experience in forest resources exploitation and utilization has a great influence on forest resources collection, marketing knowledge, and social group formation of forest users as an indication of their expertise in forest collection and selling activities.

**TABLE 1: DISTRIBUTION OF RESPONDENTS ACCORDING TO SOCIOECONOMIC CHARACTERISTICS OF THE RESPONDENTS**

**n=340**

Socioeconomic characteristics	Frequency	Percentage	Mean
<b>Sex</b>			
Male	185	54.4	
Female	155	45.6	

<b>Age</b>				
≤ 30	31	9.1		
31-40	27	7.9		
41-50	117	34.4	51.1	
50-60	45	13.2		
Above 60	120	35.3		
<b>Household size</b>				
≤ 5	104	30.6		
6-10	197	57.9	7	
Above 10	39	11.5		
<b>Years spent in school</b>				
No formal education	28	8.2		
≤ 6	54	15.9		
7-12	195	57.4	10.0	
Above 12	63	18.5		
<b>Years of experience in forest resources collection</b>				
≤ 10	103	30.3		
11-20	11	3.2		
21-30	150	44.1	21.3	
Above 30	76	22.4		

Source: Field survey, 2023

### **SUSTAINABLE PRACTICES KNOWN BY RURAL DWELLERS IN PREVENTING EXTINCTION OF FOREST RESOURCES IN SOUTHWESTERN, NIGERIA**

All (100.0%) the respondents indicated enlightenment of rural dwellers about the benefit accrue in the conservation of forest areas and provision of improved welfare schemes for forest workers as sustainable practices they are aware of that can aid the conservation of forest resources in the study area. This result implies that the more knowledge the rural dwellers have about the forms of utilization of forest resources, the more they jealously work towards conservation of such resources to enhance the longevity and regeneration of such resources. Meanwhile, it is believed that well motivated workers are predisposed to work optimally, hence forest workers who are well catered for; are positioned to work diligently and have little or no reservations against the tedious nature involved in the conservation of forest resources, also this will ensure that the act of bribery and other heinous crime are avoided.

Majority of the respondents which include 94.4%, 92.4%, 90.6% and 89.4% of the respondents indicated restriction of unauthorized activities such as illegal forest resources

exploitation, educating of rural dwellers about the importance/benefits of specific forest resources, making laws against indiscriminate harvesting of forest resources (plants) during offseason and prevention of grazing in the forest areas as sustainable practices they are aware of. Also, 86.8% of the respondents indicated both collection of fines/sanctions on illegal/indiscriminate exploitation of forest exploitation and in-situ and ex-situ practices by forest research institutes respectively as sustainable practices they are well aware of. Furthermore, 83.8%, 80.0%, 74.4%, 73.5% and 72.4% indicated prevention of wastage of forest resources collected through extension training, prevention of illegal hunting/poaching by inexperienced individuals, prevention of the use of forest areas for cultivation of crops and rearing of domestic animals, strict adherence to afforestation during cases of deforestation through government policy and domestication of some forest plants and animals as sustainable practices they are aware of that will conserve forest resources in the study area. The domestication of forest plants and animals as sustainable practices identified by respondents used for this study is in line with the policy made by Ayanwuyi and Alamu (2012) that there should be the creation of extractive forest reserves that would only allow the collection of materials like edible and

medicinal plant materials, rattan, *Agaricus bisporus*, latex and *Gastropods*. Ayanwuyi and Alamu (2012) concluded that this type of forests reserve would undoubtedly engender the sustainable livelihood of many rural people who trade in the non-timber forest (NTFPs) without them contributing to the extinction of forest resources.

In addition, 66.2% and above average (52.9%) of the respondents indicated setting up of local guards to guard the forest in conjunction with government forest guards and prevention of encroachment of the forest areas in the disguise for development while only 25.9% of the respondents indicated regulation of access time to the forest areas as sustainable they are aware of. This result is in an indication that the majority of the respondents in the Southwestern part of Nigeria are not in support of having their movement in and out of the forest areas being monitored or restricted. The resistance of the rural dwellers about supporting having regulated access time to the forest area might be linked to their collection of forest resources which include wild fruits, vegetables, river water, medicinal plants and trees which they utilize on daily basis or on emergency basis, hence the fundamental and unique benefits accrued from the forest is a major reason for the majority not being in support of the regulation of access time to the forest areas.

Generally, this result is an indication that rural dwellers in the Southwestern part of Nigeria are very much aware of various sustainable practices that can be used to conserve forest resources. The awareness and knowledge level of the rural dwellers is responsible for the availability of forest resources in the study area. This is an affirmation that environmental extensionists and forest specialists are working assiduously to preserve the gift of nature in the Southwest. Forests are essential to food security and indisputable storehouses of biological diversity and forest products, which are the stronghold of many dwellers. These products play considerable roles in the livelihood of the rural people and rural areas. They provide the fundamental nutritional requirement of present and future generations and improve living standards for the rural people. They reduce the vulnerability of the agricultural

sector to adverse natural and socio-economic factors and other risks and above all strengthen self-reliance hence, the need for their conservation by employing reasonable sustainable practices. Participatory resource management is often seen as an appropriate solution to reducing resource degradation and it is generally assumed that it would ensure the equitable and sustainable use of environmental resources (Onwubuya *et al.*, 2014). This is in tandem with the findings of this research where respondents were aware and agreed to the use of local guards in conjunction with the government local guards in safeguarding the forest and its resources. Through local participation, nearby communities would be engaged as stakeholders in managing the resources thus ensuring commitment to long term management goals (Chukwuone, 2007). This result is similar to the findings of Onwubuya *et al.*, (2014), where the respondents indicated that the prevailing conservation practice in the study was enforcement of the law against bush burning ( $X = 4.3$ ), legislation against indiscriminate felling of trees ( $X = 4.1$ ) and restrictions on some areas ( $X = 4.0$ ). Also, various conservation practices stated in the study included: prevention of clearing of forest area for agricultural purposes ( $X = 3.3$ ) and provision of forest guards for forest preservation. This study revealed that sustainable practices are better used in the Southwestern part of Nigeria as was indicated in the study of Onwubuya *et al.*, (2014) that in Eastern Nigeria, uncontrolled deforestation has led to accelerated soil erosion problems. Population pressure has also aggravated the gully erosion problem of Anambra State such that almost all local government areas of the state are affected through gradual removal of the uniform depth of soil or gullies, which cut deep down the slope. In view of the above, the forests have been subjected to degradation, exploration, utilization and careless destruction. The conclusion about eastern Nigeria and Anambra State specifically revealed that forest area and resources are better managed in the Southwest, hence the availability of the various forest resources in the Southwest compared to the level of availability in the other parts of Nigeria.

**TABLE 2: DISTRIBUTION OF RESPONDENTS ACCORDING TO SUSTAINABLE PRACTICES KNOWN BY RURAL DWELLERS IN PREVENTING EXTINCTION OF FOREST RESOURCES IN SOUTHWESTERN, NIGERIA**

**n=340**

S/N	Sustainable practices	*Frequency	Percentage
1	Prevention of the use of forest areas for cultivation of crops and rearing of domestic animals	253	74.4
2	Enlightenment of rural dwellers about the benefit accrue in conservation of forest areas	340	100.0
3	Strict adherence to afforestation during cases of deforestation through government policy	250	73.5
4	Prevention of illegal hunting/poaching by inexperienced individuals	272	80.0
5	Prevention of grazing in the forest areas	304	89.4
6	Educating of rural dwellers about the importance/benefits of specific forest resources	314	92.4
7	Setting up of local guards to guard the forest in conjunction with government forest guards	225	66.2

8	Prevention of encroachment of the forest areas in the disguise for development	180	52.9
9	Collection of fines/sanctions on illegal/indiscriminate exploitation of forest resources	295	86.8
10	Regulation of access time to the forest area	88	25.9
11	Prevention of wastage of forest resources harvested through extension training	285	83.8
12	Making laws against indiscriminate harvesting of forest resources (plants) during off season	308	90.6
13	Domestication of some forest plants and animals	246	72.4
14	In-situ and ex-situ practices by forest research institutes	295	86.8
15	Provision of improved welfare schemes for forest workers	340	100.0
16	Restriction of unauthorized activities such as illegal forest resources exploitation	321	94.4

Source: Field survey, 2023

\*: Multiple responses

### PROBLEM HINDERING SUSTAINABLE PRACTICES TO ENSURE AVAILABILITY OF FOREST RESOURCES IN SOUTHWEST NIGERIA

Based on the result shown in Table 3, all (100.0%) of the respondents indicated bribe collection by forest guards and deforestation without afforestation as problems hindering sustainable practices in ensuring the availability of forest resources in the Southwestern part of Nigeria. This result is an indication that government rules and regulations are not adhered to by the rural dwellers, the major reason afforestation is not practised. The sharp practices of the forest guards are a threat to the existence of forest resources in the Southwestern part of Nigeria.

Similarly, 94.4% of the respondents indicated lack of technical know-how on modern sustainable techniques by rural dwellers and instability of government policies on forest resources were indicated by the respondents while 90.3% indicated corruption of forest workers as the problem hindering sustainable practices in ensuring availability of forest resources in the study area. This result is an indication that extension services/agents are not working efficiently in the forest areas and this is traceable to the inefficiency of the government through poor decision making, negligence and embezzlement of funds allocated for workshops, seminar and field trip days which are expected to contribute more to the knowledge of the rural dwellers. Also, 80.6% Of the respondents indicated climate variability impact as a problem hindering sustainable practices in the study area. This result is an indication that natural disaster is a major factor that controls the existence of forest resources, hence the need for the judicious use of the resources during the on-season. This portrays the essence of sustainable practices for the conservation of forest resources as climate variability is not man-made but a natural phenomenon controlled by nature.

Furthermore, 62.1% indicated encroachment of forest areas for agricultural practices as a problem that hinders the sustainable practices for forest resources in the study area. In as much as the development of rural areas is

paramount to the growth of the habitants and the rural areas, it should be done with all consciousness not to eliminate the source of livelihood of the rural habitants and nature. Developmental projects should be done in the community with the consent of the local leaders as they will serve as a guide on the appropriate place to site projects without interfering with natural resources. Lastly, 60.6% of the respondents indicated both illegal grazing of animals in forests by criminals and indiscriminate exploitation of forest resources that leads to scarcity/extinction of forest resources as problems hindering sustainable practices in ensuring availability of forest resources. This result is an affirmation that herdsmen also hinder sustainable practices targeted for the conservation of forest resources. Herdsmen graze their cattle on the supposed forest but in the course of grazing, they knowingly or unknowingly destroy tangible forest resources and causes indiscriminate exploitation by feeding their flocks with indigenous fruits, medicinal plants amongst other edible resources for the cattle.

Generally, this result affirms that the use of sustainable practices in the conservation of forest resources is hindered in the Southwest with various problems as identified by the respondents, with an indication that sharp practices from the forest guards and utilizers of the forest resources are the major problem faced. In Nigeria, deforestation or loss of vegetation or the selective exploitation of forests for economic or social reasons is very common. In most areas, major losses have been recorded in vegetation, forest complexity (diversity), or germplasm (quality) (Onwubuya *et al.*, 2014). The deforestation rate in the country is about 3.5% per year, translating to a loss of 350,000– 400,000 ha of forest land per year and recently, it was shown that forests now occupy about 923,767 km<sup>2</sup> or about 10 million ha (Ladipo, 2010). It is well known that today, world forest resources are facing extinction much faster than they would through natural processes alone. According to Ogunwusi (2012), more recently there have been changes in the structure of the forestry sector in Nigeria due to the exploitation of the forest resources. This result is similar to

the findings of Onwubuya *et al.*, (2014) where instability of government policy, deforestation without afforestation and overgrazing were indicated as constraints to sustainable practices for forest conservation. Change of government without a blueprint for the continuation of policy and project is a major constraint to forest

conservation as diverse policies are given to the rural dwellers. Deforestation and overgrazing imply that there will be an imbalance in the ecosystem. The imbalance in the ecosystem brings about excessive carbon dioxide (CO<sub>2</sub>) which forms HCO<sub>3</sub> which is a weak acid (Onwubuya *et al.*, 2014).

**TABLE 3: DISTRIBUTION OF RESPONDENTS ACCORDING TO PROBLEMS HINDERING SUSTAINABLE PRACTICES TO ENSURE AVAILABILITY OF FOREST RESOURCES IN SOUTHWESTERN, NIGERIA**

n=340

S/N	Problems hindering sustainable practices	*Frequency	Percentage
1	Bribe collection by forest guards	340	100.0
2	Deforestation without afforestation	340	100.0
3	Lack of technical know-how on modern sustainable techniques by rural households	321	94.4
4	Illegal grazing of animals in forest by criminals	206	60.6
5	Indiscriminate exploitation of forest resources that leads to scarcity/extinction of forest resources	206	60.6
6	Climate variability impact	274	80.6
7	Instability of government policies on forest resources	321	94.4
8	Corruption of forest workers	307	90.3
9	Encroachment of forest areas for agricultural practices	211	62.1

Source: Field survey, 2023

\*: Multiple responses

## CONCLUSION AND RECOMMENDATIONS

This study established that forest resources are a dominant resources available for utilization in the Southwestern part of Nigeria and rural dwellers are aware of various sustainable practices that could ensure the continuous availability and prevention of extinction of the resources for human use in the region. Bribe collection by forest guards and deforestation without afforestation were identified by all the respondents amongst several other identified problems hindering sustainable practices in ensuring the availability of forest resources in the study area.

Form findings made during this research work, it is recommended that welfare package for forest workers should be of utmost priority with hazard allowance that will serve as a relief package for the workers, this might influence the forest workers resistiveness to bribery and other sharp practices practiced in the forest that could hamper the sustainability of the forest and the resources.

## REFERENCES

1. Ayanwuyi and Alamu (2012). Practices Toward Sustainable Natural Forest and Environmental Management. *International Journal of Physical and Social Sciences* Volume 2, Issue 8 ISSN: 2249-5894.

2. Ayanwuyi Emmanuel (2013). Effects of Non-wood Forest Products on Rural Dwellers in Surulere Local Government Area of Oyo State, Nigeria. *Research on Humanities and Social Sciences*. ISSN 2222-1719 (Paper) ISSN 2222-2863 (Online). Volume 3, No 9.

3. Center for International Forest Research (CIFOR) (2014). What you might not have known about forests and food security. 2014. Accessed 14 July 2014. Available: <http://blog.cifor.org/8619/what-you-mightnot-have-kno-wn-about-forests-and-foodsecurity#.U1le1qKqCho>.

4. Eriogun I. H., Eze C. C., Emenyonu C. A and Ibeagwa O. B. (2016). Analysis of Sustainable Agricultural Resource Use in Nigeria: An Ecological Footprint Approach. *Journal of Agriculture and Ecology Research International* 6(4): 1-13, 2016; Article no.JAERI.23348 ISSN: 2394-1073.

5. Hames, R. and Vickers, W. T. (2011). Adaptive Responses of Native Amazonians. Academic Press, New York: 200.

6. Iwena O.A (2012). Essential agricultural science. Enugu Nigeria: Tonad Publishers Limited.

7. Kumar, S. (2012). Does Participation in Common Pool Resources Management help the Poor? A social cost-benefit analysis of joint forest management in Jharkland India. *World Development*, 30 (5): 763-782.



8. Mbani, Tochukwu Georgina (2015). Contributions of Forest Resources to Rural Dwellers Income in Enugu State, Nigeria. An M.Sc Dissertation Submitted to the Department of Agricultural Economics, University of Nigeria, and Nsukka In Partial Fulfillment of the Requirement for the Award Of Master of Science (M.Sc) Degree In Agricultural Economics.
9. Merit nation (2014). Explain the importance of forest to humans. How Can We Conserve Forest and Wildlife; 2014. Accessed 22 January 2014. Available: <http://www.meritnation.com/askanswer/question/explain-the-importance-of-forest-to-humans-how-can-we-conserve-social-science/4015641>
10. National Bureau of Statistics (2013). Gross domestic product for Federal Republic of Nigeria (The Presidency). Revised 2011 and estimates for 2012 q1-q4.
11. Neumann, R. P., and Hirsch, E. (2000). Commercialization of non-timber forest products: Review and analysis of Research. *Center for International Forestry Research*. Bogor, Indonesia.
12. Nzeh, C. E. P and Eboh, E. C. (2008). Socio-economic analysis of income effects of forest products activities among rural dwellers in Enugu State, Nigeria. *Journal of Tropical Agriculture, Food, Environment and Extension*, 7(1) 22-26. Retrieved from <http://www.agrosciencejournal.com/>
13. Ogundele F.O, Utin E.A., Iwara A.I., Njar G. N., Deekor T.N (2012).An assessment of non-timber forest products (NTFPs) utilization on rural livelihoods in Ini local government area of Akwa Ibom State, Nigeria. *Journal of Biodiversity and Environmental Sciences* (JBES) ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 2, No. 8, p. 1-13, 2012 <http://www.innspub.net>
14. Ogundele F.O, Utin E.A., Iwara A.I., Njar G. N., Deekor T.N (2012).An assessment of non-timber forest products (NTFPs) utilization on rural livelihoods in Ini local government area of Akwa Ibom State, Nigeria. *Journal of Biodiversity and Environmental Sciences* (JBES) ISSN: 2220-6663 (Print) 2222-3045 (Online) Vol. 2, No. 8, p. 1-13, 2012 <http://www.innspub.net>
15. Ogunwusi A.A (2012). The Forests Products Industry in Nigeria. *African Research Review* Vol. 6 (4), Serial No. 27, October.
16. Olufemi A.O and Ameh C.E (2013). Forest Resource Situation Assessment of Nigeria; 1999. Accessed 10 September 2013. Available: [www.fao.org/docrep/004/ab578e/ab578e04.htm](http://www.fao.org/docrep/004/ab578e/ab578e04.htm).
17. Onwubuya E.A, Ogbonna O.I and Ezeobiora O.C (2014). Conservation of forest resources by rural farmers in Anambra State, Nigeria. *Journal of Agricultural Extension* Vol.18 (2) December. ISSN 1119-944X <http://journal.aesonnigeria.org> <http://www.ajol.info/index.php/jae>
18. Townson, I. M. (2012). *Forest Products and Dwellers. Incomes: A Review and Annotated Bibliography*. OFI-CLFOR, Oxford: 201-250
19. United Nations University Centre (UNUC) (2014). Nine unique features of forests. Introduction to Forestry, Forest Policy and Economics. Accessed 2 March 2014. Available: [http://foper.unu.edu/course/index.html?page\\_id=152.html](http://foper.unu.edu/course/index.html?page_id=152.html).
20. United State Department of Agriculture, Valuing Ecosystem services; 2014. Accessed 20 July 2014. Available: <http://www.fs.fed.us/ecosystemservices/>
21. Verweji, P., Schouten, M., Van Beukering, P., Triana, J., Van der Leeuw, K., and Hess, S. (2009). Keeping the Amazon forest standing: a matter of values. WWF-Netherlands Zeist P 70.
22. Watson, R. and Albon, S. (Eds). (2011). *The UK National Ecosystem Assessment: understanding nature's value to society*. UNEP-WCMP Cambridge.