



An assessment of non-timber forest products (NTFPs) utilization on rural livelihoods in Ini local government area of Akwa Ibom State, Nigeria

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Abstract

The study examined the contribution of non-timber forest products (NTFPS) utilization on rural livelihood in Ini Local Government Area of Akwa Ibom State, Nigeria. The specific objective was to investigate the utilization of NTFPS and ascertain its effects on rural livelihood. Data were obtained through the administration of 373 copies of structured questionnaire to 10 communities with large portion of natural rainforest. Data obtained were analysed using descriptive and inferential statistical tools. The multiple regression result showed that the utilization of NTFPS was significantly influenced by socio-economic factors (age, gender, income and educational level) ($p < 0.05$). The t-statistic result revealed that the utilization of NTFPS greatly contributed to rural livelihood such as cooking, medical treatment, roofing materials, craft making and income generation ($p < 0.01$). The study revealed that 96.7 per cent of forest lands in the area were owned by individuals, families and communities, while only 3.3 per cent was owned either by the state or local government. The study suggests the domestication of economically valuable products be given priority at the local level as well as improves trade in NTFPS.

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Introduction

It is a common fact that people in rural areas depend on the resources available in the area for their livelihood. A feeling of divide is that, with forests linked to rural livelihoods, forests therefore present both an opportunity and a challenge for achieving conservation and development goals (Timko *et al.*, 2010). Forest resource utilization therefore is a precondition for livelihood of forested communities who do not have alternative sources of income (Chilalo and Wiersum, 2011). Africa is said to have the highest percentage of people in the world that live on less than a dollar a day (Anderson *et al.*, 2006), and almost 60% of rural Africans live below the poverty line (Oksanen *et al.*, 2003), and in Sub-Saharan Africa, more than 90% of the poor reside in rural areas where poverty is particularly acute (Oksanen *et al.*, 2003). Timko *et al.*, (2010) noted that in Africa, over two-thirds of the continent's 600 million people are estimated to rely on forest products, either in the form of subsistence uses or as cash income derived from a wide range of timber and non-timber forest products (NTFPs).

Nigeria is rich in timber and non-timber forest resources. Forest supplies nearly half the total wood requirements of the country and is dwindling rapidly. To this end, management of forests to conserve the biological richness and maintain environmental services is a difficult proposition. This predicament is further compounded by the complete reliance of rural people on a range of non-timber forest resources for their subsistence (Utin, 2010). Forest represents a point where ecological, economic and social systems intersect. Everywhere in the world people have devised ways of utilizing their surrounding natural resources (Ihenyen *et al.*, 2009). According to Jimoh (2006), forest plays a vital role in the regulation of climate, resilience and diversity of ecosystems and species, inputs to economies at local and international scale, complex cultural and social values and environmental endowment to future generations. It provides food, medicines, building materials, raw materials for processing enterprises and agricultural inputs.

Forests are also seen as carbon sinks, stabilizers of climate, protectors of watersheds, and conservers of biological diversity. Worriedly, however, forestry master plan has failed to recognize the important role played by non-timber forest resources in rural livelihood. This oversight is primarily due to the lack of quantitative information to justify the role of non-timber forest resources in forestry sector development.

Lately, interdisciplinary researches in ecology, reproductive and soil biology, ethno biology, siculture, rural sociology and resource economics attempt to address these questions of sustainable development of forest resources in an integrated mode. While researches oriented towards conservation investigate both short term and long-term ecosystem dynamics in natural and modified forest stands, utilization-oriented research probes the impact of increased human disturbance, particularly the impact of rural communities on dwindling forest resources, as well as the effect of forest conservation on rural livelihood. This study explores forest resource utilization and management which are socially acceptable, economically viable, and ecologically sustainable for multiple uses. The findings will assist in the refinement of current forest policies, forestry planning, and the implementation of new policies and plans in the forestry sector. At present, development strategies have tried to involve local people in the management of natural resources so as to improve their chances of deriving economic and social benefits. This contradicts the preservationist environmental policies that exclude people from the forest.

In Ini local government, utilization of forest resources has potentials of providing income food, medicine, fuelwood and construction materials. It is seen as the only resource-base; as such efforts are intensified through community participation to ensure its sustainable exploitation. If properly managed, these forest products can serve as incentive for forest communities to protect existing forest and restore degraded areas, to sustain their

source of income (Elaine Marshall, 2008; Timko *et al.*, 2010). However, despite the immense value of this resource, forests are being cleared as demand for timber rises and as agricultural activities expand in the study area. The wanton exploitation of forest resources has reduced their range and abundance, compared with what was obtainable in the past. These have serious implications on resource utilization and livelihoods of rural communities. In most cases, however, the utilization of forest resources is constrained due to the loss of these valuable non-timber resources, thereby raising fears about the livelihoods of forest dependent rural communities. In Nigeria, there are plethoras of studies on NTFPs, yet, studies are far less than sufficient to cover the wide ecological and forest types found in the country, thereby showing some form of ecosystem bias.

One of the ecological regions relatively less covered is the Cross River Basin characterized by high diversity of plant and animal species, agroecology and forest formations. This study, therefore, was conducted in Ini Local Government Area situated on the lowland rainforest bordering the zone of the fresh water swamp. In the past, quite a number of studies have been carried out on non-timber forest products utilization and livelihood of rural communities. Examples of these studies include those of Aremu *et al.*, (2009); Adedayo and Akindele (2003); Sunderlin *et al.*, (2005); Adepoju and Salau (2007); Oyerinde, (2005); Eaton and Sarch (1997); Ros-tonen and Wiersum, 2005; Kusters *et al.*, (2006); Dhakal and Masuda (2009). However, in Ini Local Government Area of Akwa Ibom State with the large expanse of forestland, few studies have been carried out on NTFPs, despite the increasingly high demands and utilization of non-timber forest products for daily sustenance. It is against this backdrop that this research seeks to investigate the utilization of NTFPs and ascertain its effects on rural livelihood. The aim however, is to understand the livelihood effects of NTFPs utilization among

individuals from different socioeconomic backgrounds in the area.

Materials and methods

Study area

The study was conducted in Ini Local Government Area. Ini Local Government Area is found in the drier landward part of Akwa Ibom State where farming and forest products harvest in form of plants, fruits and wildlife assume considerable importance as a source of income, food and fuel. As it is common in most parts of Nigeria, forest product utilization is a dominant and integral part of the rural economy. About 70% of the population is engaged in farming and gathering of forest products as a means of livelihoods. Ini Local Government is located approximately between latitude 5°20' and 5° 31' N and longitude 7° 38' and 7° 53' E. It is classified among the low-land areas in South-Eastern Nigeria, lying below 200m (Utin, 2010). The entire geographical area is drained by Enyong Greek –a tributary of the Cross River (Inyang, 2000 cited in Utin (2010). Ini Local Government Area has a tropical climate with a maximum annual rainfall of 2000mm, while monthly temperatures range between 26° C and 28° C. The area is characteristics by deep sandy loam soils with a pH of 4.5 – 5.2 and very low CEC. The soil is well drained with an undulating relief. The vegetation of the area is that of a typical tropical rain forest though a greater portion of it has been modified by humans into secondary forest. It is subdivided into dry land rainforest and the freshwater swamp (moist) rainforest. The dry land or lowland rainforest is shrinking rapidly in the area and currently exists as a riparian forest along rivers and streams, which are numerous in the area (Utin, 2010). This area serves as the woodlot of the natives as well as a source of their non-timber forest products (NTFPs). The inhabitants of the area are predominantly farmers; both crop farming and animal husbandry as well as NTFPs collectors. Petty traders, hunters and fishermen operating at a very insignificant scale also characterize the socio-economic activities in the study area.

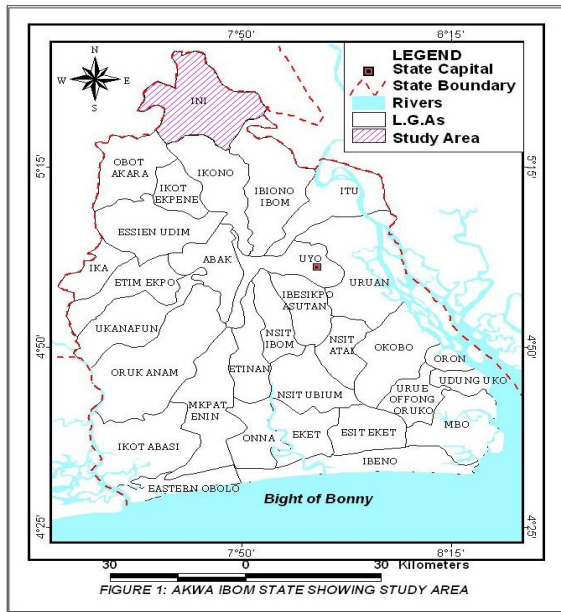


Fig. 1. Akwa Ibom State Showing study area.

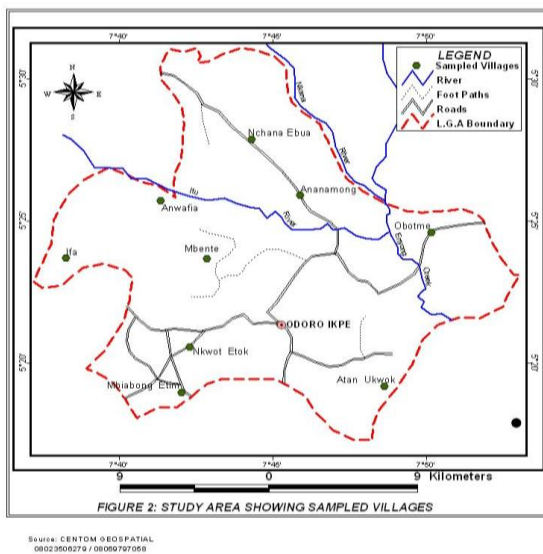


Fig. 2. Study area showing sampled villages.

Sampling design

Purposive, proportionate and systematic sampling techniques were employed. Purposive sampling technique was used to choose ten communities based on the existence of a large portion of the natural rainforest. The proportionate sampling technique was used to determine the sample size/population as well as determine the exact number of questionnaire that was administered to respective communities in relation to their population. A total of four hundred

questionnaires were administered at household level, in the ten communities selected for the study, but three hundred and seventy three were returned. This was arrived at using the Taro Yamane’s formulae to compute the sample size, taking into consideration the projected population of the communities. Glenn (1992) recommended the use of Taro Yamane’s formula to determine sample size in a survey such as this. The formula is given as:

$$n = \frac{N}{1 + N(e)^2}$$

Where: *n* is the calculated sample size; *N* is the definite population figure of the communities and *e* is the significance level (0.05).

However, after the sample size of four hundred had been determined, proportionate sampling technique was used to distribute the structured questionnaire based on the population figure of each community (Table 1). The systematic random sampling technique was thereafter adopted in administering the questionnaire. This enabled the selection of respondents at regular intervals. At the end of the survey, out of the 400 copies of questionnaire administered, 373 were found appropriate and used for the analysis.

Table 1. Questionnaire administration in relation to population size.

Sampled communities	1996 Population	Pop. projected to 2009	Sampled population	Administered questionnaire
Nchana – Eboa	774	1084	28	7
Ananamong	1537	2152	56	14
Obotme	1497	2096	56	14
Anwafia	401	561	16	4
Mbente	1103	1544	40	10
Ifa	1506	2108	56	14
Mbiabong-Okporo	408	571	16	4
Ndiya-Ikot-Imo	1403	1964	52	13
Odoro-Ikpe	1807	2530	68	17
Atan-ukwok	347	486	12	3
Total	10783	15096	400	100

Source: Author’s Fieldwork (2010)

Data collection procedure

The research employed the descriptive design, to investigate the utilization of non-timber forest products and the various livelihood opportunities it presents to rural dwellers. This design proved useful in explaining forest product utilized by community members and their contribution as a source of rural livelihood. Data were collected basically from primary sources. The primary data used for the study included data on available non-timber forest products; data on prevailing livelihood activities; data on utilization of NTFPs; data on socio-economic characteristics of communities abound by forest. The sets of primary data mentioned above were obtained from personal observation, oral interview and through the administration of a structured questionnaire.

Methods of data analysis

Data obtained from the questionnaire were analysed using tables, simple percentages, Chi Square and multiple regression analysis. In order to effectively carryout these tests, items in the questionnaire coded for descriptive analysis were transformed or recoded into dummy variables. After these transformations, inferential analyses were applied. Analysis was carried out with the aid of SPSS (17.0) software for windows.

Results and discussion

The socioeconomic characteristics of respondents show that majority of the respondents are males (76.7%), while 23.3% are females. It indicates that 92.2% are above 20 years. The educational qualification of respondents reveals that 10.5% have tertiary education, 23.6% are holders of post-primary certificates and 28.4% have primary education, while 37.5% have no formal education. This implies that majority of the respondents are literates, as such are knowledgeable of the usefulness of forest resources. The occupational structure reveals that the respondents are predominantly farmers depending on forest resources for sustenance, while a negligible percentage engages in

other economic activities. However, monthly income of the respondents indicates that majority of the respondents earn between N5, 000 and N10, 000. The socio – economic characteristics of respondents therefore shows that rural dwellers in the ten communities depend solely on non-timber forest products which formed the basis of their livelihood and sustenance.

Utilization of NTFPs among socio-economic groups

Multiple regression analysis was used to examine the utilization of NTFPs among socio-economic groups. Table 2 shows the summary of the multiple regressions on utilization of NTFPs among socio-economic groups in the study area. It further reveals that each of the independent variables (sex, age, education, household size and monthly income) explains significant variation in the level of forest utilization in the study area. Thus, the R^2 of 0.585 indicates that 59% of forest products are utilized peoples across various socio-economic backgrounds in the area. The ANOVA result (table 2) shows that the utilization of NTFPs is significantly determined by the socio-economic background of the people (age, gender, income and educational level). This therefore indicates that the utilization of non-timber forest products is considerably largely influenced by socio-economic factors. This is evident as NTFPs are mostly utilized or depended upon by people with low socioeconomic background. The rich rarely depends on it collection for sustenance, since they have the money or purchasing power to buy what they want from the market.

Products harvested from the area

Fig. 1. shows some of non-timber forest products usually consumed in the area. It indicates that leaves/bark & roots (40.5%) constitute the commonly consumed NTFPs, this is followed by fruits/seeds & nuts (25%), spices/condiment (11.5%), fuel wood (16%) and animals (7%). The Federal Department of Forestry (1987) has noted that wildlife is most highly valued as food and the most commonly consumed species are small animals. The

survey shows that grass cutter, giant rat and small antelopes are the most commonly hunted, consumed and sold animal products in the area. Adedayo and Akindele (2003) maintained that forests are common property resource that plays a crucial role in rural livelihood. It therefore, support subsistence and income generating activities such as small scale timber harvesting, fuel wood collection and collection of wild fruits. These non-timber forest products include plants used for food, beverages, fodder, fuel, medicine, fibres, biochemical and animals. These products are also potential pillars of sustainable forestry. Common plant species used for preparation of meals in the area are shown in Fig 2, while Fig 3 shows some of the edible forest nuts displayed for sale at the local market.

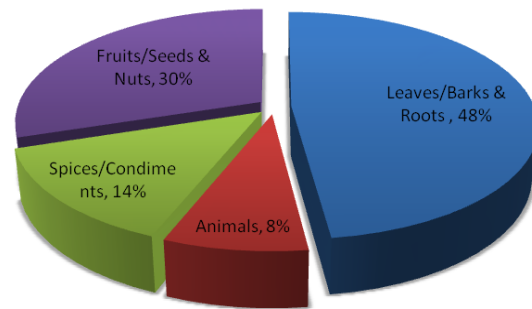


Fig 1. Products usually gathered/collected from the forest.



forest.



Fig 2. *Piper gueneense* and *Gnetum africana* (leaves used in preparing household meals in the area).

Table 2. Summary of multiple regression NTFPS among socioeconomic groups.

Variables	Coefficients		
	b	β	t-value
Sex	2.575	0.462	5.572*
Age	2.652	0.531	4.992*
Education	1.814	0.208	8.714*
Household size	1.761	0.285	6.184*
Monthly income	0.239	0.623	0.384
Test results			
F- value	4.069*		
R	0.77		
R ²	0.59		
Constant	4.382		3.976*
DF	5/367		

*Significant at 1% significance level

Source: SPSS Window Output Version 17.0



Fig. 3. Edible Nuts (kola, bitter kola, alligator pepper) display for sales in the local market.

Utilization of NTFPs and its contribution to rural livelihood

The utilization of NTFPs as it improves rural livelihoods was put to further analysis using a bivariate regression analysis. This analytical technique is useful in testing for significant variation in the utilization of NTFPs and its contribution to rural livelihood (income, health & shelter among others) of the people in the area. Table 3 shows the summary of the bivariate regression analysis result of the utilization of NTFPs on rural livelihood. The result of t-statistics indicates the utilization of NTFPs contribute to rural livelihood such as cooking, medical treatment, roofing materials, craft making and income generation. This result therefore implies that forest resource utilization contributes a reasonable quota to rural livelihood in the study area. Non-timber forest products (NTFPs) form an integral part of the livelihood strategy of rural communities in the tropics. At the household level, they are used mainly for subsistence purposes such as food, medicine and construction materials etc. Moreover, some products are of economic importance as they are traded locally and even internationally especially rattan, fibre and agro-forestry species (*Gacinia cola*, *Ivingia gabonensis*, *Cola edulis*, *Raffia vinivera* and *Gnetum africanum*). However, household utensils seem insignificant as majority of the utensils are bought from the market. Utensils such as pot, spoon, and

knife among others are directly got from the market. Only few households get their utensils from the forest.

Table 3. Utilization of NTFPs and its contribution to rural livelihood.

Variables	Coefficients		
	b	β	t-value
Cooking	.629	3.099	.002*
Medicinal Treatment	.576	2.855	.005*
Roofing materials	1.113	4.885	.000*
Household Utensils	.104	.423	.672
Weaving/Crafts	.867	3.772	.000*
Sales/ Income	.878	4.310	.000*

*Significant at 1% significance level

Source: SPSS Window Output Version 17.0

Uses of NTFPs products by household

Fig. 4 shows that most NTFPs harvested by rural dwellers are used for food and treatment. This accounted for 41.3% and 28.4% respectively. 16.4% of the respondents said they use the leaves and stems of raffia palm for roofing and construction of houses, bans and farm huts; 5.9% uses it for household utensils; 3.5% was recorded for respondents who used NTFPs for weaving mats, baskets, ropes and other crafts and finished products which are sold to generate income; while 1.1% of the total respondents collect NTFPs for other uses (plate 2). As further revealed by FAO report, more than 500 plant species and 280 animal species are used in one way or the other. About 20 non-timber forest products make it to the local markets and continue to contribute significantly to the income of rural people. Forest resources provide opportunities for income generation through jobs and small enterprises example rattan and basket weaving (see Fig. 5)

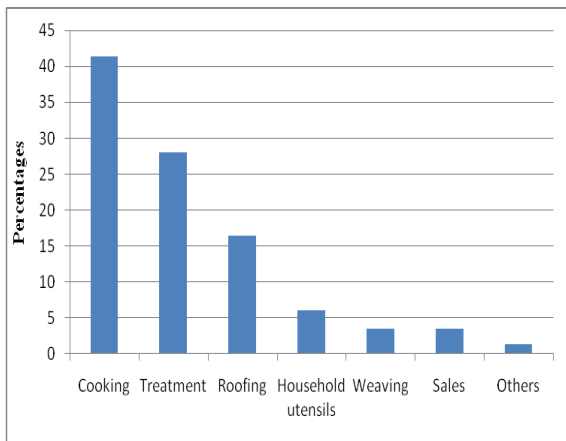


Fig. 4. Uses of NTFPs by households.



Fig. 5. Finished NTFPs (fiber, mat, basket and sieve) displayed for sales at the local market.

Contributions of NTFPS to household health

Most respondents in the study area depend on medicinal plants for their health needs. FAO (1999) reported that at least 25% of drugs used in modern pharmaceutical preparations are derived from plants, while many others are synthetic analogue

built on proto type compounds isolated from plants. In the study area, most of the respondents depend on traditional healers who in turn rely on the forest for supplies of medicinal plants in the treatment of peculiar ailments. Few medicinal plants are cultivated, because the low price of materials harvested from the wild still makes cultivations financially unattractive. As shown in table 4, 51% of the respondents patronize traditional healers and birth attendants for their health needs. 15% of patronize itinerant drug sellers during market days. 26% report at the chemist, while only 8.0% visits the hospital/clinics which are rarely found in communities used for this study. It has been argued that 80 per cent of total households particularly in rural areas depend on natural herbs for their health care delivery (King, 1966, Bear, 2000). Recent trends have confirmed this observation, as the number of people depending on herbs for their health needs keeps increasingly. This was further confirmed in Okafor (2008), where he noted that often times, the distances between rural communities and orthodox medical centers are quite considerable hence, rural dwellers naturally rely on traditional herbs for treatment when the need arises. It is only when the situation gets out of hand that they seek modern medicine assistance e.g. during complicated labour, fatal accidents and prolonged illnesses.

Table 4. Contribution of NTFPs to rural health care.

Contributions of NTFPs	Frequency	Percent
Traditional Healer	190	51
Itinerant drug seller	56	15
Chemist	97	26
Hospital /clinic	30	8
Total	373	100

Source: Author’s Analysis, 2010

Methods of harvesting

Table 5 shows the various methods used by rural dweller in harvesting forest products. 14.7% of the

respondents harvest their products through annihilation while 28.2% of them harvest through gathering and a higher number of respondents 52.1% harvest by pulling and cutting of branches or leaves of plants. Though considerable proportion of forest products are extracted by annihilation and gathering methods, collection of leaves, fruits and seeds by pulling or cutting of branches still makes such collection methods destructive and unsustainable. Most often than not, collection are done without any consideration for size and age thus resulting in species decline. The continuous shrinking of NTFPs in the study area is leading to undue competition among rural dwellers for premature and unsustainable harvest of NTFPs for immediate financial gains.

Table 5. Methods of harvesting.

Methods of Harvesting	Frequency	Percent
Puling and cutting of branches	213	57
Annihilation	55	15
Gathering	105	28
Total	373	100

Source: Author’s Analysis, 2010

Constraints on utilization of NTFPs

The contribution of NTFPs to household health and rural livelihood cannot be overemphasized. Despite this, a number of factors constitute hindrances to the effective utilization of forest products. Although, the various studies highlighted the often important role of NTFPs for local communities, they also have led to doubts about the potential of NTFP extraction from natural forests to contribute simultaneously to forest conservation and poverty alleviation (Ros-Tonen, 2008). Though, the forest in the communities is relatively accessible, respondents still identified the following constraints on NTFPs utilization. Table 6 reveals that 47% of respondents identify declining stock of forest resources as a major constraint towards the utilization of NTFPs. 22% of respondents thinks forest resource utilization is

being constrained by the prevailing land tenure system in the study area. While 16% and 9% of respondent claim that lack of access to market and gender limits their utilization of forest products respectively. Poor market infrastructure (roads) and market information put forest dwellers at the primary chain of production under undue advantage, by traders who have access to market information on prices and flow of products. Only 6% of them identified government policy as constraining utilization. Existing studies has also identified and grouped this constraints into biophysical, demographic, economic, institutional and socio-political factors influencing resource governance and ownership.

Table 6. Constraints to NTFPs utilization.

Constraints on utilization	Frequency	Percent
Declining natural stock	175	47
Land tenure	83	22
Poor access to market	59	16
Gender	34	9
Government Policy	22	6
Total	373	100.0

Source: Author’s Analysis, 2010

Forest resource ownership

The challenge for a sustainable forest management is to determine who among the stakeholders (Government, Rural community, individuals, NGOs and International Conservation Movement) should own and manage forest resources. In the study area, ownership and access to forest resources is by birth, inheritance and acquisition. Access to this natural capital provides buffer against poverty and gives opportunity for self- employment. Women do not have direct ownership of forest lands in the study area; their access to land is regulated by male relations. However, the information in table 7 shows that forest lands in the area are owned by individuals (51.5%), families (25.7%), and communities (19.6%),

while 3.3% of the forest land is owned either by the state or local government. Land is the most important fixed asset for the cultivation of agricultural crops as well as collection of non-timber forest products. In spite of the land use decree of 1978, which vests the ownership of land in the State Governments, rural land owners still look onto forest lands as their traditional lands. Access to land in the area just like in other parts of Nigeria is based on membership of a land holding community by birth, while right to forest lands, plants, animals and water is often communal (Osemeabo, 2004).

Table 7. Forest ownership

Forest Ownership	Frequency	Percent
Individual	192	51.5
Family	96	25.7
Government	12	3.2
Community	73	19.6
Total	373	100.0

Source: Author's Analysis, 2010

Discussion

The result of analysis shows that the utilization of NTFPs varies amongst socio-economic groups in the area. The study reveals that while women search for vegetables and fruits for household consumption, their male counterpart usually go to the forest in search of animals such as grass cutter, antelope as well as other non edible plants. However, availability of NTFPs is not the only factor that determines their collection, but the socioeconomic status of the peoples. This is because it greatly determines what is collected and by whom. The study reveals that gender plays a vital role in the collection of NTFPs as well as utilization as a source of rural livelihoods. The active involvement of women as partners with their male counterparts in forest resource management should be encouraged. The study further reveals that the use of NTFPs among the communities includes for food, medicine, income generation, construction/building materials and household utensils/craft. This result however leads

support to earlier studies like those of Baer (2000) that apart from the food and medical usefulness of NTFPs, rural communities also utilize them for house construction, household utensils, firewood, artistic or cultural objects, traditional ceremony and small scale enterprises. The study indicates that the utilization of NTFPs varies across communities, as NTFPs are traditionally utilized and still provide main source of medicine, in many local areas across the study area. According to Mr. Udoette a traditional healer and Mrs. Atim a village midwife, medical substances of forest plants are important as anti-malaria drugs and for contraceptive purposes, fever treatment, fungal infection, pain, wounds, stomach ache and anti-natal treatment.

The study also reveals that the utilization of NTFPs helps to sustain rural livelihood in the area. It shows that a number of forest plants are useful for the treatment of ailments. Some products are locally traded while others are traded in wider regional markets. As noted by Jimoh (2006) the contribution of non-timber forest products to the reduction of rural poverty is a direct contribution of NTFPs to rural livelihoods. Over 75% of the country's Population lives in the rural area and more than 80% of the rural inhabitants depend directly on wood energy for cooking and preservation of foods and food additives such as fish and bush meat. For instance in the study area, majority of the households depend either wholly or partially on income generated from the sales of fuel wood, fruits, vegetables, bush meat marketing and other forest based activities, which generate lots of income. Adekunle and Bakare (2009) in similar study reported that it is a common phenomenon to see villages adjacent to forest selling bush meat along the major highway. They argued that in Nigeria, majority of rural households and large proportion of urban households depend on forest products (such as bush meat and vegetations) to meet parts of their nutritional needs. Egunjobi (2003) in his opinion posited that very large number of households generate part of their income from selling tree

products as it is commonly done in Ini local government area of Akwa Ibom State. Obviously, the economic importance of non-timber forest products have been recognized globally, although economists according to (Jimoh, 2006) have the opinion that the supply of most of them are rigid and that the increasing prices and low competitiveness for them portray their extraction as an essentially primitive activity which is likely to give way to domestication.

However, today's interest in NTFPs according to Miah (2008) is based on the argument that in order to conserve forest, we have to develop market system for NTFPs, so that people will perceive the forest as being too valuable to destroy. Nevertheless, the crucial role of NTFPs in rural livelihood cannot be overemphasized. At this juncture, it is essential to note that the genetic resources of most of these species are under intense pressure and that many of them are ecologically threatened, endangered or even extinct in a number of cases. This is particularly so when people largely depend on it for their basic needs. On this regard, sustainable extraction of these resources is necessary to safeguard the economy of the rural people. For effective conservation efforts, governing institutions and policies should include all the stakeholders (women, community leaders, hunters, village heads, traders as well as research institutes) to facilitate sustainable utilization of forest resources not just for NTFPs but also for timber forest products which are also important for rural economy and also for national developmental strategy to reduce rural poverty.

Conclusion

The livelihood of households in this study depends greatly on the range of economic activities in which NTFPs play a major role. The collection of NTFPs is the major source of income to people in rural areas particularly the poor; as they have less alternative sources of income. The use of these products adds crucial dimension to a diversified livelihood base, thus acting as a safety net particularly when there is a short fall in agricultural production to minimize

risk and fill the gap of food shortage. The major hindrances affecting utilization of NTFPs is the declining natural stock, land tenure, combined with poor market access and gender. However, to ensure the sustainability of NTFPs, it is important that the domestication of economically valuable products be given priority at the local level as well as improves trade in NTFPs to encourage domestication.

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