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## Utilization of Non-Timber Forest Products (NTFPs) in New Bussa, Nigeria

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### ABSTRACT

The study examined domestic utilization of non-timber forest products in New Bussa, Borgu Local Government Area of Niger State. Data were collected from randomly selected 100 households using structured questionnaire. Frequencies and percentages were used to analyse the data. The findings revealed the following NTFPs in the study area: charcoal, bush meat, firewood, fruits, chew stick, herbs, fish, locust beans, snails, honey, rope, and roots for herbs. Majority (61%) of the respondents considered firewood as the most important NTFPs with daily level usage of 89%. Almost half of the respondents (47%) obtained these NTFPs from the bush/forest with little or no cost, 38% bought them from the market and 15% from sawmill. Transportation was identified as the major problem encountered in the course of getting NTFPs by the respondents.

The study concluded that respondents could not do without these NTFPs in their daily domestic activities as it serves as sources of food, local herbs, employment, income generating and thus means of livelihood. The study therefore recommends that there should be public enlightenment by the government and extension workers on forest conservation and management to avoid deforestation of the existing forest, encourage tree planting and incorporate agro-forestry in the existing farming system in the study area.

**Keywords:** domestic utilization, households, livelihood, forest conservation, deforestation

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### INTRODUCTION

According to Cote (2003); a forest is an ecosystem characterised by a more or less dense and extensive tree cover, often consisting of stands varying in characteristics such as species, composition, structure, age class and associated process and commonly including meadow, streams, fish and wildlife. In recent years, forests have been increasingly recognised as rich reservoir of many valuable biological resources, not just timber. The term non-timber forest products (NTFPs) emerged as an umbrella to recognise the products derived from these various forest resources as a group. Non-timber forest products are plants and /or forest products that are valued for other purposes beside timber. They have been described as all biological materials of plant and animal origin other than wood that are extracted from the forest for human use and are mainly technological processing. Often there are no payments to the forestry department even in the form of permits for their exploitation / extraction. Values from only few non-timber forest products feature in the National Gross Domestic Products (GDP) calculations and records because of the disperse users, great variety of products, uses location and methods of exploitation. The list of NTFPs is inexhaustible specific. They include plants used for firewood, handicrafts and carvings, plants used for firewood, condiments, fodder, chemicals, medicines and even shade (Ogboho, 2014).

Over the centuries, the benefits of these NTFPs have been enduring and playing great roles in the lives of people particularly those of rural communities. NTFPs have always been and continue to be an important element of the forest resources as a whole. People are dependent upon natural resources for meeting a large number of their basic necessities of life. The type of resources and utilization patterns, however; vary by ecological zone and socio-cultural area. Food, fodder, firewood and medicine are important non-timber values of forests collected all year round in various locations as reported by Oboho, 2014.

Jimoh and Adebisi (2005) maintained that NTFPs include a vast number of edible and non-edible products gathered from the forest –by- forest edge or a team of urban people for subsistence or for local and external trade. Considering the variability and diverse nature of the NTFPs, a lot of

households are able to meet their immediate needs by collecting NTFPs from the forest while other earn income to meet other needs through marketing of NTFPs harvested (Ikojo *et al.*, 2003).

However, Etukudo, (2000) noted that forests constitute important and cheap sources of vitamins, minerals, proteins, carbohydrate and fat their contribution to human diets is immeasurable. The dietary contribution of forest trees to improve nutrition status of mankind is further enhanced by timing of their availability, which often falls at strategic period of general food shortage particularly in Nigeria (Agbogidi and ofuoku, 2007). Odebiyi and Ogunjobi, (2003) Noted that rural communities rely heavily on NTFPs as a means of generating income, sources of food and medicine thereby reducing poverty level of the people. Hence, NTFPs play a vital role in Nigeria.

NTFPs are also important for seasonally dependent agricultural system. They provide fodder and energy for livestock. They also contribute to quality of rural household diet indirectly by providing habitat for wild animals and fish. Rural households spend income realised from NTFPs to buy food to maintain their families hence dependence upon several combined and seasonal activities of NTFPs as the only one/ sure way to ensure household food security (Agbogidi, 2010)

Households world over are dependent upon natural resources for meeting a large number of their basic necessities. The type of resources and utilization pattern vary by ecological zones and socio-cultural areas. Forest provides a wide range of benefit at the local, national and global levels. (Agbogidi and Eshegbeyi, 2008) As against timber exploitation, the exploitation of NTFPs impacts very small perturbation and degradation on the ecosystem and its recuperation is very fast after extraction (Adeokun *et al.*, 2002). However, this as necessitated the study of the domestic utilization , the level of usage of these NTFPs, the sources and frequency of use of these NTFPs by the rural dwellers and the problems encountered in the course of getting the NTFPs by the rural dwellers in the study area.

## **METHODOLOGY**

New Bussa is a town in Niger state, Nigeria. It is the new site of Bussa after the Kainji Lake dam set the previous location under water. As of 2007, New Bussa had an estimated population of 24,449. New Bussa is the headquarter of the Borgu Emirate and the Borgu Local Government Area of Niger state. New Bussa is located on latitude 9<sup>0</sup>53' 0" N and longitude 4<sup>0</sup> 31' 0"E. it is made up of about 7607 households according to National primary health care, (NPHC 2015).

The population of the study area comprised of the entire household in New Bussa. The totals of one hundred and fourteen household were randomly sampled (1.5%).

A well-structured questionnaire based on the objectives of the study was used to collect data from the respondents (households). One hundred questionnaires were retrieved for the analysis. Data were analysed using descriptive statistics such as frequency and percentage.

## **RESULTS AND DISCUSSION**

### **Non-timber Forest Products in the Study Area**

Table 1: shows the common NTFPs in the study area and their likely uses. These include: charcoal, bush meat, firewood, fruits, chew sticks herbs, dyes, fish locust beans, mushroom, snails, honey, calabash and roots for herbs. This result is consistent with those identified by Oboho, 2014; Tee and Amonum, 2008; Idumah *et al.*, 2008; and Olajide 2003. All respondents (100%) reported that charcoal and firewood are widely used for domestic purposes in the study area. This is in line with the report of Aju and Uwalaka in Ijeomah and Aiyeloja (2010) that fuel wood is the primary source of sources of energy amounting for over 90% of the total energy used for domestic purposes in Nigeria. A large proportion (86%) of the respondents reported that fruits are consumed as food. This is a good source of vitamins and minerals for the households majority (77%) of the respondents use chew stick for toothbrush as this play a critical role in the dental Care and buccal hygiene of many people in Nigeria's rural and urban centres. (Aderounmu *et al.*, 2002). It was also revealed that 82% of the respondents reported that herbs are curing various ailments. This is in accordance with Aju and Uwalaka in Ijeomah and Aiyeloja (2010) that says "ever before the introduction of Western drugs in Nigeria the people depended solely on plants, animals and mineral recipes for their medical care. Adekunle (2005) also added that ethno medicine has gained much acceptance as the only alternative medical personnel and the unaffordable cost of orthodox medicine in the rural areas. However, the table corroborates the report of Odebiyi and Ogunjobi (2003) that says "rural communities rely heavily on NTFPs as a means of generating income, source of food and medicine thereby reducing the poverty level of the people".

**Table1.** Common NTFPs and their uses in the study area.

Variables (n=100)	Frequency	Percentage
<b>CHARCOAL</b>		
Cooking	100	100.0
<b>BUSH MEAT</b>		
Cooking	13	13.0
Food	87	87.0
<b>FIREWOOD</b>		
Cooking	93	93.0
food	7	7.0
<b>FRUITS</b>		
Cooking	11	11.0
Food	86	86.0
Medicine	3	3.0
<b>CHEW STICK</b>		
Cooking	9	9.0
Food	7	7.0
Cloths	7	7.0
Toothbrush	77	77.0
<b>HERBS</b>		
Cooking	2	2.0
Food	11	11.0
Medicine	82	82.0
Toothbrush	5	5.0
<b>DYES</b>		
Cooking	25	25.0
Cloths	38	38.0
Tying	29	29.0
Medicine	5	5.0
Toothbrush	3	3.0
<b>Others identified are:</b>		
Fish, locust beans		
Mushroom, snail, honey		
Ropes, calabash and		
Roots for herbs.		

**Source:** field survey, 2015

### Most Important NTFPs in the Study Area

Table 2 reveals that firewood is the most important NTFPs in the study area with 61%. This could be because fuel wood is the primary source of energy amounting for over 90% of the total energy used for domestic purposes in Nigeria. Indications also showed that more and more people will still continue to use firewood as fuel in preference to commercial fuels like Kerosine and gas as these and their appliances are costly and generally beyond the reach of the rural poor. (Aju and Uwaka in Ifeomah and Aiyeloja, 2010). Etukudo et al, (1994) and Etukudo (2000) in Ijeomah and Aiyeloja, (2010) also noted that cultural habits of the people will continue to prolong the use of fuel wood to other energy sources even among the rich and enlightened elites. Firewood as the most important NTFPs in the study area may also be because they obtain them from the forest/bush with little or no charges. (Figure 1; 47%). This is in consonance with Oboho (2014).

**Table2.** Most important NTFPs in the study area.

NTFPs	Frequency	Percentage
Firewood	61	61.0
Bush meat	18	18.0
Charcoal	4	4.0
Fruits	2	2.0
Chew stick	9	9.0
Dye	6	6.0
<b>Total</b>	<b>100</b>	<b>100.0</b>

**Source:** field study, 2015.

## SOURCE AND FREQUENCY OF USE OF NTFPs BY THE RURAL DWELLERS

Figure 1 shows the source of obtaining the NTFPs by the respondents in the study area. It reveals that 47% got their NTFPs from the bush/forest, 38% got from the market and the rest 15% got their own from sawmill. This shows that 47% of the respondents obtained NTFPs through free access to the bush/forests with little or no charges such as firewood, fruits, chew sticks, herbs, snail etc. This is in line with Oboho, (2014) purchase of some NTFPs are done in the market such as charcoal, honey, fish, snail, fruits, bush meat etc. Sawmill by-products such as rough wood, wood showings and saw dusts are used for domestic cooking with little or no cost.

From table 3, 64% of the respondents used charcoal daily while 89% used firewood daily. This could mean that the higher percentages (64% and 89%) that used charcoal and firewood daily engaged in household cooking of food thrice, twice or once daily (Kayode *et al*, 2010). The rate of cooking by the household determines the frequency of use of firewood

And charcoal. Those that used charcoal or firewood weekly, fortnightly and monthly may be using other sources of energy like kerosene, gas cooker and electric cooker. Yearly and never (5% and 4%) respondents may be top government officials who relied solely on sophisticated cooking equipment and those that cook on ceremonial and festival days for entertainment purposes using caterers especially in the urban centres.

For bush meat, 10% use it daily, 41% weekly, 4% fortnightly, 25% monthly, 10% never consume bush meat. Respondents that consume bush meat. Respondents that consume bush meat on daily, weekly and fortnightly basis may be hunters who have access to it, those who can afford it, probably preferring the task and the nutrients as well as those who travel constantly outside the study area and bought it for consumption. The low consumption could be done to the fact that the study area is protected by Kanji Lake National Park where poaching is an offence. The percentages that never eat bush meat may be those that their religion, tradition, culture or spiritual beliefs forbid it. Fruits are widely consumed on daily and weekly basis (42% and 47%) in the study area as part of their food as it is a cheap source of vitamins and minerals. (Etukudo, 2000). Majority (80%) of the households used chew stick on daily basis. This could be due to free accessibility to the forest, cheaper than tooth paste and brush and the dental care importance. This is in agreement with Aderounmu *et al*, (2002). From the same table 3, 23% used herbs daily, 29% weekly, 17% fortnightly, 21% monthly, 3% yearly and 7 never use herbs. This shows that majority of the respondents are used to herbs as remedy to ailments. This is in line with the report of Gbile (1987), FAO (1990), Adjanohoun *et al* (1991), Kaitmowitz (2007) in Ijeomah and Aiyeloja (2010) that some popular medicinal plants in Nigeria are; *Azadirachta indica* used to treat malaria, *Nicotiana tabacum* used to treat convulsion, *Parkia biglobosa* used to treat guinea worm, filariasis, skin infections, leprosy, malaria, diarrhoea, and as a poison antidote. *Khaya senegalensis* used to treat back pain pile etc. the percentage that never use herbs (7%) may be people that dislike bitter or sour taste, the medical personnel who relied on drugs and injections and those that doubt the dosage of herbs. As a result, traditional healers and herbal sellers have secured gainful employment in the rural areas (Olagoke and Adekunle, 2008 in Ijeomah and Aiyeloja, 2010).

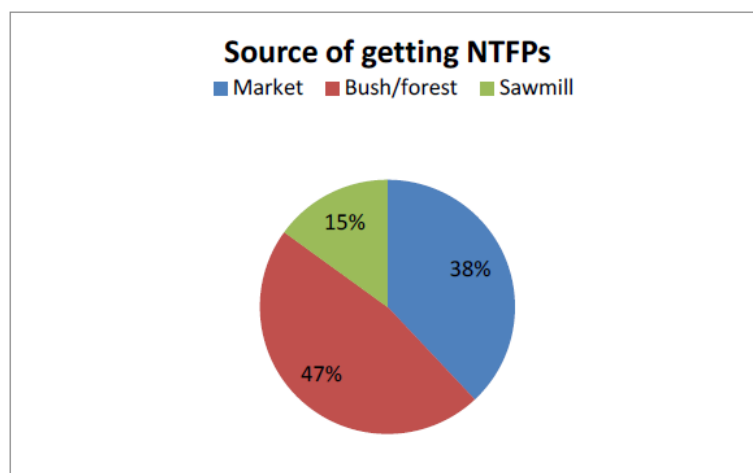


Figure1. Sources of getting NTFPs

Moreover, 30% of the respondents used dye daily 16% weekly, 8% fortnightly, 26% monthly and 20% never used dyes in the study area. The dyeing of clothes is a means of recycling used clothes to look more attractive and preservation of culture. It also generates employment and income to some groups in the rural areas, the percentage that never (20%) used dyes may be affluent people in the society who have the means of changing their wardrobe regularly with new or imported clothes.

**Table3.** Frequency of use of NTFPs by the rural dwellers

NTFPs	Frequency	Percentages
<b>Charcoal</b>		
Daily	64	64.0
Weekly	7	7.0
Fortnightly	17	17.0
Monthly	17	17.0
Yearly	5	5.0
Total	100	100.0
<b>Bush meat</b>		
Daily	10	10.0
Weekly	41	41.0
Fortnightly	4	4.0
Monthly	25	25.0
Yearly	10	10.0
Never	10	10.0
Total	100	100.0
<b>Firewood</b>		
Daily	89	89.0
Weekly	4	4.0
Fortnightly	3	3.0
Never	4	4.0
Total	100	100.0
<b>Fruits</b>		
Daily	42	42.0
Weekly	47	47.0
Fortnightly	3	3.0
Monthly	5	5.0
Yearly	3	3.0
Total	100	100.0
<b>Chew sticks</b>		
Daily	80	80.0
Weekly	10	10.0
Fortnightly	3	3.0
Yearly	7	7.0
Total	100	100.0
<b>Herbs</b>		
Daily	23	23.0
Weekly	29	29.0
Fortnightly	17	17.0
Monthly	21	21.0
Yearly	3	3.0
Never	7	7.0
Total	100	100.0
<b>Dyes</b>		
Daily	30	30.0
Weekly	16	16.0
Fortnightly	8	8.0
Monthly	26	26.0
Never	20	20.0
<b>Total</b>	100	100.0

**Major Problems Encountered In The Course Of Getting NTFPs**

Figure 2 shows the problems encountered by the rural dweller in the course of obtaining NTFPs. Transportation was identified as the major problem (36%) encountered in the course of getting

NTFPs. This is followed by high cost (21%) such as bush meat, honey e t c, 14% for both seasonality and scarcity and 15% for security. The security problem may be from the forest guards and National Park patrol team who were enforcing forest laws and policy as conservation measures for forest products and wildlife in the study area.

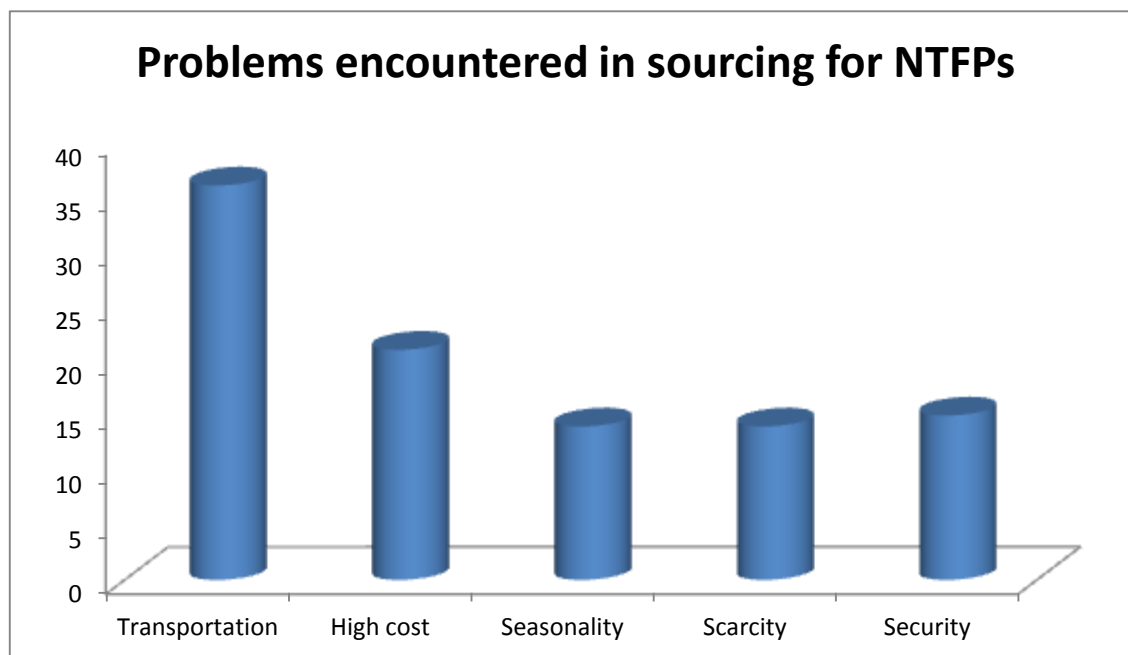


Figure2. Problems encountered in the course of getting NTFPs

## CONCLUSION

The study has identified the following as the NTFPs in the study area, charcoal, firewood, bush meat, chew sticks, herbs, dyes, fish, locust beans, mushroom, snails, honey, calabash and roots for herbs. Charcoal and firewood are widely used for cooking by the households. The study showed that firewood is the most important (81%) NTFPs in the study area for household consumption have daily level of usage of 89% while charcoal has a daily level usage of 64%. Nearly half (47%) of the respondents obtained (sources) their NTFPs with little or no cost from the forest/bush. This made NTFPs easy for them to acquire as a means of livelihood. Transportation was identified as the major bottleneck they encountered in the course of getting the NTFPs for domestic purposes. However the study concluded that majority of the respondents cannot do without using NTFPs for domestic purposes as sources of food, employment and income generating activities; this invariable improves the socio- economic status of the respondents. The study recommends that there should be public enlightenment by the government and extension workers on forest conservation and management to avoid deforestation of the existing forest, encourage tree planting and incorporate agro-forestry in the existing farming system in the study area.

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