



Original Scientific paper

Originalni naučni rad

DOI: 10.5937/POLJTEH2501023C

CONTRIBUTION OF NON-TIMBER FOREST PRODUCTS TO LIVELIHOODS OF RURAL DWELLERS IN IGABI LOCAL GOVERNMENT AREA OF KADUNA STATE, NIGERIA

Oluyinka Christopher Ariyo*

*Department of Entrepreneurship and Innovative Agriculture,
Federal College of Forestry Mechanization, Afaka, Kaduna State, Nigeria
Forestry Research Institute of Nigeria, Ibadan, Nigeria*

Abstract: Non-Timber Forest Products (NTFPs) are major source of livelihoods to the rural dwellers. It provides essential food and nutrition, medicine, fodder, thatch and construction materials, mulch and non-farm income for rural households. NTFPs has not been given due attention regardless of its contribution to the livelihoods improvements of the rural communities. The study examined the contribution of Non-Timber Forest Products (NTFPs) to the livelihoods of rural dwellers in Igabi Local Government Area of Kaduna State. Two-staged sampling techniques were used for the study. Four districts were selected purposively and random sampling was used to select 80 respondents from four communities within the selected districts. Data were collected with well structured questionnaires and presented with mean, percentage and frequency distribution while Likert Scale and Chi- square were used to analysed the data. The results showed that 41.25% of the respondents are famers, male (78.75%), age range between 31-40 years (38.75%), married (63.75%) with household size of 11-15 (47.50%) members, had primary school education (30.00%) and with experience of 11 to 15 years (48.75%) in the use of NTFPs. Sixteen different types of NTFPs were available, most commonly collected and most often used for food, medicine, cooking, construction and preservation. These NTFPs were mushrooms, fruits and nuts, vegetables, seeds, bushmeat, medicinal plants, snails, leaves, poles, firewood, ropes, pegs, stakes, honey, bamboo and locust beans. Most of the respondents obtained their NTFPs from the market, forest and farms.

*Corresponding Author. E-mail address: ask4ariyo@yahoo.com

ORCID: 0000-0001-8512-9433

The average income obtained from NTFPs per respondent per month was ₦ 32,250. It was observed NTFPs contributes significantly ($X^2 = 34.73$) to the livelihoods of the respondents.

The study concludes that the NTFPs generate income, serves as sources of food security, medicine, providing multiple social and cultural values thereby increasing the overall livelihoods of the rural dwellers in the study area.

Key words: Rural dwellers, livelihoods, NTFPs, market, forest, income, medicinal plants

INTRODUCTION

Forests provide goods and services which are mainly timber and non-timber forest products. The importance of NTFPs to people from all corners of the world is evident in the enormity and variety of species collected for personal consumption and as a source of income [13]. The awareness of the importance of NTFPs as one crucial benefit from forests coupled with a desire to conserve forest while making life better for millions of rural people has made NTFPs the object of many research and development interventions. The terms non-timber forest products (NTFPs) and non-wood forest products (NWFPs) are used interchangeably. They are products of biological origin, other than wood, derived from forests, other wooded land and trees outside forests. NTFPs may be gathered in the wild or from trees outside forests or produced in forest plantations and agroforestry schemes. Examples of NTFPs include food additives (edible nuts, mushrooms, honey, fruits, herbs, spices and condiments, aromatic plants, game); fibres (used in construction, furniture, clothing or utensils); resins and gums; and plant and animal products (used for medicinal, cosmetic or cultural purposes) [9].

The importance of non-timber forest products (NTFPs) to the livelihoods of the rural dwellers are numerous and indispensable. It constitute an important sources of livelihoods for million of people across the world. In India alone it is estimated that over 50 million people are dependent on NTFPs for their subsistence and cash income [18]. According to [8], 80 % of the developing world population meets health and nutritional needs by using NTFPs. [2] stated that NTFPs play an important role in the socioeconomic, cultural and political system of rural and urban communities. [14] reported the contribution of NTFPs to rural household income and food security in Zambia as well its influence on the national economy.

Forest-based activities in developing countries Nigeria inclusive, which are mostly in NTFPs area, provide an equivalent of 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 [6]. NTFPs are important forest products especially in dry land areas where they form alternative sources of livelihoods. They also contribute to poverty alleviation through generation of income providing food and improved nutrition, medicine and foreign exchange earnings [4]. There is therefore a growing awareness of the contributions of NTFPs to household economies, food security, national economies and conservation of biodiversity.

Non-Timber Forest Products provide food, medicines, fibres and cash income for rural households [16].

The importance of non-timber forest products goes beyond meeting basic needs since the products are also among the rapidly growing markets sectors. The estimated total value in world trade on NTFPs as of 2011 is approximately US \$1,100 Million [12]. Indication is that the marketing has grown by nearly 20% annually in the last couple of years [11]. Future development of NTFPs offers potentials for increasing income, expanding opportunities and diversifying enterprises in rural areas. People all over the world have been living on NTFPs because these come in a variety of items namely: food, forage, roughage, medicine, fuel, fibres, tannin, resins oils, spices and a host of others [9].

In Kaduna State, many rural communities exist within and around forest areas especially Afaka forest reserve where the study areas are located. The rural dweller in these communities utilizes NTFPs and the contributions of NTFPs to their livelihoods have not been study. There is therefore research gap in terms of the types and availability of NTFPs, variability of uses and dependence on NTFPs within the rural communities. It is against these backdrops the research was conceived with the objectives to examine the socio-economic characteristics of respondents, identify the available NTFPs, sources and uses in the study area, examine the income derived by the respondents from NTFPs and assess the contribution of NTFPs in improving livelihoods of the respondents. The hypothesis of the study stated in the null form that NTFPs does not contribute to the livelihoods improvement of the rural dwellers.

MATERIALS AND METHOD

Study Area

The study was conducted in Igabi Local Government Area (LGA) of Kaduna state. The Local Government was created out of Zaria Local Government in 1989 with its headquarters at Turunku, located in the northern part of the state. It covers an area of about 3,222 km² with population of 581,500 [15]. It lies between the latitude 10° 59' 25"N and 10° 32' 33"N and longitude 7° 31' 26"E and 7° 31' 21"E on the equator. The local government has twelve wards namely: Afaka, Birnin Yero, Gadan Gayan, Gwaraji, Igabi, Kerewa, Kwarau, Rigachikun, Rigasa, Sabo Birnin Daji, Turunkun and Zango Aya, it shares boundaries with Giwa and Kaduna North LGA to the North and with Sabo to the East, Birnin Gwari and Giwa LGA to the west and Igabi LGA to the south. The climate ranges from Sahel to Sudan savannah with average rainfall of 1025mm/annum, falling between May to October which last for about 4 - 5 months a year. The ethnic groups in the study area comprises of Gbagyi predominantly, Hausa Kataf, Igbo, Fulani and Yoruba. The main occupation is farming, crops cultivated include; rice, yam, maize, guinea corn, millet and cassava, while animals such as goat, sheep and cow are reared.

Methods of Data Collection

Primary data were collected with structured questionnaires designed to capture the objectives of the study. The questionnaires were administered to the respondents by personal interview method. The respondents were allowed to respond and expressed their opinion freely to the questions asked. More responses were obtained from the respondents by probing.

Sampling Techniques

Two-staged sampling techniques were adopted for this study. The first stage was the purposive selection of four wards that are closer to the Afaka forest reserve. The wards selected are Afaka, Rigasa, Rigachikun, and Sabon Birnin Daji. In each ward, one community were selected, these are Gidandogo (4.3 km), Hayindamani (5 km), Old Afaka (15 km) and Kadoge (21 km). The second stage involved random selection of 10, 30, 25 and 15 respondents respectively from each community, making eighty (80) respondents as sample size used for the study.

Data Analysis

The data collected were presented with descriptive statistics such as mean, percentage, frequency distribution and tables. The contribution of the NTFPs to the livelihoods improvement of the rural dwellers were analysed with Likert Scale. Four points likert scale of mostly contributed, contributed, less contributed and not contributed of NTFPs to the livelihoods of the rural dwellers were used, and assigned with the ranks values of 1, 2, 3, and 4 respectively. The hypothesis which stated that NTFPs does not contribute to the livelihoods improvement of the rural dwellers was analysed and tested with Chi-Square model.

Chi-Square mathematical model is given as:

$$X^2 = \sum \frac{(F_o - F_e)^2}{F_e}$$

Where: X^2 = Chi-square, $\sum$ = Summation sign, F_o = Observed frequencies, F_e = Expected frequencies

RESULTS AND DISCUSSION

Socioeconomic Characteristics of the Respondents

The socio- economic characteristics of the respondents is presented on Table 1. The table showed that 78.75% of the respondents were male and 21.25% female. This showed that males are more in the study area than female. The age distribution of the respondents showed that the highest age range is found between 31-40 years which constituted 38.75%. 21.25% and 17.50% are between the age range of 41-50 and 21-30 years respectively. Only 12.50% of the respondents are within 11-20 years of age.

The average age of the respondents was 35 years. This means that the respondents are youths and were still in their active age. This could lead to more and constant exploitation of NTFPs for their subsistence needs.

In terms of marital status, 63.75% of the respondents are married, 21.25% are single, the percentage of those divorced and widowed are 8.75% and 6.25% respectively. This indicates that majority of the respondents were married showing the significance of NTFPs in contributing to the livelihoods of the respondents.

A larger percentage (47.50%) of the respondents has household size of 11-15 members. High household size means more household/ family labour available for forest products collection. 33.75%, 11.25% and 7.50% has household size within 6-10, 1-5, and above 16 members respectively. The mean household size of the respondents was 11 members.

The educational status revealed that, 52.50% of the respondents has formal education among which 15.00% has secondary school education, 30.00% has primary school education while 7.50% has tertiary education. The percentage of respondents that has non-formal education was 47.50%. This showed that more than half of the respondents are educated. According to [19], education is one of the important human capitals, which plays important role in determining household status in the society.

A high level of illiteracy often leads to over-exploitation of forest resources [1], while greed makes the educated to over-exploit resources. The average years of schooling of the respondents as estimated by this study was 15 years.

The occupation of respondents revealed that 41.25% are famers, followed by 32.50% and 11.25% who are traders and civil servants. Only 15.00% are engaged in herbs selling. Table 1 further showed that 48.75% of respondents has 11-15 years of experience in the use of NTFPs for their livelihoods improvement, 31.25% has 6-10 years experience, 16.25% and 3.75% has 1-5 and above 16 years of experience respectively.

Table 1. Socio-economic characteristics of the respondents

Socio-Economic Variables	Frequency	Percentage	Mean
Gender			
Male	63	78.75	
Female	17	21.25	
Age			
11-20	10	12.50	
21-30	14	17.50	
31-40	31	38.75	
41-50	17	21.25	
Above 50	8	10.00	
Mean			35
Marital status			
Single	17	21.25	
Married	51	63.75	
Divorced	7	8.75	
Widowed	5	6.25	
Household size			
1-5	9	11.25	
6-10	27	33.75	
11-15	38	47.50	
Above 16	6	7.50	
Mean			11
Educational Level			
Non formal education	38	47.50	
Primary education	24	30.00	

Contin. Table 1.			
Secondary education	12	15.00	
Tertiary education	6	7.50	
Average year of Schooling			15
Occupation			
Farming	33	41.25	
Trading	26	32.50	
Civil servant	9	11.25	
Herb seller	12	15.00	
Years of experience			
1-5	13	16.25	
6-10	25	31.25	
11-15	39	48.75	
Above 16	3	3.75	
Mean			10

Source: Field Survey (2022).

Types of Non- Timber Forest Products (NTFPs) available and their uses

The types of Non-Timber Forest Products (NTFPs) available in the study area and their uses by the respondents are presented on Table 2. From the table, sixteen different types of NTFPs were available, this includes mushrooms, fruits and nuts, vegetables, seeds, bushmeat, medicinal plants, snails, wrapping leaves, poles, firewood, ropes, pegs, stakes, honey, bamboo and locust beans. The most commonly collected and most often used based on availability are firewood (19.17%), locust bean (11.18%), leaves (8.62%), vegetables (7.99%), snail (7.67%) and honey (7.03%) respectively. The most commonly collected and often used NTFPs from the study of [17] are vegetables, bush meat, chewing sticks, mushroom, wrapping leaves, construction poles, fruits and nuts. According to [5], NTFPs include fruits and nuts, vegetables, medicinal plants, gum and resins, bamboo, rattans and palms; fibres and flosses, grasses, leaves, seeds, mushrooms, and honey.

In term of uses, the respondents affirmed that most of the NTFPs found in the study area are consumed as food or as condiments to enhance soup flavour. [3] stated that NTFPs can be used to supplement diets thus contributing to food security and increasing the diversity of foods necessary to reduce the monotony in the diets of the rural and urban people. In this study, some NTFPs were consumed because of their medicinal properties to treat different types of diseases. This agreed with [5] which stated that NTFPs are major source of Healthcare alternative to the rural communities.

Some of the NTFPs are used for preservation, building, electricity pole, telegraphic pole, cooking, construction and to tight goods. Others are used for agricultural activities such as pegging, marking out of land and staking (Table 2).

The ranking of NTFPs by the respondents were based on their preference for NTFPs, it revealed that firewood was ranked first, followed by bushmeat and locust bean which were ranked 2nd, vegetables was ranked 3rd. Mushroom, snail and nuts/ fruits occupied equal rank of 4th; medicinal plants, honey and bamboo had equal rank of 5th, pole was ranked 6th, ropes, pegs and stakes had equal rank of 7th while leaves and seeds occupied 8th rank, and 9th respectively.

Table 2. Types and uses of NTFPS from the study area

S/n	NTFPs	Uses	Frequency*	Percentage	Rank
1	Mushroom	Food	02	0.64	4
2	Nut and fruits	Food	12	3.83	4
3	Vegetables	Food	25	7.99	3
4	Seed	Food, medicine	15	4.79	8
5	Bush meat	Food, medicine	20	6.39	2
6	Medicinal plants	Medicine	5	1.60	5
7	Snail	Food, medicine	24	7.67	4
8	Wrapping leaves	Preservation, Wrapping	27	8.62	8
9	Poles	Building, electricity, telegraphic pole	15	4.79	6
10	Firewood	Cooking	60	19.17	1
11	Ropes	Tighten of goods	7	2.24	7
12	Pegs	Marking out	16	5.11	7
13	Stake	Yam staking	10	3.19	7
14	Honey	Food, medicine	22	7.03	5
15	Bamboo	Construction, staking	18	5.75	5
16	Locust beans	Food	35	11.18	2
	Total		313		

Source: Field Survey (2022). *Multiple responses

Sources of Non-Timber Forest Products in the study area

The sources of NTFPs as presented on Table 3 showed that 36.25% of the respondents obtained the NTFPs from farm/ forest/ market, 18.75% and 12.50% got the NTFPs from market and forest only while 11.25% and 6.25% source for NTFPs from farm/market and forest/ market. The percentages of respondents that collect the NTFPs from farm only are equal to those collecting from farm/ forest, 7.50% respectively. [10] in their research stated that the major ways of getting NTFPs by his respondents was from market only (63%), personal farm (23%), market/ free areas, free areas/ forest reserve and market/ personal farm contributed 3% each. Sources such as forest reserve only, and personal farm/ forest reserve had 2% each while free areas only, personal farm/ free areas and market/ forest reserves each had 1% respectively. It can be inferred from the table that forest and market serve as an important source of NTFPs to the respondents of the study area.

Table 3. Distribution of sources of Non-Timber Forest Products in the study area

Sources	Frequency	Percentage
Farm only	6	7.50
Forest only	10	12.50
Market only	15	18.75
Farm/ Forest	6	7.50
Farm/ market	9	11.25
Forest/ market	5	6.25
Farm/ Forest/ Market	29	36.25

Source: Field Survey (2022).

Monthly Income obtained from NTFPs in the study Area

Table 4 showed the monthly income accrued to the respondents from NTFPs. The highest percentage (36.25%) of the respondents obtained ₦ 20,000- ₦ 30,000 per month. 21.25%, 15.00% and 12.50% of the respondents received between 10,000 - 20,000, 40,000- 50,000 and ₦ 30,000- ₦ 40,000 respectively. Very view respondents (8.75% and 6.25%) of the study area acquired highest income of ₦ 50,000- ₦ 60,000 and ₦ 60,000- ₦ 70,000 respectively. The average income obtained from NTFPs per respondent per month was ₦ 32,250. This showed that Non-Timber forest Products contributed to the household income. According to [5] the income obtained from the sale of NTFPs enables farmers to meet their basic needs and those of their families (purchase of medicinal products, kerosene, soap and clothes; construction of houses; payment of dowry and school fees). It also assists them to finance other lucrative activities such as purchase of pesticide for cocoa plantation. Income received from the sale of NTFPs can also help rural communities invest in water and electrification projects. In this study, NTFPs does not only generating income, it contributes significantly to food security, and household health care, providing multiple social and cultural values thereby increasing the overall livelihoods of the rural dwellers in the study area. However, the income realised per month per respondent is just a little above the minimum wage paid to workers by Federal Government of Nigeria and the income is no doubt plays an important role in meeting the financial needs of the respondents which directly improves their standard of living and consequently alleviate their level of poverty, similar report was made by [7].

Table 4. Distribution of monthly income obtained from NTFPs
by the respondents of the study area

Monthly income	Frequency	Percentage
10,000- 20,000	17	21.25
20,000- 30,000	29	36.25
30,000- 40,000	10	12.50
40,000- 50,000	12	15.00
50,000- 60,000	7	8.75
60,000- 70,000	5	6.25
MEAN= 32,250		
Total	80	100

Source: Field Survey (2022).

Contribution of NTFPs to the Livelihoods Improvement of the Rural Dwellers

The contribution of NTFPs in improving the livelihoods of the respondents was measured with four points Likert scale of mostly contributed, contributed, less contributed and not contributed. Table 5 showed that 61.25% of the respondents stated that NTFPs contributed to the livelihoods improvements of the rural dwellers, 35.00% and 3.75% affirmed that NTFPs mostly contributed and less contributed to the livelihoods improvement.

The result showed that NTFP contributed to the livelihoods improvement of the rural dwellers. This agreed with the statement of [5] that NTFPs have influence on livelihoods both globally and nationally.

Table 5. Distribution of the contribution of NTFPs to the livelihood's improvement of the respondents

Effective	Frequency	Percentage (%)
Mostly contributed	28	35.00
Contributed	49	61.25
Less contributed	3	3.75
Not contributed	0	0
Total	80	100

Source: Field Survey (2022).

Test of Hypothesis of Contribution of NTFPs to the Livelihoods Improvement of the Rural Dwellers

The Chi square test of significance of the contributions of NTFPs to the livelihoods improvement of the respondents on Table 6 revealed the calculated Chi- square value of 34.73 (X^2 statistics) was greater than the tabulated value of 16.64 (X^2 critical) at 0.01 percent probability level. This showed that the X^2 -statistics was significant, therefore the null hypothesis (H_0) which states that NTFPs does not contribute to the livelihoods improvement of the rural dwellers in the study area is hereby rejected and the alternative hypothesis (H_A) accepted. This showed that NTFPs contributes to the livelihood's improvement of the respondents.

Table 6. Chi-Square analysis of the contribution of NTFPs to the livelihoods improvement of the respondents

Chi-Square variables	Rank	f_o	$R + f_o$	Total	f_e	$f_e - f_o$	$(f_o - f_e)^2$	$(f_o - f_e)^2 / f_e$	Tabulated Value@1%
Mostly contributed	1	28	29	57	50.67	22.67	513.93	10.14	
Contributed	2	49	51	100	88.89	39.89	1591.21	17.90	
Less contributed	3	3	6	9	8	5	25	3.13	
Not contributed	4	0	4	4	3.56	3.56	12.67	3.56	
Total		80	90					34.73	16.64

Decision rule: If f -calculated is greater than f -tabulated, H_0 is rejected and H_A is accepted

CONCLUSION AND RECOMMENDATIONS

The study concluded that majority of the respondents are farmers, age range between 31-40 years, married, with household size of 11-15 members, educated with primary school education and having experience of 11 to 15 years in the use of NTFPs.

Sixteen different types of NTFPs such as mushrooms, fruits and nuts, vegetables, seeds, bushmeat, medicinal plants, snails, leaves, poles, firewood, ropes, pegs, stakes, honey, bamboo and locust beans were available, most commonly collected and most often used for food, medicine, cooking, construction and preservation.

Majority of the respondents obtained their NTFPs from the market, forest and farms. The average income obtained from NTFPs per respondent per month was ₦ 32,250. The study further concluded that the NTFPs generate income, serves as sources of food security, medicine, providing multiple social and cultural values thereby increasing the overall livelihoods of the rural dwellers in the study area.

The NTFPs was found to be effective in contributing to the livelihoods of the respondents. The study therefore concluded that there is need for domestication, conservation and planting of NTFPs in gardens and compounds to support livelihoods of the people.

REFERENCES

- [1] Adekunle, M. F., Ojo, L. O. and Oluwalana, S. A. 2002. Environmental resources utilisation: A case study of forest plant in traditional health care in Ogun State, Nigeria. *Int. Journal Usuf Mngt.* 3 (1 &2): pp.19-24
- [2] Bedia, S. 2014. Study on the forest based livelihood for the selected tribal population of Ranchi district of Jharkhand. B.Sc. Dissertation, Unpublished. Faculty Centre for Integrated Rural and Tribal Development and Management, School of Agr. and Rural Development. Ranchi, India
- [3] Bolanle-Ojo, O. T. and Onyekwelu, J. C. 2014. Socio economic importance of *Chrysophyllum albidum* G. Don. In Rainforest and Derived Savanna ecosystems of Ondo State, Nigeria. *European Journal of Agriculture and Forestry Research*, 2(3): pp.43-51
- [4] Chikamai, B.N. and Kagombe, J. (2002): Country Report for Kenya. In: *Review and synthesis on the state of knowledge of Boswellia spp. and commercialisation of Frankincense in the drylands of Eastern Africa*. KEFRI, Nairobi.
- [5] David O. E, Jimoh K. A, Oyewole S. O. and Ayeni A. E. 2019. Non-Timber Forest Products (NTFPs) as a means of Livelihood and Safety Net among the Rurals in Nigeria: A Review. *American Journal of Science and Management* 6 (1) (2019). pp.27-31.
- [6] Duong, N.H. 2008. 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* 1., pp.88-98.
- [7] FAO. 2012. Food and Agricultural Organization of the United Nations. Rome
- [8] FAO. 2002. Non-Wood Forest Products in 15 Countries of Tropical Asia: An Overview. Bangkok: FAO Regional Office for Asia and the Pacific.
- [9] FAO.1991. Forest Industry Crucial for Overall Socio-Economic Development *Unsylva* 42:167.
- [10] Folayan, B. O., Akinbowale, A.S., Adetula, O. I., Adeniji, O. A., Tolorunju, M. S. and Adeyekun, O. J. 2022. Contributions of Non-Timber Forests Products to Household Economy in Akure Metropolis, Ondo State, Nigeria, *Proceedings of the 43rd Annual National Conference of Forestry Association of Nigeria*, pp. 199-207
- [11] Hammett, A.L. and Chamberlain, J.L. 1998. Sustainable Use of Non Traditional Forest Products: Alternative Forest-Based Income Opportunities. In: Proc. of the conference, Natural Resources Income Opportunities for Private Lands. Univ. of Maryland, Cooperative Ext. Serv., College Park, Md. pp. 141-147.
- [12] Kalu, C. and Anigbere, R.F. 2011. 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*, 7 (2): pp. 30-35.

- [13] Lawal, I. O., Igboanugo, A. B. I., Osikarbor, B., Duyilemi, O. P., Adesoga, A. A., Borokini, T. I. and Adeyanju, A. 2010. Evaluation of plant-based non-timber forest products (NTFPs) as potential bioactive drugs in Southwestern Nigeria. *Journal of Clinical Medicine and Research* 3(4): pp. 61- 66.
- [14] Mulenga, P.B, Richardson, R.B, Mapemba, L. & Tembo, G. 2011. Contribution of Non- Timber Forest Products to Rural Income in Zambia. Policy Synthesis food security Research Project, Zambia. Ministry of Agriculture and Cooperatives, agricultural Consultative Forum, Lusaka, Zambia. No 46. <http://www.aec.msu/fs2/zambia/Index.htm>.
- [15] NPC. 2006. National Population Commission, Federal Office of Statistics. Census 2006.
- [16] Okafor, J.C., Omoradion, F.I. and Amaja, L.1994. *Non-Timber Forest Products (Nigeria):* Consultancy Paper prepared by the Tropical Forest Actions Programme (TFAP) Forest Management, Evaluation and Co-ordination Units (FORMECU) and Federal Department of Forestry (FDF) Abuja, Nigeria. p. 8.
- [17] Oyerinde, O.V. 2015. Contributions of Non-Timber Forest Products (NTFPs) to household economy of rural dwellers in the tropical forest zone of Ondo State, Nigeria, *Forests and Forest Products Journal*, Forest and Forest Products Society 8: pp.1-9
- [18] Shankar, S.S., Rai, A., Ankamwar, B., Singh, A., Ahmad, A. and Sastry, M. 2004. Biological synthesis of triangular gold nano prisms. *Nature materials* 3(7): pp.482-488.
- [19] Stoian, D. 2003. Making the best of two worlds: rural and peri-urban livelihoods options sustained by non-timber forest products from the Bolivian Amazon. *Paper presented at the International Conference on Rural Livelihoods, Forests and Biodiversity, 19-23 May 2003, Bonn, Germany.* p. 23.

DOPRINOS ŠUMSKIH PROIZVODA ŽIVOTU RURALNIH STANOVNIKA U PODRUČJU LOKALNE SAMOUPRAVE IGABI DRŽAVE KADUNA, NIGERIJA

Oluyinka Christopher Ariyo

*Department of Entrepreneurship and Innovative Agriculture,
Federal College of Forestry Mechanization, Afaka, Kaduna State
Forestry Research Institute of Nigeria, Ibadan, Nigeria*

Apstrakt: Glavni izvor sredstava za život za stanovnike sela u oblasti lokalne uprave Igabi u državi Kaduna, Nigerija, su šumski proizvodi (ne-drveni - NDŠP). Ovi proizvodi obezbeđuju neophodnu hranu za ishranu, lekove, stočnu hranu, slamu i građevinski materijal, malč i ne-poljoprivredne prihode za seoska domaćinstva.

NDŠP nije posvećena dužna pažnja bez obzira na njihov doprinos poboljšanju života u ruralnim zajednicama.

Studija je ispitala doprinos, uticaj šumskih proizvoda (NDŠP) za život ruralnih stanovnika u oblasti lokalne uprave Igabi u državi Kaduna, Nigerija.

Za istraživanje su korišćene dvostepene tehnike uzorkovanja. Četiri okruga su odabrana namerno, a nasumično uzorkovanje je korišćeno za odabir 80 ispitanika iz četiri zajednice unutar odabranih okruga. Podaci su prikupljeni pomoću dobro strukturisanih upitnika i predstavljeni sa srednjom, procentualno i frekvencijskom distribucijom.

Za analizu podataka korišćeni su Likert Scale i Chi-kvadrat test.

Rezultati su pokazali da su 41,25% ispitanika poljoprivrednici, muškarci (78,75%), starosne dobi od 31 do 40 godina (38,75%), oženjeni (63,75%) sa veličinom domaćinstva od 11-15 članova (47,50%).

Ispitanici imaju osnovnu školu (30,00%) i sa iskustvom od 11 do 40 godina (47,50%) i iskustvom od 11 do 7 godina u korišćenju/upotrebi šumskih proizvoda (NDŠP).

Bilo je dostupno 16 različitih tipova šumskih proizvoda (NDŠP), najčešće sakupljenih i korišćenih za hranu, lekove, kovanje, izgradnju nekih objekata i čuvanje. Ovi NDŠP su bile pečurke, voće i orašasti plodovi, povrće, seme, meso grmlja, lekovito bilje, puževi, lišće, stubovi, ogrevno drvo, užad, klinovi, kolci, med, bambus i zrna rogača.

Većina ispitanika je svoje NDŠP nabavljala na pijaci, u šumama i na farmama.

Prosečan prihod ostvaren od NDŠP po ispitaniku mesečno je ₦ 32.250. Uočeno je da NDŠP značajno doprinosi ($X^2 = 34.73$) egzistenciji ispitanika.

Studija zaključuje da NDŠP ostvaruju izvestan prihod, služe kao izvori sigurnosti hrane, sirovine za medicinu, obezbeđujući višestruke društvene i kulturne vrednosti, tako da se povećava ukupni stepen egzistencije ruralnih stanovnika u oblasti istraživanja.

Ključne reči: Stanovnici sela, sredstva za život, NDŠP, tržište, šuma, prihod, lekovito bilje

Prijavljen/Registered:

***Submitted:* 01.12.2024.**

Ispravljen:

***Revised:* 25.01.2025.**

Prihvaćen:

***Accepted:* 05.02.2025.**