

Harnessing the Potentials of NTFPs for National Development in Nigeria

ABSTRACT

Development is a desirable change that brings improvement in the standard of living of majority of the people. Especially improvement in the nutritional status and health of the people, increase in their real income and per capita income as well as improvement in the educational achievement or access to education, fairer distribution of income and better livelihood options. However the potentials of NTFPs in contributing to national development in Nigeria have not been fully tapped. Therefore, this paper examined the potentials of NTFPs for national development. These potentials, namely, provision of food, provision of income, provision of communal peace and provision of medicinal materials. The study revealed some of the ways of harnessing the potentials of NTFPs in contributing to national development include revision of States forest policy, adoption of open door forest policy, Commercialization of NTFPs, improved extension service for NTFPs and promoting conservation of NTFPs. The States forestry Departments in the country should strive hard to create a unit for NTFPs that will coordinate and monitor the exploitation of NTFPs in their States and ensure their sustainable contribution to national development.

Keywords: Forest Policy, Livelihood Strategies, Sustainable Forest Management, Non-Timber Forest Products, National Development, Nigeria.

1. INTRODUCTION)

The forest and its resources are precious resources to man. The welfare of man and his wellbeing are linked with the forest and its resources. Forests and their products play critical roles in human environment, needs and livelihood (Adeyoju, 2001). Adedayo and Oyun (2010) noted that man cannot live a convenient and satisfying life without the forest and its resources. Not even the application of today's technology can provide a suitable and acceptable alternative to the use of the forests and its resources. Among the diverse products provided by the forests, non-Timber Forest Products (NTFP) represent a significant part. NTFPs have been playing significant roles in the livelihoods of many rural households not only in Nigeria but all over Africa. NTFPs provide small but significant sources of income, particularly for women and for families that do not have access to agricultural markets Central African Regional Programme for the Environment (CARPE), 2001). NTFPs also provide critical supplies of food during periods when agricultural crops fail or are otherwise scarce. NTFPs are so important that at a time NTFPs were seen as a possible 'magic bullet' to solve deforestation issues (CARPE, 2001).

NTFPs are many and varied. They include forest fruits, ropes, resins, snails, mushrooms, leaves, firewood and bush meat. They are biological resources other than timber, which are harvested from either natural or managed forests. Examples include nuts, oil seeds, latexes, resins, gums, medicinal plants, spices, wildlife and wildlife products. Others are dyes, ornamental plants, poles, raw materials such as bamboo and rattan (Nguyen and Bui, 2000).

NTFPs are highly valued either for their leaves, roots, barks or fruits. They are the forest treasure that sustains rural dwellers by providing income, foods and medicinal materials. It is however sad to note that the utilization of NTFPs in Nigeria has been faced with a myriad of problems which has limited their great values and potentials in contributing to national development. Table 1 show that the major problems faced by the people in the utilization of NTFPs in Ondo State, Nigeria are; long distance covered in search of NTFPs, increasing scarcity of many NTFPs, bad roads and seasonality of NTFPs. It is sad to note that many people trekked long distances in order to get NTFPs. This is a problem because lots of time that could have been used for other productive ventures is wasted as a result of the long distance covered. Closely connected with this is increasing scarcity of NTFPs, bad roads and seasonality of NTFPs making it difficult to utilize NTFPs. Ahenkan and Boon (2010) noted that NTFPs market in Ghana is highly characterized by seasonality. This shows that seasonality of NTFPs is a problem that cuts across the West African sub region. As such the potentials of NTFPs in

contributing to national development have been reduced drastically by these problems. It is in view of this that this paper takes a look at how the potentials of NTFPs in contributing to national development can be harnessed with a view to improving the contributions of NTFPs to national development in Nigeria. The paper takes a look at the concepts of national development and NTFPs. This is with a view to having a good theoretical knowledge of the two concepts. The paper also takes a look at the potentials of NTFPs for national development and how these potentials can be harnessed for national development in Nigeria.

Table 1: Problems encountered by People in the Collection of NTFPs in Ondo State, Nigeria

Problems faced in the Collection of NTFPs	n	%
Long Distance	103	43
Bad road/ high transportation cost	29	12
Restriction by the Guard	17	7
Increasing scarcity of NTFPs	38	16
Seasonality of NTFPs	17	7
Insect bite	22	9
Unfavorable Weather	14	6
Total	240	100

Source: Adapted from Falade (2012)

2. Concept of National Development

All over the world every society strives for development. This is because development is a desirable change that brings improvement in the standard of living of the people especially their nutritional status, improvement in health, increase in real income of the people and per capita income as well as improvement in the educational achievement or access to education, fairer distribution of income and better livelihood options. As noted by Dawe (2018) national development is the ability of a county or countries to improve the social welfare of the people e.g by providing social amenities like quality education, potable water, transportation infrastructure and medical care. In the same vein www.refernce.com (2018) defined national development as the ability of a nation to improve the lives of its citizens. Measures of improvement may be material, such as an increase in the gross domestic product, or social, such as literacy rates and availability of healthcare.

63 Development helps to bring improvement into all aspects of human lives including income and
64 consumption levels. However, achieving this development in Nigeria and in many other African
65 countries seems to be a herculean task. This is as a result of failure on the part of government and
66 individuals to take advantage of the country's human potentials and resource endowment. National
67 development refers to the ability of a nation to improve the lives of its citizens. Measures of
68 improvement may be material, such as an increase in the gross domestic product, or social, such as
69 literacy rates and availability of healthcare. To achieve this development many countries embarked on
70 development strategies code named National Development Plan (NDP). This is a long/ medium term
71 development plan, developed by the government (National Planning Commission) to ensure that
72 strategies are put in place to achieve national development and at the same time ensure that the
73 strategies are followed.

74 Nigeria has great potentials in agriculture and forestry that can help to bring rapid national
75 development. It is however sad to note that many of these potentials have not been properly
76 harnessed both by government and by individuals. Adeyoju (2001) noted that throughout ages, the
77 presence or absence of forests is an indication of civilization. In any habitat the botanical content of
78 the forest is vital to the welfare of the people.

79 **2.1 Concept of NTFPs.**

80 Wickens (1991) defined NTFPs as all biological materials (other than industrial round wood, derived
81 sawn timber, wood chips, wood based panels and pulp) that may be extracted from natural
82 ecosystem, managed plantations and be utilized within the household, be marketed or have social,
83 cultural and religious significance. This means NTFPs cover a wide variety of forest products that are
84 not timber products. Chamberlain *et al.*, (1998) also defined NTFPs as plants, parts of plants, fungi
85 and other biological materials that are harvested from within and on the edge of natural, manipulated
86 or disturbed forests. NTFPs include fungi, moss, Lichen, herbs, vines, shrubs or trees. Many different
87 parts are harvested including the roots, tubers, leaves, bark, fungi, branches, resin, fruits, seeds as
88 well as the wood. NTFPs are plants and plant materials used for food, fuel, storage fodder, and
89 medicine etc. (Idumah *et al.*, 2008). Global Forest Atlas (2018) noted that Non-timber forest products,
90 often referred to as NTFPs, are an important aspect of forests and forest use in many parts of the
91 world. In addition to timber, paper, and bioenergy, a number of products are extracted from
92 forests that have important local and economic uses, and have been, suggested by researchers and
93 some environmental NGO's and agencies to offer additional economic benefits for local
94 communities. Examples of NTFPs include game, medicinal plants, resins, bamboo, fruits,
95 fibers, fungi, and palms. These products include those naturally occurring in forest ecosystems, as
96 well as products that are managed (by manipulating forest ecosystems) or planted. As these products
97 depend on forest environments for their production, they are thought of as a potential economic "win-

wins” that will promote forest conservation while providing local benefits. It has been shown that NTFPs can be extracted sustainably - however, other cases have shown that uncontrolled extraction due to high demand or population pressures can cause forest degradation or species extinction.

They are the forest treasure that sustains rural dwellers by providing income, foods and medicinal materials. As a matter of fact, majority of the rural poor all over Africa would have been showing obvious signs of malnutrition if not for the food provided by NTFPs to them in form of forest fruits and vegetables. Forest foods help to supplement and complement the daily diet of the rural poor.

Potentials of NTFPs for National Development

Provision of Food; - One of the glaring potentials of NTFPs to national development is the provision of food to many people. Food is a necessity and one of the major indices of national development is improved nutritional status of the people. NTFPs provide diverse types of food to many people in Nigeria. These include different types of forest fruits (like *Adansonia digitata* and *Chrysophyllum albidum*) and leaves (like *Ocimum gratissimum* and *Vitex doniana*), snails, honey, bush meat and mushrooms. Table 2 shows a list of forest plant species in Nigeria that provide food to the people either as fruits or as leaves which serve as vegetables. It is important to note that many of these forest fruits and leaves are very rich in vitamins, minerals and proteins. They therefore help to improve the nutritional status of many Nigerians. Vinceti, *et al* (2013) noted that Forest foods such as wild fruits, nuts, vegetables, mushrooms and animal products contribute in many ways to food security. The dietary quality of many forest foods is high. Many of the micronutrients provided by forest foods have important health and developmental functions, and their absence in diets therefore has important health implications. Warner (2000) also noted that forests are the source of a variety of foods that supplement and complement what is obtained from agriculture. This shows that foods obtained from the forests as NTFP foods play important role in ensuring that the nutritional status of many people is improved. NTFP foods are even much more important in ensuring that many households in Nigeria stay out of hunger during emergencies and difficult periods. These include periods of drought, floods, wars or insurgency as well as during prolonged dry season and during periods of crop failure. It is a well known fact that poor people live precariously without any savings against emergencies or crop failure. NTFP foods therefore provide cushion against these adversaries and help households to maintain high nutritional status even during adverse periods. It is important to note that many rural households in the country are faced with the problem of malnutrition. Most of them often feed on bland and monotonous diet of carbohydrate which often leads to malnutrition. Therefore NTFP foods have the ability to improve and enrich this monotonous diet. Adedayo (2017) noted that many NTFPs that serve as food help to add flavor to the otherwise bland food eaten by the rural dwellers in the country. Especially vegetables like *Ocimum gratissimum* and the succulent leaves of *Adansonia digitata*. He noted further that these NTFPs help to improve the nutrition of rural dwellers by providing protein, energy, vitamins and essential minerals. For instance Montoho Gardens (2007) stated that the nutritional composition of *Blighia sapida* per 100g of fruit is fat 18.8g, protein 8.8g and phosphorous 98mg. Some NTFP fruits are very nutritious in the country. They

include the fruits of *Tamarindus indica*, *Parkia biglobosa*, *Vitellaria paradoxa*, *Spondias mombin* and *Borassus aethiopum*. The processed seeds of *Parkia biglobosa* is particularly known to be rich in proteins and vitamins. It is therefore included in the soup preparations of many households in the country.

In the same vein many leaves that are NTFPs serve as vegetables to many households in the country. Sene (2000) noted that through trial and error over generations, African societies have discovered and utilized myriad plant species whose leaves can be used for food. The leaves contribute to the richness of diets, hence reducing various dietary deficiencies. Worthy of note are the leaves of *Adansonia digitata*, *Ocimum gratissimum* and *Vernonia amygdalina* which are widely used as vegetables by many rural dwellers and some urban dwellers in the country. This shows that NTFP foods play important role in ensuring that a lot of people are not malnourished in the country.

Table 2: List of Forest Plant Species that provide edible Fruits or Leaves to the people in Nigeria.

S/N	Name of Plant Species	Type of Food
1.	<i>Adansonia digitata</i>	Fruits and Leaves
2.	<i>Artocarpus cuminis</i>	Fruit
3.	<i>Blighia sapida</i>	Fruit
4.	<i>Borassius aetopium</i>	Fruit
5.	<i>Chrysophyllum albidum</i>	Fruit
6.	<i>Dacryodes edulis</i>	Fruit
7.	<i>Garcinia cola</i>	Fruit
8.	<i>Gongronema latifolium</i>	Leaves
9.	<i>Irvingia gabonensis</i>	Fruit
10.	<i>Moringa oleofera</i>	Leaves
11.	<i>Morus mesozygia</i>	Fruit
12.	<i>Ocimum gratissimum</i>	Leaves
13.	<i>Parkia biglobosa</i>	Fruit
14.	<i>Spondias mombin</i>	Fruit
15.	<i>Tamarindus indica</i>	Fruit
16.	<i>Tetracapidium conophorum</i>	Fruit
17.	<i>Treculia africana</i>	Seed
18.	<i>Vernonia amygdalina</i>	Leaves
19.	<i>Vitellaria paradoxum</i>	Nuts
20.	<i>Vitex doniana</i>	Leaves

Source: Adapted from Fuwape, 2005 and Babalola and Agbeja, 2008

Provision of Income; - NTFPs have great potentials in providing income to many people especially the rural dwellers and some urban dwellers not only in Nigeria but all over Africa. The provision of income by NTFPs has helped to contribute to national development. It is important to note that one of the indices of national development is fair distribution of income. National development cannot be achieved in any decisive manner without increase in the income earnings of majority of the grass root people. It is increase in the income of the majority of the grass root people that will lead to fairer

distribution of income which will bring about national development. NTFPS are capable of providing and increasing the income levels of millions of rural inhabitants and urban poor in Nigeria. Table 3 shows that rural women in north central Nigeria earned reasonable income from the sale of forest fruits which is an important NTFP in the area. An average of 37% of them earned between ₦31,000.00 and ₦40,000.00 per annum from the sale of forest fruits alone in North Central Nigeria. Ojea *et al.* (2016) and Endamana *et al.* (2016) noted that though NTFPs may not be the most important income generating products for local people living close to the forests, they contribute significantly to household income, food security, and household health care as well as, provision of multiple social and cultural values. Sunderlin *et al* (2005) noted that exploitation of NTFPs plays an important role for the rural poor as gap filler and source of income in situations where alternative livelihood activities are scarce.

Table 3: Estimate of annual Income realized by rural women from the sale of forest fruits in North Central Nigeria.

Ethnic Group	A		B		C		D		E		F		G		H		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Yoruba	2	3	17	21	27	34	33	41	1	1	0	0	0	0	0	0	80
Nupe	6	8	19	24	28	35	26	33	1	1	0	0	0	0	0	0	80
Berom	1	1	16	20	33	41	30	38	0	0	0	0	0	0	0	0	80

NB: A= <₦10,000.00, B= ₦10,000.00- ₦20,000.00, C= ₦21,000.00- ₦39,000.00, D= ₦31,000.00- ₦40,000.00, E= ₦41,000.00- ₦50,000.00, F = ₦51,000.00- ₦60,000.00, G= ₦61,000.00- ₦70,000.00, H= >₦70,000.00

Source: Adedayo *et al*, (2010).

Promotion of Communal Peace: - The exploitation of NTFPs has a great potential in promoting communal peace and community development, and by extension, national development. It is important to note that peace brings development and progress to the society. Kutesa (2009) noted that without peace, development is not possible. As a matter of fact, businesses as well as all forms of livelihoods can only thrive well under a peaceful atmosphere. Exploitation of NTFPs can bring peace to the society because it could help to engage many members of the community in one thing or the other. Some people are engaged in harvesting, some in processing and some in the sale of NTFPs. Kalu and Egharevba (2006) noted that NTFPs provide employment for 57% and 43% of women involved in marketing and processing of NTFPs respectively in Benin, Nigeria. What this means in essence is that many people who otherwise would have been jobless found employment in the utilization chain of NTFPs. As such, they are busy with their NTFP jobs rather than getting involved in any criminal activities or in any form of insurgency. It is a known fact that an idle hand is the devil's workshop. The implication of this on peace is that those that are jobless are the ones that are often into criminal activities or insurgency, but when these people are engaged in the utilization of NTFPs, the tendency of their involvement in criminal activities or insurgency is drastically reduced. The role of

exploitation of NTFPs in promoting societal peace is an unquantifiable role which is of extreme importance in ensuring national development.

Provision of Medicinal Materials: NTFPs are known to provide medicinal materials that are used in curing different kinds of ailments. It is the medicinal materials provided by NTFPs that has helped majority of them to be in a state of good health. The health of an individual and by extension the health of a community is important to the survival, welfare and development of the individual or community. Adedayo (2007) noted that many Nigerians and other African countries sought alternative medical care through the use of medicinal plants in order to maintain their health and cope with the rigours of daily struggle for survival and hard work. He noted further that for millions of the poor people in tropical African countries, forest plants are well cherished and sought for medicinal use. It is when people are in a state of good health that they can be engaged in hard work that can bring about development. WHO (2000) noted that though it has not been scientifically proven but it has been observed and locally proven that traditional medicine are well known to be used in the treatment of various human ailments especially by the rural people in developing countries. They also provide the necessary nutrients for the growth and development of the human body. Table 4 shows a list of plant materials that are used for medicinal purpose by rural women in Kogi State, Nigeria.

Table 4: Name of Plants and the ailment cured used by rural women in Kogi State, Nigeria.

S/N	Medicinal Plant	Parts used	Ailment Cured
1	<i>Vernonia amygdalina</i>	Leaves	Malaria
2	<i>Azadirachta indica</i>	Leaves and bark	Fever
3	<i>Psidium guajava</i>	Leaves	Fever
4	<i>Carica papaya</i>	Leaves, Fruits, Exudates	Malaria, Typhoid
5	<i>Cassia alata</i>	Flowers and root	Fever
6	<i>Moringa oleifera</i>	Leaves	Malaria
7	<i>Magnifera indica</i>	Leaves, bark	Malaria
8	<i>Garcinia cola</i>	Seed	Cough
9	<i>Spondias mombin</i>	Leave	Blood replacement
10	<i>Allium sativum</i>	Bulb	Cough, Hypertension, Worms
11	<i>Aloe barteri</i>	Leaves	Constipation, Intestinal Ulcer
12	<i>Allium cepa</i>	leaves	Fever and Pile
13	<i>Annona senegalensis</i>	Leave	Low sperm count
14	<i>Calotropis procera</i>	Leave	Rashes
15	<i>Daniellia oliveri</i>	Bark	Malaria, Diabetes
16	<i>Zingiber officinale</i>	Leaves and root	Back pain

17	<i>Piliostigma thonningii</i>	Leave, Bark	Malaria
18	<i>Vitex doniana</i>	Leaves	Fever
19	<i>Cola nitida</i>	Bark	Low sperm count
20	<i>Terminalia ivorensis</i>	Leave, Bark	Cough, Diaorhea
21	<i>Jatropha curcas</i>	Exudate, Root	Mouth diseases, Sore
22	<i>Momordica charantia</i>	Whole plant	Gonorrhea, Fever, Pile
23	<i>Phyllanthus amarus</i>	Leave and seed	Fever, high blood pressure
24	<i>Anthocleista djalensis</i>	Leave	Cough. Malaria
25	<i>Khaya senegalensis</i>	Bark	Pile, malaria
26	<i>Adansonia digitata</i>	Bark, Leaves	Control of heart beat
27	<i>Parkia biglobosa</i>	Bark	Skin Rashes
28	<i>Piper guineense</i>	Seed	Rotting teeth
29	<i>Waltheria indica</i>	Leave	Dysentery
30	<i>Musa paradisiaca</i>	Green Fruit	Diabetes
31	<i>Pupalia lappacea</i>	Leave, Seed	Women sterility
32	<i>Morinda lucida</i>	Leaves, bark	Malaria, Diabetes
34	<i>Zingiber officinale</i>		Cough, Asthma, Jaundice
35	<i>Spondias mombin</i>	Leaves	Malaria
36	<i>Alstonia boonei</i>	Bark	Rashes, Fever
37	<i>Xylophia aethiopica</i>	Seed	Teeth Rotting
38	<i>Ocimum gratissium</i>	Leaves	pile
39	<i>Azelaia africana</i>	Root	Hypertension
40	<i>Fagara zanthoryloides</i>	Root	Rheumatism

Source: Adedayo and Oyun, (2017)

3.1 Harnessing the Potentials of NTFPs for National Development

The potentials of NTFPs in contributing to national development cannot be overemphasized. They include the provision of food, income contribution to peace and provision of medicinal materials. These potentials can be harnessed in the following ways.

- 1. Review of States Forest Policy:** It is essential that the forest policies of all the states in the country should be reviewed. There is the need to review the forest policy of many states in the country in view of the emerging contemporary issues in forestry that are germane to the development of forestry sector (especially NTFPs) and the reduction of rural poverty. Presently the forest policy of most states in Nigeria allows for people to have open access to NTFPs in free areas. Members of a community are also given free access to NTFPs on communal lands while members of the public are given free access to a limited number of NTFPs on government lands. This limited access includes free access to exploit leaves,

snails, mushrooms, herbs and some fruits. This situation has not really help in the sustainable management of NTFPs on communal lands. There is therefore the need to review state forest policy to take care of NTFP governance especially on communal lands. For instance issues that concerns NTFP governance are necessary to be addressed by the forest policy of each states of the country in order to take care of competition and their over-exploitation. State forest policy should particularly pay attention to NTFP governance by ensuring that a unit is created in the Department of Forestry in each state that will see to all issues that is related to NTFPs especially NTFP governance. This will go a long way in helping local community dwellers to direct the utilization of NTFPs on their communal lands in a better and more sustainable manner. This no doubt will be in line with the current trend in the management of NTFPs worldwide. This will help to ensure sustainable management of NTFPs towards meeting the needs of the people.

2. Adoption of Open door Forest Policy: - Forest policy makers should adopt an open door policy on issues that are related to NTFPs. This is because if the utilization of NTFPs is to improve considerably among the people and contribute more to national development forest policy makers must adopt this strategy (open door policy) that will allow for easy flow of information and communication from the people to the NTFP unit and forest policy makers and from NTFP unit back to the people. NTFP units created in the States forestry Departments in the country or forest policy makers in each state forestry Department should be able to have free flow of information on the various indigenous uses of NTFPs in the state as well as uses of NTFPs in others in the country. This will help policy makers come up with a holistic policy that will help to promote the contribution of NTFPs to national development.

3. Commercialization of NTFPs:- Commercialization is one sure way by which the interest of the people in the utilization of NTFPs can be increased. This is because commercialization will help to increase income earnings people can get from NTFPs tremendously. Belcher and Schreckenberg,(2007) noted that the rationale for NTFP commercialization is often to improve the livelihoods of poor people, especially NTFP producers. By creating and capturing more value, it is hoped that poor people will gain from improved income and employment opportunities. The strategy of commercialization can be achieved in the following ways.

- 247 **a.** Existing markets of NTFPs should be upgraded and expanded by the state or local
248 government. Markets with shelter facilities should be provided for traders of NTFPs both
249 in rural markets and in urban markets. In addition new sales outlets for NTFPs should be
250 created at strategic locations in urban centres. The strategic locations are those locations
251 that can advertise or help boost the awareness of NTFPs among urban dwellers. This will
252 help to boost the level of patronage of NTFPs and help to increase the income derived
253 from them.
- 254 **b.** Another way of improving the commercialization of NTFPs is by encouraging market
255 research on NTFPs. Part of the market research will be to identify the best selling points
256 for specific NTFPs and the best selling method (wholesale, retailing or hawking). Market
257 research will also provide information on the best way of linking producers of NTFPs with
258 the markets. Most importantly market research should be able to identify important roads
259 that can be developed that will link majority of the producers of NTFPs with the markets.
- 260 **c.** Another way of improving commercialization of NTFPs is to provide improved storage
261 facilities to the producers and sellers of NTFPs. Improved storage facilities will help to
262 reduce loss through spoilage as it is currently experienced by some sellers of NTFPs due
263 to poor storage facilities. Improved storage facilities will therefore help to encourage the
264 sales of some NTFPs.
- 265 **d.** Value addition to NTFPs can also help to improve their commercialization. Processing of
266 some NTFPs can help to add more value to them thereby helping to increase sales and
267 income derived from them. Taylor (1999) noted that local processing of forest fruits
268 (which are also NTFPs) can increase returns on them.
- 269 **e.** Removing marketing barrier that prevent marketers of NTFPs from changing from being a
270 retailer to wholesalers can also help to improve commercialization of NTFPs. This is
271 because if commercialization of NTFPs is to be encouraged there must be free entry into
272 their marketing. Ramadhani (2002) and Schreckenber *et al* (2006) noted that
273 commercialization of forest fruits can be improved by removing marketing barriers that
274 prevent women from changing from being a retailer to wholesaler. They noted further that
275 unnecessary road checks and permits should be avoided. This will promote easy
276 movement of NTFPs and it will help to promote their commercialization.

f. Grading and packaging of NTFPs can also help to improve their commercialization. Grading will help to remove NTFPs that are low quality, while packaging will help to attract the attention of many people. This will thus boost its commercialization.

4. Improved Extension Service for NTFPs: -The extension service for NTFPs in each state in Nigeria should be improved. Hitherto the extension service for NTFPs in most states is either non existence or at a low ebb.. If NTFP units are created in the States Forestry Departments, the unit will ensure that the awareness of NTFPs is promoted among the people through improved extension services. Improved extension services will help to create awareness among the people the various potentials of NTFPs in improving the income earnings of the people.

5. Promoting Conservation of NTFPs: - awareness must be created among the people on the need to avoid over-exploitation of NTFPs and ensure their conservation. *Conservation according to Udvardy (1984) means the management of human use of the biodiversity so that it may yield the greatest sustainable benefit to the present generation while maintaining its potential to meet the needs and aspirates of future generations When NTFPs are conserved it ensures sustainable utilization of NTFPs.* When there is sustainable utilization of NTFPs it will ensure its continuous contribution to national development.

4. Conclusion

This study examined the great potentials of NTFPs and how they could be harnessed for national development. These potentials include provision of food, provision of income, provision of communal peace and provision of medicinal materials. The study showed that the potentials of NTFPs in contributing to national development can be harnessed by reviewing of States forest policy, adoption of open door forest policy, commercialization of NTFPs, improved extension service for NTFPs and promoting conservation of NTFPs. Each State of the federation will do well by creating a unit for NTFPs in order to properly harness the potentials of NTFPs for national development.

REFERENCES

Adedayo A...G. 2007. The use of medicinal plants among urban households within Akure metropolis, Ondo State, Nigeria. In medicinal plants in Agriculture, The Nigeria experience. Proceedings 3rd Annual Conference, School of Agriculture and Agriculture Technology (eds. G. E. Onibi, S.O

307 Agele, V.A.J. Adekunle and M.O. Olufayo), Federal University of Technology, Akure, Nigeria.
 308 16th-19th April, 2007. PP 185-190.

309 Adedayo, A.G. and Oyun, M.B. (2010): Assessment of the impact of Democratic Rule on some
 310 Aspects of Forest Resources Management in Ondo State, Nigeria.. International Journal of
 311 Social Forestry Vol. 3(1) pp.1- 11.

312 Adedayo, A.G. Oyun, M.B... and Kadeba, T.O.S. (2010): Access of Rural Women to Forest
 313 Resources and its impact on Rural Household Welfare in North Central Nigeria. *Journal of*
 314 *Forest Policy and Economics* 12 439 - 450.

315 Adedayo, A. G. (2017). Harnessing the Food Potentials of NTFPs for Food security in Nigeria's Rural
 316 Communities. :In: O. A. Fagbenro and B. N. Ejidike (eds.) Proceedings of the 6th International
 317 Conference / workshop on Giant African Land Snails (NetGALS) Snail: Harnessing Bio-
 318 Resources for food security and National Development. Held at the Federal University of
 319 Technology, Akure, Nigeria. June 4th-7th, 2017. Pp. 20-24.

320 Adedayo, A.G. and Oyun M.B. (2017): Strategies to improve the use of medicinal plants among rural
 321 women in Kogi State, Nigeria. *International Journal of Current Research* Vol. 9, Issue,08,
 322 pp.56728-56736, August, 2017

323 Adeyoju, K.(2001). Forestry for National Development. In: L. Popoola, J.E. Abu and P.I. Oni (eds.)
 324 *Proceedings of the 27th Annual Conference of the Forestry Association of Nigeria* held in
 325 Abuja, FCT.17th-21st September 2001 Pp.55-68.

326 Ahenkan, A. and Boon, E. (2010): Commercialization of non-timber forest products in Ghana:
 327 Processing, packaging and marketing. *Journal of Food Agriculture and Environment* 8(2) 962
 328 -969.

329 Belcher, B. and Schreckenberg, K. 2007. Commercialization of non- timber forest products: A reality
 330 check. *Development Policy Review* 25(3) 355-37

331 Central African Regional Programme for the Environment (CARPE) (2001): Non-Timber Forest
 332 Products Economics and Conservation Potential. Congo Basin Information Series Issue Brief
 333 No 10 March, 2001.

334 Chamberlain, J.L., Bush, R. and Hammett, A.L. (1998): Non-Timber Forest Product: The other Forest
 335 Products. *Forest Product Journal*.48 (10): 2-12.

336 Dawe, J. (2018): What is national development? www.answers.com. Cited on 19th January, 2018.

337 Endamana D, Angu K A, Akwah G N, Shepherd G, Ntumwel B C (2016) Contribution of non- timber
 338 forest products to cash and non- cash income of remote forest communities in Central Africa.

339 Int. For. Rev. 18 (3): 280–295.

340 Falade, O. I. (2012): Gender involvement in the collection and sales of non-timber forest products
 341 (NTFPs in forest communities of Ondo State, Nigeria. Unpublished M.Agric. Tech
 342 Thesis of the Department of Forestry and Wood Technology, Federal University of
 343 Technology Akure, Nigeria. Pp.121.

344 Global Forest Atlas (2018): Non-timber Forest Products. <https://globalforestatlas.yale.edu>. Cited on 1st
 345 June, 2018

346 Idumah, F.O. (2001): Forestry sub-sector and poverty alleviation in Nigeria. In: L. Popoola, J.E. Abu
 347 and P.I. Oni (Eds.) Proceedings of the 27th Annual Conference of the Forestry Association of
 348 Nigeria held in Abuja (FCT) 17th -21st September, 2001. Pp.319 – 327.

349 Kalu, C and Egharevba, R.(2006): Women in Processing and Marketing of Non-timber Forest
 350 Products: Case Study of Benin City, Nigeria. *Journal of Agronomy* Volume 5 (2): 326-331.

351 Montoso Gardens (2007):*Blighia sapida*: Common names, origin and distribution, description,
 352 propagation and uses <http://www.montosogardens.com> Accessed on 10th July, 2013.

353 Nguyen, T. N. and Bui, T. A. (2000): Non-Timber Forest Products (NTFPs)-Gender Analysis & Gender
 354 Action Plan. NTFP Project, 8 Chuong Duong Do, Hanoi, Vietnam, 2000.

355 Ojea E, Loureiro M L, Alló M, Barrio M (2016) Ecosystem services and REDD: estimating the benefits
 356 of non- carbon services in worldwide forests. *World Dev.* 78: 246 –261.

357 Ramadhani, T. (2002): Marketing of Indigenous fruits in Zimbabwe. Socioeconomic studies on Rural
 358 Development. Vol.129 Wissenschaftsverlag Vauk. Kiel, Germany. Pp.212.

359 www.reference.com, (2018): What is national development? <https://www.reference.com>. Cited on 31st
 360 May, 2018.

361 Schreckenber, K., Awono, A., Degrande, A., Mbosso, C., Ndoeye, O. and Tchoundjeu, Z. (2006):
 362 Domesticating indigenous fruit trees as a contribution to poverty reduction. *Forests, Trees*
 363 *and Livelihoods*.16, 35 -52.

364 Sene, E.H. (2000): Forests and Food in Africa; the place of forestry in FAO's Special programme for
 365 Food Security. *Unasylva* 202 vol.51 (1) 13-18.

366 Sunderlin, W., Angelsen, A., Belcher, B., Burgers, P., Nasi, R., Santoso, L. and Wunder, S. (2005).
367 'Livelihoods, forests, and conservation in developing countries: an overview. *World Development*,
368 3 (9): 1383–1402.

369 Taylor, D.A. (1999): Requisites for thriving rural non-wood forest product enterprises. *Unasylva* 198
370 50(3) 3-8.

371 Udvardy, M.D.F.(1984). A classification of Biogeographic provenances of worlds. I. U. C. N. and
372 National resources GIAND.

373 Vinceti, B.; Ickowitz, A.; Powell, B.; Kehlenbeck, K.; Termote, C.; Cogill, B.; Hunter, D. (2013): Diet,
374 nutrient availability, food security, Non Timber Forest Products. *Unasylva* 64(241): 54-64

375 Warner, K. (2000): Forestry and Sustainable Livelihood. *Unasylva* 2 02 vol. 51 (1) 3-12.

376 Wickens, G. E. (1991) Management issues for development of non-timber forest products. *Unasylva*
377 42(165):3-8.

378 World Health Organization (WHO), (2000): General guidelines for methodologies on research and
379 evaluation of traditional medicine