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Adetunji SA
Forestry Research Institute of
Nigeria: Rainforest Research
Station Ore, Nigeria

Akeredolu OA
Forestry Research Institute of
Nigeria: Rainforest Research
Station Ore, Nigeria

Non-timber forest products and their benefits to rural livelihood: A case study of Saki agricultural zone of Oyo state, Nigeria

Adetunji SA and Akeredolu OA

Abstract

Like in many other developing country, the occurrence of poverty in Nigeria is on the increase. This has exposed many households to unfavourable living conditions. Non timber forest products are a blessing from nature to human, diverse and poised to benefit several millions of people. If properly exploited, they are not only capable of solving food security and health related challenges but also contribute to household income. This study assessed the benefits of NTFPs to the livelihood of rural households. Data were obtained via well structured questionnaires. Obtained data were analyzed using descriptive statistics. Findings revealed that there was high dependence on NTFPs in the study area. The study area was male dominated, the modal age range of the respondents was between 31-40 years of age. A total number of 44 invaluable NTFPs (plants and animals) belonging to 33 families were identified in the course of the study, their scientific and family names were documented alongside the morphological parts in use. Similarly, the contribution of these NTFPs to the rural household was documented. Areas of contribution include: standard of living, 30%; child education, 15%; family health, 18%; food security, 20% and income generation, 17%. No doubt, if well managed, generations to come would also be beneficiaries of these natural resources.

Keywords: Non-timber forest products (NTFPS), poverty, exploited, livelihood and morphological

Introduction

Non timber forest products (NTFPs) are plant and animal resources obtained from the forest other than timber that play a crucial role in the wellbeing of people. NTFPs are obtained as food, fodder, biomass fuel, organic fertilizers, fibres, medicine, gums, resin and construction materials. Popoola and Maishanu (1995) stated that non timber resources of the forest make an important contributions to the wellbeing of the rural poor by providing them with forest foods which are essentially dietary supplements, especially during periods in the agricultural cycle when production is low or in times of emergency.

The estimated total value of NTFPs in world trade as of today is approximately US\$ 1100 million (Kalu and Anigbere, 2011) [3]. In Nigeria, they provide about 17 million full time jobs in the formal sector and another 30 million in the informal sector, as well as 13-35% of all rural non-farm employment (Duong, 2008) [1].

The benefits obtainable from NTFPs are not limited to the rural communities as urban centres equally benefit from the finished products of these resources on a daily basis. Some of these products include Medicines, perfumes, suntan lotion, nail polish, mouth wash, hair conditioners, toiletries, peanut butter, edible nuts, herbs, canned fish etc.

With the yearly rise in poverty rate in Nigeria, it is increasingly becoming impossible for many households to meet their daily basic obligations (majorly feeding), especially in the rural areas. Availability of NTFPs provide a leeway to navigate hard times by ensuring food security, maintaining nutritional balance and contributing to healthcare system, (Jimoh and Haruna, 2007) [5]. Therefore this study assessed the contribution of NTFPs to the livelihood of rural population, a case study Saki Agricultural zone, Oyo state, Nigeria.

Methodology

This study was conducted in Saki Agricultural zone of Oyo state, Nigeria. The area was selected due to its derived savannah vegetation which supports the flourishing of all agricultural products as well as wild life. Residents of this area are predominantly farmers who rely on farm produce and non-timber forest resources for their livelihood.

Correspondence

Adetunji SA
Forestry Research Institute of
Nigeria: Rainforest Research
Station Ore, Nigeria

Multistage sampling procedure was employed in selecting the samples for this study. In the first stage, four local governments were purposively selected based on the diversity of NTFPs in these areas, three communities were randomly selected from each of the four local government in the second stage of the sampling. Finally, ten respondents were selected from each community using snowball sampling technique to arrive at a sample size of 120 respondents.

Primary data was used in the study, data were collected with the use of well structured questionnaires. The questionnaires were administered to 120 respondents to elicit relevant socioeconomic variables as well as ask questions bordering around the contribution of NTFPs to their livelihood. Collected data were subjected to descriptive statistical analysis such as tables, ranges, frequencies and percentages.

Results and Discussion

Socioeconomic Characteristics of Respondents

Majority of the respondents from the area were males (70%)

as revealed by Table 1, while only 30% were females. The modal age range was between 31 - 40 years of age (25.8%), this implies that majority of the respondents were young adults and as such were expected not to only have the knowledge of NTFPs but also, benefit from the diversity of these resources in the area. Islam was the most recorded religion (52.5%), Christianity was next with (40%) while 7.5% of the respondents practiced other religions. Table 1 further revealed that 16.7%, 60.8%, 12.5% and 10% of the respondents were single, married, divorced and widowed respectively. Most (55%) of the respondents had between 4 and 6 individuals in their household while fewer respondents (4%) had more than 15 individuals in their households. Almost 32% of the respondents had no formal education, 23.3% had primary education, while 13.3% and 12.5% had secondary and tertiary education respectively. By occupation, 54.1% of the respondents engaged in farming, almost 28% were into trading, 10% were teachers, whereas, 4.2% were civil servants.

Table 1: Socioeconomic Characteristics of Respondents

Characteristics	Frequency	Percentage
Gender		
Male	84	70
Female	36	30
Total	120	100
Age		
20-30	20	16.7
31-40	31	25.8
41-50	30	25
51-60	29	24.2
>60	10	8.3
Total	120	100
Religion		
Christianity	48	40
Islam	63	52.5
Others	9	7.5
Total	120	100
Marital Status		
Single	20	16.7
Married	73	60.8
Divorced	15	12.5
Widowed	12	10
Total	120	100
Household Size		
1-5	66	55
6-10	37	30.8
11-15	12	10
> 15	5	4.2
Total	120	100
Education Level		
No Formal Education	38	31.7
Primary	28	23.3
Secondary	22	18.3
Tertiary	15	12.5
Others	17	14.2
Total	120	100
Occupation		
Farming	65	54.1
Trading	33	27.5
Teaching	12	10
Civil Service	5	4.2
Others	5	4.2
Total	120	100

Field Survey, 2019

Non Timber Forest Product in Use in the Study Area

The prevalence of non timber forest products in the study area was revealed on table 2. A total of 44 species of plant and animal based NTFPs belonging to 34 families, in-use by the respondents in the study area were identified and documented. Plants (wild vegetables, herbs, shrubs and trees) (36), were more prevalent compared to animals (8) in the area. While animals obtained from the forests in the area by the respondents only served the purpose of protein supplement and income generation, available plants were put to several other uses. Wild vegetables were cooked as soup, leaves and herbs obtained were utilized for ethnomedicinal and condimental purposes, wild fruits were consumed for vitality, fuelwoods were fetched and used as cooking energy, palm

fronds were useful in making sheds which made their domestic chores easier, bamboo and some other trees were used for construction purposes.

It was a general consensus however among the respondents that these herbs are potent in treating several kinds of illnesses in adults, children and even infants. Some of the illnesses outlined to be cured by these herbs by the respondents include: Malaria, typhoid, dysentery, high fever, cold and cough, erectile dysfunction, measles, snake bite, skin rash, pile, convulsion, stroke, diabetes, acne, decongestion of the bowels, various kinds of inflammation. This is corroborated by the findings of Jonah I.J, *et al.*, (2013)^[2] where many of these NTFPs were found to be potent in remedying several health challenges.

Table 2: Biodiversity of Non Timber Forest Products in the Area

S/N	Local Name	Scientific Name	Family	Biota	Uses	Parts Used
1.	Abura	<i>Mitragyna ciliata</i>	Rubiaceae	Plant	Medicine	Leaf and Bark
2.	Afon	<i>Treulia africana</i>	Moraceae	Plant	Food and Medicine	Seed and Fruit
3.	Agbalumo	<i>Chrysophyllum albidum</i>	Sapotaceae	Plant	Supplement and Medicine	Fruit and Leaves
4.	Agbayun	<i>Synsepalum dulcificum</i>	Sapotaceae	Plant	Fruit and Medicine	Fruit
5.	Aidan	<i>Tetrapleura tetraptera</i>	Mimosaceae	Plant	Medicine	Fruit
6.	Akan	<i>scylla serrata</i>	Brachyura	Animal	Food	Entire Body
7.	Apon	<i>Irvingia gabonensis</i>	Irvingiaceae	Plant	Soup	Seed
8.	Asala	<i>Tetracarpidium conophorum</i>	Euphorbiaceae	Plant	Fruit and Medicine	Fruit
9.	Ataare	<i>Aframomum melegueta</i>	Zingiberaceae	Plant	Medicine	Fruit & Seed
10.	Ata ile	<i>Zingiber officinale</i>	Zingiberaceae	Plant	Spices	Root
11.	Ayuu	<i>Allium sativum</i>	Alliaceae	Plant	Medicine	Fruit
12.	Dongoyaro	<i>Azadirachta indica</i>	Meliaceae	Plant	Medicine	Leaf, Bark & Root
13.	Ebolo	<i>Crassocephalum crepidioides</i>	Asteraceae	Plant	Soup	Entire Plant
14.	Egun	<i>Ceiba pentadra</i>	Malvaceae	Plant	Medicine & Soup	Entire Plant
15.	Ejinrin	<i>Momordica foetida</i>	Cucurbitaceae	Plant	Medicine	Leaf
16.	Eledę Igbo	<i>Sus scrofa</i>	Suidae	Animal	Protein Source	Meat
17.	Elegede	<i>Cucurbita pepo</i>	Cucurbitaceae	Plant	Dietary Supplement	Fruit & Leaf
18.	Eru	<i>Croton lobatus</i>	Euphorbiaceae	Plant	Medicine	Entire Plant
19.	Etiponnla	<i>Boerhavia diffusa</i>	Nyctaginaceae	Plant	Soup	Leaf
20.	Eworo Igbo	<i>Oryctolagus cuniculus</i>	Leporidae	Animal	Protein Source	Meat & Wool
21.	Ewuro	<i>Vernonia amygdalina</i>	Asteraceae	Plant	Medicine & Soup	Leaf
22.	Igala	<i>Tragelaphus scriptus</i>	Bovidae	Animal	Protein Source	Meat
23.	Igbin	<i>Achatina spp</i>	Muricidae	Animal	Food and Medicine	Meat & Shell
24.	Iru	<i>Parkia biglobosa</i>	Leguminosae	Plant	Spice and Medicine	Entire Plant
25.	Iteji	<i>Gongronema latifolium</i>	Asclepiadaceae	Plant	Soup and Medicine	Leaf
26.	Iyere	<i>Piper guineense</i>	Piperaceae	Plant	Medicine	Leaf and Seed
27.	Kajuu	<i>Anacardium occidentale</i>	Anacardiaceae	Plant	Food and Medicine	Leaf and Fruits
28.	Obi Edun	<i>Cola laurifolia</i>	Malvaceae	Plant	Medicine	Fruit
29.	Odu	<i>Solanum americanum</i>	Solanaceae	Plant	Medicine and Soup	Fruit and Leaf
30.	Ogbọ	<i>Parquetina nigrescens</i>	Asclepiadaceae	Plant	Food	Leaf, Bark & Root
31.	Okerę	<i>Sciurus Spermophilus</i>	Sciuridae	Animal	Protein Source	Meat
32.	Okete	<i>Cricetomys emini</i>	Nesomyidae	Animal	Protein Source	Meat
33.	Olu	<i>Agaricus campestris</i>	Agaricaceae	Plant	Soup	Entire Plant
34.	Opaarun	<i>Oxytenanthera abyssinica</i>	Poaceae	Plant	Construction	Stem
35.	Ope	<i>Elaeis guineensis</i>	Arecaceae	Plant	Food and Shelter	Fond and Fruit
36.	Ori	<i>Butyrospermum paradoxum</i>	Sapotaceae	Plant	Food and Cosmetics	Seed
37.	Oro	<i>Irvingia wombulu</i>	Irvingiaceae	Plant	Food	Fruit
38.	Orogbo	<i>Garcinia kola</i>	Clusiaceae	Plant	Multipurpose	Fruit
39.	Oruwọ	<i>Morinda lucida</i>	Rubiaceae	Plant	Multipurpose	Entire Plant
40.	Oya	<i>Thryonomys swinderianus</i>	Thryomyidae	Animal	Protein Source	Meat
41.	Pandoro	<i>Kigelia africana</i>	Bignoniaceae	Plant	Medicine	Fruit
42.	Pako	<i>Massularia acuminata</i>	Rubiaceae	Plant	Tooth Hygiene	Branch and Stem
43.	Taba	<i>Nicotiana rustica</i>	Solanaceae	Plant	Medicine	Leaf
44.	Yerepe	<i>Crotalaria retusa</i>	Fabaceae	Plant	Green Manure & Medicine	Leaf and Root

Field Survey, 2019

Benefits of NTFP to the Livelihood in the Study Area

Table 3 revealed that NTFPs in the study area have improved the standard of living of almost 30% of the respondents who have directly benefited from forest resources over time, in provision of food, shelter and more importantly, income. This

has translated to improvement in their standard of living.

About 15% of the respondents claimed that without the availability of NTFPs in the areas, they could not have afforded to train their children in school. By implication, the availability of NTFPs in the areas have supported their

economic obligations mostly via income generation.

Rural dwellers are predisposed to various kinds of health challenges due to the unavailability of basic amenities in such areas, table 3 further revealed that close to 18% of the respondents and their family members utilized NTFPs for solving various health related problems. Wild vegetables and herbs, leaves, fruits, bark, roots, pulp etc. were some of the NTFPs obtained from the forest by the respondents to treat common health problems.

Rural poverty in Nigeria is at endemic stage, where over 69% are in acute poverty, (NBS, 2012) [4]. Consumption is a vital indicator in the livelihood of an individual without which millions would be malnourished and die daily of starvation, a little over 20% of the respondents in the study indicated that NTFPs (Plants and Animals) have immensely benefited their lives through daily provision of food and nourishment thereby ensuring their food security as revealed by table 3.

Income generation is of great importance as it ensures the economic fluidity of the respondents household. All the other contributions identified in the study would be constrained in the absence of income generation. Thus, table 3 revealed that 17% of the respondents directly benefited from NTFPs in the area by engaging in the sales of resources fetched from the forest in open markets surrounding the area. Some of the marketable NTFPs obtained in the area include; fishes, snails, bush-meats, wild vegetables and fruits, herbs, fuelwood, oil palm etc. A few other respondents (about 6%) also utilized the NTFPs but didn't reveal how they benefited from them.

Table 3: Contribution of NTFPs to the Livelihood of Respondents

Contribution	Frequency	Percentage
Standard of living improvement	85	24.9
Children's Education	50	14.6
Family Health	60	17.5
Food Security	70	20.4
Income Generation	58	17
Others	19	5.6
Total	342	100

Field Survey, 2019

Conclusion

The availability of non timber forest products in our environments is of great importance and cannot not be underestimated. The diversity of these resources have contributed immensely to the livelihood of rural populations. Thus, this study revealed that the study area was male dominated, small to medium scale agriculture was their major occupation, households relied majorly on the NTFPs to meet their daily nutritional requirement as well as financial obligations. These resources play a pivotal role in the livelihood of the respondents through income generation which guarantees them economic sustenance and food security. There was also a very high level of dependence on NTFPs as remedy by respondents for healthcare challenges especially as basic health facilities are not available in such areas.

From the foregoing, it safe to say that NTFPs are a blessing to the rural population and as such should be exploited sustainably so that generations to come would benefit from these multipurpose natural resources.

References

1. Duong N. The Role of Non-timber Forest Products in Livelihood Strategies and Household Economics in a Remote Upland Village in the Upper ca River Basin, Nghe the Phuong. Journal of science and Development.

2008; 1:88-98.

2. Jonah IJ, Marcus SN, Ilori IA. Economics of non-timber forest products (NTFPs) in Oyo-state, Nigeria. IOSR Journal of Humanities and Social Science (IOSR-JHSS). 2013; 18(4):01-18. e-ISSN: 2279-0837, p ISSN: 2279-0845. www.iosrjournals.org
3. Kalu C, Anigbire RF. Social Benefits of Non-Timber Forest Products (NTFPs): An Assessment of Employment Generation from NTFPs Enterprises in Benin Metropolis, Edo State, Nigeria. Nigeria Journal of Agriculture and Environment. 2011; 7(2):30-35.
4. NBS. Poverty Profile for Nigeria. Nigerian Bureau of Statistics, Abuja, Nigeria, 2012.
5. Jimoh SO, Haruna EA. Contributions of Non-Timber Forest Products to Household food security and income around Onigambari forest reserve, Oyo State, Nigeria. Journal of Environmental Extension. 2007; 6:28-33.