



AN ASSESSMENT OF THE ROLE OF FOREST RESOURCES ON POVERTY ALLEVIATION IN ADO LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA



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Abstract: This study was conducted in Ado LGA, Benue state, Nigeria. Various forest resources in Ado were identified along with their contributions to rural livelihood and poverty alleviation. Data collected include economic activities from forest products, income, forest products utilization at household level. Data collected were analyzed using Statistical Package for Social Sciences and results were presented using frequencies, percentages, pie and bar charts, and tables. From the results, 78% of the respondents were married, while 14% were single. The result also showed the educational level of the respondents as secondary education constituting the majority (53%). The occupational status was also captured with (22%) of the respondents primarily involved in farming and (49.3%) trading in forest products and agricultural produce. The study also noted the benefits derived from the forests which include timber. Furthermore, the study found that forest resources contribute to household income through trade, household health through local medicine, skin care, pre-natal and post-natal care, domestic energy, and provision of edible products. The study then recommended that Community Forest reserves should be put in place while already existing ones should be beefed up and protected. This will help conserve the remaining forest ecosystems and its resources for future generation. The Government and local population should embark on tree planting campaign also. This will reduce the recent pressure on the forest.

Keywords: Forests, Resources, forest Products, Poverty Alleviation, Timber, Ado.

Introduction

Forest has been defined by Food and Agricultural Organization (2015) of the United Nation as “land of more than 0.5 hectares, with a tree canopy cover of more than 10%, which are not primarily under agricultural or urban land use. Forests are naturally endowed with numerous resources that are valuable to mankind (FAO, 2015). But a forest is much more than just trees. It also includes smaller plants such as mosses, shrubs, and wildflowers. In addition, many kinds of birds, insects, and other animals make their home in the forest (Ogunsawo et al 2014). The forest ecosystem is highly complicated as the trees and other green plants use sunlight to make their own food from the air, water and minerals in the soil. The plants themselves serve as food and shelter for animals. These animals in turn are eaten by other animals. After plants and animals die, their remains are broken down by bacteria and other organisms such as protozoans and fungi. This process returns minerals to the soil where they can again be used by plants (Osemeobo 2016). If the forest is wisely managed, it provides us with a continuous source of wood and many other products (Onwubuya et al 2014).

The forest equally plays a very significant role for poverty alleviation in naturally resource rich environments (Verinumbe et al 2005). Prehistoric people got their food mainly by hunting and by gathering wild plants (Encyclopedia Britannica 2019). Despite recent civilization there is still heavy dependence on forests most especially for economic, environmental, and social values (Amadi. et al 2018). Moreover, Kallonga et al (2003) stated that there is link between households’ income and forest resources management.

Poverty is a state of lack or deprivation of basic necessities of life (Vincenti et al 2013). Poverty in Nigeria is very high with more than 65% of the population categorized as poor

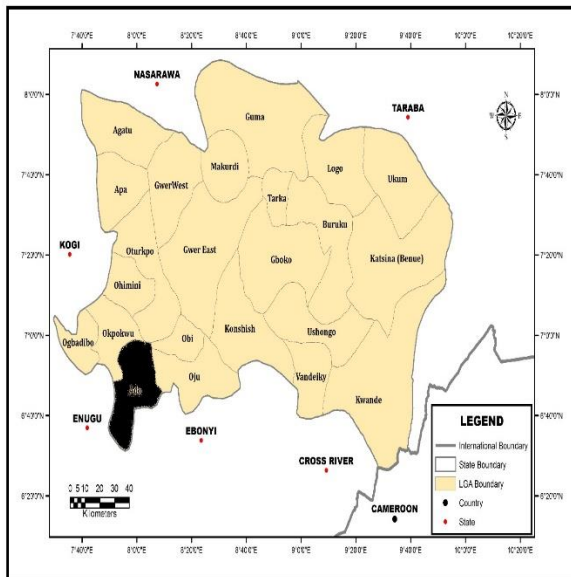
(Adebayo. 2016). In the same vein, Adebayo 2016 also noted that poverty in Nigeria is severe and widespread, with the highest prevalence in the rural areas. According to Oni, (2018), many rural dwellers in Nigeria suffer from poor environment, unemployment, poverty and disease. The economies of the rural communities in Ado local government are largely a product of land use for agriculture and forest resources utilization.

Forests resources provide lumber, plywood and railroad ties. It is also used in making furniture, tool handles and many other products. In many parts of the world, wood serves as the chief fuel for cooking and heating (Nurudeen et al 2014). In addition, forest products such as latex, which is used in making rubber, turpentine and various fats, such as gums, oils and waxes used in manufacturing are obtained from trees. In some societies, forest plants and animals make up a large part the people's diet (Termonte et al 2013). Over 75% of Nigerian population live in rural areas and majority of these people depend on the environment and natural resources for their livelihoods. The link between livelihoods and natural forests management is of fundamental importance to national prospects for economic growth and poverty reduction.

The Study Area

Benue State lies within the lower river Benue trough in the middle belt region of Nigeria. Its geographic coordinates are longitude 7° 47' and 10° 0' East. Latitude 6° 25' and 8° 8' North; and shares boundaries with five other states namely: Nasarawa State to the north, Taraba State to the east, Cross-River State to the south, Enugu State to the south-west and Kogi State to the west. The state also shares a common boundary with the Republic of Cameroon on the south-east. Benue occupies a landmass of 34,059 square kilometers (Wikipedia, 2020).

Benue State with a population of about 4,253,641 according to the National Population Commission 2006 census. It is inhabited predominantly by the Tiv, Idoma and Igede people, who speak Tiv, Idoma, and Igede languages respectively. Its capital is Makurdi. Benue State is a rich agricultural region; popularly grown crops includes; oranges, mangoes, sweet potatoes, cassava, soya bean, guinea corn, yams, rice, groundnuts, and Palm Trees. Ado is a local government area of Benue State. It is one of the 9 local government areas in the southern senatorial zone which is mainly occupied primarily by the Idoma people. The area contains mineral and natural resources in commercial quantities such as limestone, kaolin, petroleum and coal.



Source: Google map 2021
 Figure 1 showing Map of Benue state with the study area (Ado) shaded in black

Climate

Based on Köppen climate classification, Benue State experiences two distinct seasons, the wet and dry seasons (Wikipedia, 2020). The rainy season lasts from April to October with annual rainfall in the range of 100-200mm. The dry season begins in November and ends in March. Temperatures fluctuate between 21 – 37 degrees Celsius in the year.

Vegetation

The vegetation of the southern parts of the state is characterized by forests and derived savanna, which yield trees for timber and provide a suitable habitat for animals. The state thus possesses potential for the development of viable forest and wildlife reserves.

Occupation

The people of Ado of Benue State are predominantly farmers who cultivate crops like yam, cassava, corn, rice and guinea corn. They are also involved in other vocations such as white collar jobs, arts and craft works.

Methodology

Simple random sampling was used to administer 80 questionnaires to the respondents at 30% sampling intensity for all the wards. The interviewed households consist of male and female heads of household who were the key respondents. Data collected include socioeconomic, economic activities from forest products, income, forest products utilization at household level and problems encountered.

The number of questionnaires administered in each Ward was based on the population using method of proportional allocations techniques (Cochran, 1977). The model is stated as follows:

$$nh = N_h \times n/N$$

Where nh = Number of questionnaires administered in each Sampling ward

Nh = Estimated population of people in the ward

n = Total number of questionnaires administered

N = Total number of people in all Sampling ward

The questionnaire method was employed in data collection in the following areas.

Data analysis was done using Statistical Package for Social Sciences. The data were first coded in a form suitable for addressing research questions and the employed method of analysis.

$$\text{Percentage } P = f/N \times 100\% \text{ ----- Eqn 1}$$

Where P = percentage

F = frequency to be converted to percentage

N = Numbers of frequencies

Results and Discussion

Age of Respondents

The results (Table1) showed that 22% of the respondents fall within the age of 21-30; while 42.% respondents fall within the age bracket of 31-40. and respondents 35.6% of them fall within the age bracket of 41 and above. Proving the fact that most of the respondents are adults with families utilizing forest products

TABLE 1. Age distribution of the respondents

Respondents	Frequency	Percent
21-30	16	21.9
31-40	31	42.5
41 and above	26	35.6
Total	73	100.0

Source: Field work 2021

Occupation of the Respondents

From the analyzed questionnaires, more than 21% of the respondents are farmers while and more than 49% are traders in agriculture and forest products. This finding corroborates reports by Popoola (2008) that Agriculture and Forestry contribute about 38% of the nation’s GDP

with 70% of the population deriving their means of livelihood from agriculture and forestry. It also coincides with a report by FAO (2015) that the Nigerian economy is characterized by a rural based traditional sector relying heavily on forest resources biodiversity for their means of livelihood.

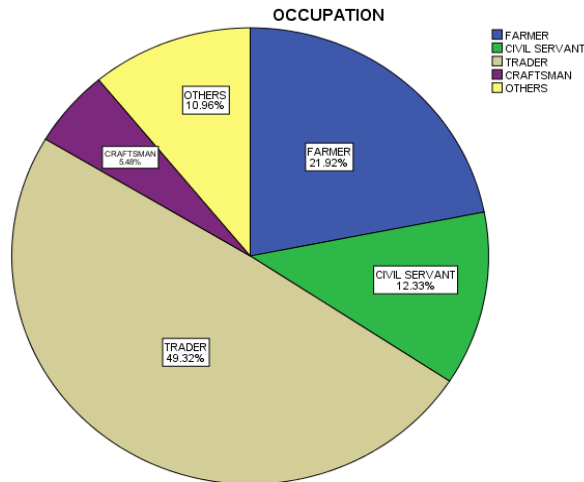


Figure 2 Showing the Occupation of the respondents

Benefits Derived from Ado Local Government Area Forest

From the analysis, 26% of the respondents indicated the provision of food and fruits as the benefit they derive from the forest, while other benefits include climate change mitigation, provision of employment, timber and non-timber forest products. This finding gives further credence to a study by Udo (2013) who observed that forests and forestry contribute to human wellbeing through food security, job creation and poverty alleviation as well as sources of medicines for curing diseases and ailments. He also noted that forests play critical roles in environmental beautification, biodiversity conservation, ecotourism, and mitigation of climate change. This finding also corroborates the work of Chukwuemeka et al (2018) who noted that forests has always been a major economic resource of great importance the people of Nigeria in general.

Tale 3 Benefits Derived from Ado Local Government Area Forest

Respondents	Frequency	Percent
Provision Of Food/Fruits	19	26.0
Environmental Conservation	1	1.4
Climate Change Mitigation	6	8.2
Provision Of Employment	11	15.1
Provision Of Timber	26	35.6
Provision Of Non-Timber Forest Products	10	13.7
Total	73	100.0

Source: Field work 2021

Forest products used in building

From the analysis, 90.% of the respondents pointed that timber and poles are major forest product used in building construction in the study area, while others noted that exudates from trees as the medical materials from the forest. This finding coincides with the report by Amadi et al (2018) which stated that forests provide a wide variety of highly valuable ecological, economic, and social benefits such as carbon storage, soil and water conservation, provision of employment, enrichment of systems and improvement of urban and rural living conditions. This finding further gives credence to the work of Chukwuemeka et al (2018) which noted wood to be the major source of building materials in rural areas and cities as well.

Table 4. Forest Products used in Building

Respondents	Frequency	Percent
Timber	66	90.4
Pole	2	2.7
Exudates From Trees	2	2.7
Others	3	4.1
Total	73	100.0

Source: Field work 2021

Presence of forest based industries in the study area

Over 94% of respondents noted the presence of forest based industries in the study area. The raw materials mostly used in these industries include palm oil, timber, cola nut, fuel wood, pole, *Irvingia gabonensis* seed, palm wine, bush meat, felled logs, shea butter, honey and palm fronds. The industries are mostly on cottage scale. This finding corroborates the work of Weber (1974) who asserted that the amount of cocoa being harvested reflected farmer's need for cash. This finding also supports the research of Amadi et al (2018) which noted the production of charcoal as a major traditional source of employment in Vandeikeya L.G.A. of Benue state.

Services Provided By the Forest Trees

Respondents were aware of forest services. provided by forest trees. Such as wind breaks, aesthetics improvement, provision of natural shade, climate change mitigation, local ingredients, provision of fruits, air purification and raw materials for forest based industries. This finding supports the work of Udo (2013) who observed that forests and forestry contribute to human well being through food security, job creation, poverty alleviation as well as sources of phyto medicines for curing diseases. He also noted that forests play critical roles in environmental beautification, biodiversity conservation, ecotourism, and mitigation of climate change.

Conclusion

This study sought to assess the role of forest resources in poverty alleviation in Ado Local Government Area of Benue State. Various economic activities that were undertaken by respondents in the study area in order to earn

household income and sustain their ways of living were identified. Farming and trading on forest products were found to be the leading activity in terms of generating cash income whereby 91.8% of the 73 respondents accrued money through selling surplus agricultural and forest crops. Cash income generating activities based on forest products was also a reliable means of livelihood with 82.2% of the respondents in the study area implying that forests diversify income earning opportunities in rural areas.

This research also revealed the level of awareness of rural dwellers to the benefits and services derived from the forest with 26.0% of the respondents indicating provision of fruits, 1.4% ticking environmental conservation, 8.2% noting climate change mitigation, 15.1% selecting provision of employment, 35.6% pointing at provision of timber and 13.7% ticking provision of non-timber forest products as the benefits derived from the forest. This finding is quite impressive because 53.42% of the respondents are secondary school graduates.

The study also revealed the consumption level of edible forest products and the frequency of consumption. 71 out of the 73 respondents stated that they consume edible forest products. 53 out of the 71 noted that they consume forest edible forest products every day. Edible forest products were found to contribute significantly to household nutrition. In addition to the frequency of consumption, the various contributions to the health of the respondents was also noted with 72 (98.6%) of the respondents affirming that edible forest products have been beneficial to their health by boosting immune system, easing of menstrual pains, enhancement of prenatal and postnatal health, improvement of skin health, improvement of vision, enhancement of bone health, boosting of sexual performance, treatment of malaria and typhoid, repair of worn body tissues and provision of a reliable source of good food nutrition. With regards to the availability of the edible forest products, 63% of the respondents noting that the edible forest products are not readily available. This could be attributed to unsustainable utilization of these resources over the years.

The role of forest resources in providing shelter was also noted with the various forest products used in building construction in the study area identified. Timber was found to be the major forest product being used in building construction. This indicates that forest resources are invaluable sources of raw materials for building construction in the study area.

The forest based industries in the study area were also identified. Forest resources were found to generate cash income for different households in the study area. The income derived from trade in forest products was found to contribute significantly to overall household income. This indicates that forest resources play a very important role to the livelihoods of the household through generation of cash income.

Generally, the results of this particular study show that forest resources have great potentials in sustaining household livelihoods thus contributing towards poverty reduction in the study area.

Recommendations

- Awareness of the importance of ecosystem should be made by the government agencies to curb excessive use of the forest by communities in close proximity to the forest ecosystems.
- Community forest reserves should be put in place in place while already existing protected areas should be strengthened. This will help conserve the remaining forest ecosystems and its resources for future generations.
- Government should embark on tree planting campaign programs involving communities with proximity with the forest ecosystems for planting of species that are mostly preferred for fuel wood. This will reduce pressure on the forest. A notable tree species that can provide high fuel energy and also enhance soil fertility is teak, (*Tectona grandis*). It can be grown on farmlands and plantations.

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