



## SHORT COMMUNICATION

### UTILIZATION OF NON- TIMBER FOREST PRODUCTS (NTFPs) AMONG FARMING POPULACE IN KOGI AND NIGER STATES, NIGERIA

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## INTRODUCTION

Forests are plant communities consisting predominantly of trees and other woody vegetation occupying an extensive area of land. They are essential natural resources for rural farming families providing for them both subsistence and market-oriented livelihood strategies (Oludotun, 2011). Globally, many wood forest products like fuel wood, construction materials and non-wood forest products such as wild foods, leave litters, leaves for wrapping, medicinal products and land snails provide rural farming families with several entrepreneurship livelihood opportunities. Forest products are known to be essential sources of income generation for rural farming families for means of livelihood, expansion of farms and diversifying commercial activities (Campbell *et al.*, 2015). The study objectives were to Identify non-processed forest woody resources utilised in the study area and examine constraints to non-woody forest resources utilization.

Harvesting and utilization of highly non timber forest products (NTFPs) has been considered a win - win strategy in the study areas (Kogi and Niger states), where rural people gain while conserving forest biodiversity ecosystem services. Nevertheless, the sustainability of NTFPs harvesting has been debated as the nature of NTFPs harvesting regimes scale of commercialization. NTFPs has been considered an ecological sound alternative for the non-degrading commercial exploitation of natural forest, because it well generates profit for rural dweller in the study areas while conserving biodiversity and ecosystem functioning, (Campbell *et al.*, 2015).

## MATERIALS AND METHODS

### Study Area

Kogi State lies to the South of the Federal Capital Territory, Abuja, and shares boundaries with nine other States in the country. Nasarawa by the North East, Benue State to the East, Enugu State to the South East, Anambra State to the South, Edo State to the South West, Ondo State to the West, Ekiti State to the West, Kwara State to the North West, Niger State to the North. This gives way to common interstate trade. The State has two seasons, the

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wet and dry seasons (Kogi State Ministry of Agriculture and Rural Development, 2016). The wet season begins in March and ends in October and the dry season spans between November and early March. The annual rainfall is between 1016mm and 1524mm, while the mean daily temperature ranges between 24°C and 27°C. It is located within Longitude 5° 22' and 7° 49' East & Latitude 6° 31' and 8° 44' North. Kogi State has a wide stretch of forest and arable land for farming, good grazing Land for livestock and large bodies of water for fishing and irrigation farming. Food and cash crops commonly grown in commercial quantities include yam, cassava, rice, maize, beniseed (sesame) guinea corn, cocoa, coffee, cashew, oil palm and vegetables

Niger State is located in the Guinea Savannah ecological zone of Nigeria. In terms of land mass, it is the largest State in Nigeria. It covers a total land area of 74,224km<sup>2</sup> accounting for about eight percent of Nigeria's land area. About 85% of its land area is good for arable crops production (Niger State Geographical Information System, 2015). It is located within Latitudes 8– 10°N and Longitudes 3 – 8°E with a population of about 3,950,249 (NPC, 2006) and with a growth rate of 3.2%, the State has an estimated population of 5,586,000 in 2017 (Niger State Geographical Information System, 2015). Eighty-five percent of the State's populations are farmers. The State is bordered to the North by Zamfara State, to the Northwest by Kebbi State, to the South by Kogi State, to Southwest by Kwara State; while Kaduna State and the Federal Capital Territory bordered the State to Northwest and Southwest respectively. Furthermore, the State shares a common international boundary with the Republic of Benin at Babanna in Borgu Local Government Area (Niger State Geographical Information System, 2015).

### **Sampling Procedure and Sample Size**

Multi-stage sampling technique was used for the study in both States. The first stage involved selection of all the Agricultural zones in both States. At the second stage, one (1) Local Government Area from each agricultural zone was randomly selected. The third stage involved random selection of four communities from the selected LGAs. At the fourth stage, 10% of the farmers were randomly selected from the sampling frame of each communities. In all, a total of 326 respondents were selected from both States as the sample size for the study.

### **Data Collection and Analysis**

Primary data used for the study were collected by the researchers and trained enumerators using structured questionnaire complimented with interview schedule. Data obtained were analysed using descriptive statistics such as frequency distribution, percentages and mean.

## **RESULTS AND DISCUSSION**

### **NTFPs Utilised**

Results in Table 1 revealed that 37.9% of the respondents in Niger state utilized African jointfril as a form of washing domestic pots with ashes when dry which will save cost for conventional detergent, with Kogi state having lower utilization of 7.5%.

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**Table 1: Distribution of respondents according to NTFPs utilisation**

NTFP	Kogi State (n=173) Frequency (%)	Niger State (n=153) Frequency (%)	Pooled (n=326) Frequency (%)
African jointfril			
UF	10 (5.8)	32 (20.9)	42 (12.9)
UD	13 (7.5)	58 (37.9)	71 (21.8)
UG		3(2.0)	3 (3.0)
Bush mango			
UF	18 (10.4)	31 (20.3)	49 (15.0)
UD	12 (6.9)	31 (20.3)	43 (13.2)
UG	19 (11.0)	25 (16.4)	44 (13.4)
Mahogany			
UF	26 (15.0)	36 (23.5)	62 (19.0)
UD	26 (16.2)	59 (38.6)	85 (26.1)
UG	3 (1.7)	1 (0.7)	4 (1.2)
Neem			
UF	16 (9.2)	47(30.7)	63 (19.3)
UD	14 (8.1)	42 (27.5)	56 (17 .2)
UG	14 (8.1)	42 (27.5)	56 (17 .2)
Shear butter			
UF	37 (21.4)	47 (30.7)	84 (25.8)
UD	24 (13.9)	45 (29.4)	69 (24.2)
UG	2 (1.2)	21 (13.7)	23 (7.1)
Teak			
UF	17 (9.8)	26 (16.9)	45 (13.8)
UD	17 (9.8)	42 (27.5)	61 (18.5)
UG	2 (1.2)	5 (3.3)	7 (2.1)

Sources: Field survey, 2018; Figures in parenthesis are percentages; \*Multiple responses

**Note:** UF= Utilised when fresh; UD= utilised when dried; and UG= Utilised raw when grinded; UF = Utilised when fried

The pooled result indicated that 21.8% of the farming populace utilize African jointfril when dry; 20.9% of the respondents utilized fresh African jointfril in Niger compared to that of Kogi State with 5.8%, the pooled result also indicated that 12.9% of the respondents utilized African jointfril on fresh for treatment of some illness such as paralysis. Also, 20.3% utilised bush mango for making delicacy traditional soup (Ogbono) when dry in Niger state while in Kogi it was 6.9%. Bush mango is also utilized in fresh form with Niger state having higher (20.3%) utilisation compared to Kogi State with 10.4%, with the pooled result of 15.0% of the respondents utilized bush mango in fresh form. However, 38.6% and 16.2% of the respondents utilised mahogany for stomach ache when dry in Niger and Kogi States, respectively. The pooled result showed that 26.1% of the farming populace utilize mahogany when dry. Moreover, 30.7% utilised shea butter as oil in soup and serve as liniment for joint and broken bones when fresh in Niger state than in Kogi with 21.4% when fresh. The pooled result also indicated that 25.8% of the farming populace in the study area utilized shea tree product such as shea butter when fresh for domestic purpose. However, Neem 30.7% utilized Neem on fresh forms in Niger compared to Kogi with 9.2% the pooled result 19.3% of the respondents in study areas utilized Neem on fresh for the treatment of some tropical diseases

such as fever, malaria and typhoid, 27.5% and 8.1% in the respective State of Niger and Kogi utilized Neem in both dry and grinded form for both domestics fuel wood and medicine, the pooled results 17.2% of the respondents utilized Neem when fresh and grinded. While 27.5% utilised teak for building of barns and other woody construction such as local bridges to enhance transportation of goods from rural areas to market square in Niger compared to that of Kogi which is lower with 9.8%. The pooled result showed that 18.5% of the respondents in the study area utilized teak when dry. This implies most of the respondents utilised non-processed woody forest resources for their livelihood when dry. This might be due non-perishability nature of woody forest unlike other forest resources.

### Environmental Hazards of Forest Resources Utilization

The environmental hazards have been computed using three (3) likerts rating scale of very hazardous = 3 hazardous = 2 not hazardous = 1. Any value less than 2 after computation is considered not hazardous, while value of 2 and above is considered hazardous and the ranking was based on the highest frequency of mean score for the variable. Results in Table 2 revealed that in Kogi State, wind blow ( $\bar{x}$ =2.42) and bush burning ( $\bar{x}$ = 2.36) were the most severe environmental hazards of forest resources utilization in the State. Similarly, in Niger State, bush burning ( $\bar{x}$ =2.49) and wind blow ( $\bar{x}$ =2.46) were the severe environmental hazards of forest resources exploitation and utilization in the State. For the pooled result, wind blow ( $\bar{x}$ =2.44) and bush burning ( $\bar{x}$ =2.42) were the severe environmental hazards of forest resources utilized in the study area; implying that wind blow was the major environmental hazards encountered by rural farming populace in the utilisation of forest resources for their livelihood. This finding is in consonance with Inoni (2012) who stated that windblow was a major environmental hazard faced by chainsaw operators in Nigeria. The researcher also stated that bush burning had resulted to the extinction of some fauna and flora resources in Sub-Saharan Africa.

Table 2: Environmental hazards of forest resources utilisation

Environmental hazards encountered	Kogi State (n=173)			Niger State (n=153)			Pooled (n=326)		
	Mean ( $\bar{x}$ )	R	D	Mean ( $\bar{x}$ )	R	D	Mean ( $\bar{x}$ )	R	D
Bee attacks	1.60	3 <sup>rd</sup>	NH	1.73	3 <sup>rd</sup>	NH	1.66	3 <sup>rd</sup>	NH
Windblow	2.42	2 <sup>nd</sup>	H	2.46	1 <sup>st</sup>	H	2.44	1 <sup>st</sup>	H
Unpredictable fall of trees on wood loggers	1.53	4 <sup>th</sup>	NH	1.58	4 <sup>th</sup>	NH	1.55	4 <sup>th</sup>	NH
Wild animals attack	1.33	5 <sup>th</sup>	NH	1.22	5 <sup>th</sup>	NH	1.30	5 <sup>th</sup>	NH
Bush burning	2.36	2 <sup>nd</sup>	H	2.49	1 <sup>st</sup>	H	2.42	2 <sup>nd</sup>	H

Sources: Field survey, 2018; R = ranking; D = Degree of Hazardous

### CONCLUSION

African joinfril, mahogany and teak were utilized mostly when dry while bush mango and Neem were utilized mostly when fresh. The severe environmental hazards encountered by farming populace in the utilisation of forest resources were windblow and bush burning. Non-processed woody forest resources were utilized more in Niger State than Kogi State.

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However, awareness should be created for farming populace in Kogi State on the benefits attached to woody forest resources in the study area. Rural farming populace should organize themselves into community self-help groups for protection of forest against bush burning.

### REFERENCES

- Campbell, B., Jeffrey, S., Kozanayi, W. & Lukert, M. (2015). Household livelihood in Semi-arid Regions: Options and Constraints. Jakarta, Indonesia, *Centre for International Forestry Research (CIFOR)*: Pp.120-143.
- Inoni, O.E. (2012). Effects of forest resources utilisation on the economic well-being of rural households in Delta State, Nigeria. *Agricultural Tropica et Subtropica* 42 (1), 20-27.
- Kogi State Ministry of Agriculture and Rural Development (2016). Farmers registration bulletin.
- Kogi State Ministry of Information (2016). *Working Document*
- Oludotun, B. (2015), *Forests and Its Services to Nigeria and Nigerians*.  
oluwasomidotun.blogspot.com/.
- Niger State Ministry of Information. (2012). *Working document, pp. 1-71*
- Niger State Geographical Information System. (2015). Background information. Retrieved from [www.nigersis.com/about-niger-state](http://www.nigersis.com/about-niger-state). Accessed on 13/08/2017.
- NPC (2006). National Population Commission. 2006 Census Data.