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Non-Timber Forest Products Utilization Among the Women of Support Zone Communities of Kainji Lake National Park, New Bussa, Niger State, Nigeria

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Abstract
The study examined the involvement of women in the utilization of non-timber forest products (NTFPs), at the Support Zone communities of Kainji Lake National Park, New Bussa, Niger State, Nigeria. The specific objectives are to identify socio-economic characteristics of the respondents, involvement in the extraction of Non timber forest products, Utilization of NTFPs by respondents, reason for collection of non-timber forest products. Data for this study was derived from primary and secondary sources. A multistage random sampling method was used. A random selection of three villages neighboring the park was done from each of the sub divisions making a total of 21 villages. Structured questionnaires were administered randomly. Twenty (20) questionnaires were administered in each of the communities making a total of Four hundred and twenty (420) respondents for the study area. The descriptive statistical tool was used for data analysis. Majority of the respondents 342 **(**81.4%) are involved in gathering of Non timber forest products out of which 310 (90.6 %) of the respondents are part time gatherers of this resources and the remaining 32 (9.4%) are full time gatherers. 289 (84.5 %) of the respondents get this products outside the park, 35 (10.2 %) of them get this products from inside the park and 18 (5.3 %) get this products from both inside and outside the park The non-timber forest products are being utilized by the communities for income, food, fuel wood, Medicare, and hand craft**.** The study recommended improved livelihood for women, provision of basic necessities of lives to the park communities. Enhanced Conservation education programme and Establishment of community forest to reduce pressure on the park resources.

Keywords: Socioeconomic characteristics, Non timber forest products, Women, Utilization, Park.

Introduction

Non-timber forest products (NTFPs) refer to natural resources collected from forests, apart from sawn timber, and these include other wooded land and trees outside forest reserves (FAO, 2012)**.** Non- timber forest products according to Center for International Forest Research, CIFOR (2013) refers to any produce or provision other than wood or timber that is gotten from the forest. Such as; nuts, vegetables, fruits, fish, medicinal plants, resins, essences, a range of bark and fibre, bamboo, rattans, honey, insects, animals, fodder, fertilizers, medicinal extracts, construction material, cosmetic and cultural products, natural dyes, latex, tannins, and gums. They also include essential oils, spices, edible oils, mushrooms, horns, tusks, bones, decorative articles, pelts, plumes, hides and skin, non-wood ligno-cellulosic products, phytochemical and aroma chemicals. About 80% of the developing countries in the world depend on NTFPs for their primary wealth, health and nutritional needs (FAO 2016). Okafor, (2014) defined NTFPs as forest goods and services providing wood products. These include poles, fuels, chewing stick, gum, dye, herbs, shrubs, wine, stem fibers, seed, spices, mushroom, snail, wild vegetables, fruits etc. These include plant and plant materials used for food, fuel, storage and fodder, medicine, cottage and wrapping materials, biochemical as well as animals, birds, reptiles and fishes, for food and feather.

There are several types of NTFPs for exploitation in Nigeria and these include a wide range of edibles and non-edibles, such as fruits, seeds, leaves, nuts, bush meat, roots, tubers, fibres, resins, latex, sticks, ropes,

and construction materials like bamboos and rattans among others (Akanni, 2013; Sulaimon, 2016). Exploitation of such natural resources increases the range of income generating options for rural women, especially in developing countries, including Nigeria (Amusa *et al.*, 2012; Fernande and Ghislaine, 2014). Exploitation of NTFPs is usually less destructive than timber harvesting, and offers good opportunities for improving livelihoods, as NTFPs are generally easily accessible to the rural poor and little capital investment is needed for collection, processing and marketing (Ellis and Allison, 2017). Consequently, trading NTFPs potentially offers a means of concurrently achieving both conservation and development goals (Olaniyi *et al.,* 2013; Suleiman *et. al.,* 2017). Women are more dependent on nature by virtue of sexual division of labour. This is due to the increasing population relying directly on the forest (Olabode, 2003**).** In Africa, more than two-third (2/3) of the people which is about 600 million as estimated depend on forest resources either in a type of subsistence use or as source of revenue (Ogundele, *et al.,* 2012; Timko, *et al.,* 2010). According to Agbogidi and Okonta (2003), a large proportion of urban and rural household depend on the collection or extraction and sales of NTFPs to earn their livelihood.

During the 1960s and 1979s, forest products earned large amounts of foreign exchange and the sector was ranked highest in employment generation in Nigeria (National Bureau of Statistics, 2014). NTFPs are rapidly growing and as such the importance goes beyond meeting basic needs of food. Despite the importance of NTFPs for rural livelihoods, as well as its good potentials for socio-economic development of Nigeria, the sector has generally been overlooked by policy makers. Until in the last decade, forestry Departments have not paid much attention to the potentials of NTFPs resources (Biswas and Chowdhury, 2013; Vantomme *et al*., 2012). Charlie and Sheona, (2004) looked into the role and importance of NTFPs In daily lives of rural people in South Africa and discovered that more than 85% households used products such as wild spinaches, fuel wood, wooden utensils, edible fruits etc. Also, they reported that more than half of the households investigated made use of edible insects, wood for construction, bush meat, wild honey and reeds for weaving. In Nigeria, food security of rural dwellers is improved by growing trees in the home gardens and on farms (Olabode, 2014). Stems, fruits and seeds of various kinds all contribute to financial security of rural dwellers particularly during the emergency periods. In the high forest zones of Eastern and Western Nigeria, bush meat and snails, harvesting and sales are a major income generating activity almost all year round. In the savanna zone of the central and northern Nigeria, honey, fuel-wood, locust-bean seeds, gum Arabic and charcoal making generate a lot of income to the rural dwellers. Hence, Egunjobi (1996) while reporting on the potentials of Non-timber forest products of Omo Forest reserve observed that the contributions of non-timber forest products to the rural economy in Nigeria is as much if not more than that of timber. Harvesting and processing of NTFPs in many places have graduated from the subsistence level of household dietary needs alone and sales at local market to international cross-boundary trades.

According to Coulibaly- Lingani, *et al.* (2011) women constitute about 75% forest users globally because of their roles as carers and those who feed the family; they are always in the forest at one point or the other, harvesting one forest specie or the other, hence they have the knowledge about the relative abundance of forest species, their location, state and rates of depreciation and also bear the brunt of most negative forest management policies (Ogunjobi, *et al.,* 2010, Coulibaly- Lingani, *et al.* 2011). Thus for any forest programs to be effective, gender differences must be addressed and women's intricate relationship with forest resources recognized, this is so because women are the primary beneficiaries of the forests, and the ones most directly impacted by their loss (Nussbaum, 2000; McElroy, 2002a; McElroy, 2002b). While in Nigeria, Oloruntoba and Adetokumbo, (2016) in their study found out that women were able to name 66 non-timber forest products and their uses, 34 animal species, 23 hardwood species and about 15 spices and 28 mushrooms from the forest, (Oloruntoba and Adetokumbo, 2016). This finding led Eneji, *et al.* (2009) to conclude that women are then much more versatile in forest resources exploitation and management than men. Women are responsible for 70–80 percent of household food production in sub-

Saharan Africa, 65 percent in Asia, and 45 percent in Latin America and the Caribbean. They achieve this despite unequal access to land, information, and inputs such as improved seeds and fertilizer. Women's role in natural resource management is considerable whether it is water, agriculture, forest or wildlife ecosystem, and coastal zones (Parikh, 2017). *Evidence is scarce on the level of participation of rural women in the exploitation of NTFPs, as a means of livelihood in the study area. In the light of the above, the study described the socioeconomic characteristics of the respondents.* Involvement in the extraction of Non timber forest products, utilization of *NTFPs* by respondents, *respondents' level of participation in the exploitation of NTFPs* reason for collection of non-timber forest products in the park.

Materials and Methods

Study area

Kainji Lake National Park which was formally known as Borgu game reserve, was upgraded to its present status in 1991. It lies approximately between latitude $9^{o}40''$ N and $10^{o}30''$ N with longitudes of $3^{o}30''$ N and $5^{o}50''$ E. Thus, it lies at the extreme west of the wooded savanna region and in an area generally referred to as the middle belt of Nigeria. It is characterized by relatively sparse population, tsetse fly infestation and abundant wild animals. The park is 560 Km north of Lagos and 385Km to the northwest of Abuja, the Federal Capital Territory (Figure 1).

Kainji Lake National Park, which covers a total area of 5340.82 sq.km is made up of two (2) non-contiguous sectors, the Borgu and Zugurma sectors. The Borgu sector, lies between Borgu and Baruten Local Government Areas of Niger and Kwara States and Covers an area of 3, 970. 02sq.km. it is bordered in the east by Kainji Lake and in the west by republic of Benin (Fig 2). The Zungurma sector on the other hand, occupies a relatively smaller area of 1, 370. 80 sq.km and is situated in the Mariga Local Government Area of Niger State. This sector is bordered by Kontagora River on the north-west side and by the Manyara River on the north side (Figure 2).

The park area enjoys the middle belt climate of Nigeria. It comprises of two distinct seasons of wet and dry seasons. The wet season starts from around mid-April of every year and ends early in November giving about a seven months' wet season while November to April represents the dry season. The temperature during the dry season is about $37^{o}C$ and drops to about $28^{o}C$ during the wet season being affected by the north east harmatan winds. The average relative humidity is 53% and is generally on the higher side especially during the dry season (Development Research Bureau, DBR, 2013). The rainfall is a major climatic element in the park being responsible for vegetal growth and hydrology of the rivers. The mean rainfall is 1200mm. The amount of rainfall increases to the southeast from Borgu towards the Niger valley. This is due to the leeward nature of the park site being east of Yoruba hills. The number of rainy days' averages about 200 days increasing eastwards to Niger Valley. The vegetation comprises mainly of Guinea savannah type with patches of forest along the kainji lake shore and river Timi and Sodoro. In addition the Park contains quite a variety of ethno-historical and cultural sites such as the Kibi hills, Kali hills and shrines as well as Manyara River and Lion caves in Zugurma. The Park is endowed with different species of wild animals such as Lion, Leopards, Hyena, Western heartbeast, Roan antelope, Hippopotamus, grass cutter, water buck , Bush buck, Yellow backed ducker, Buffalo, Elephant, Warthog, Red river hog, Python, Crocodile etc.

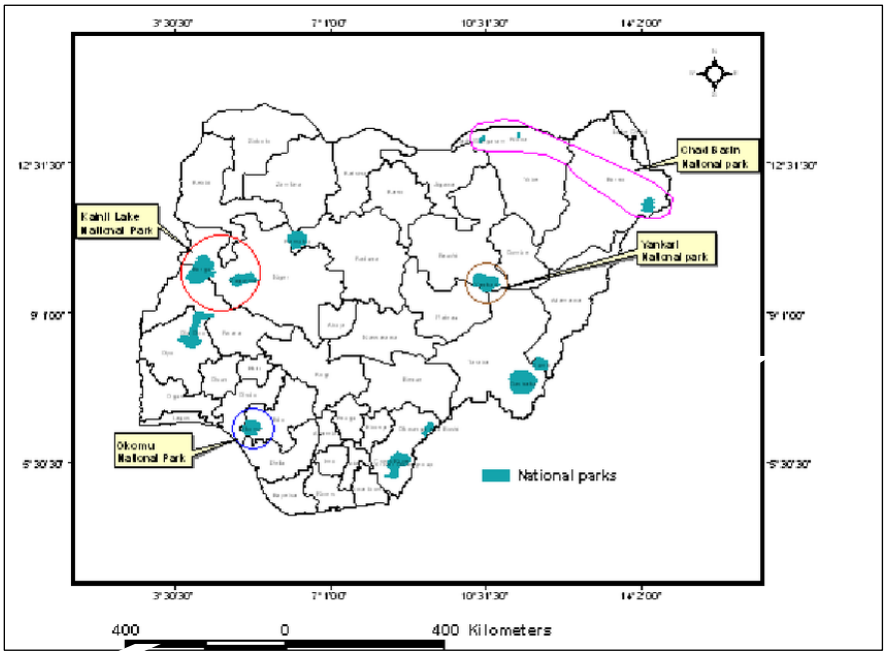


Figure 1: Map of Nigeria Location of Kainji Lake National Park

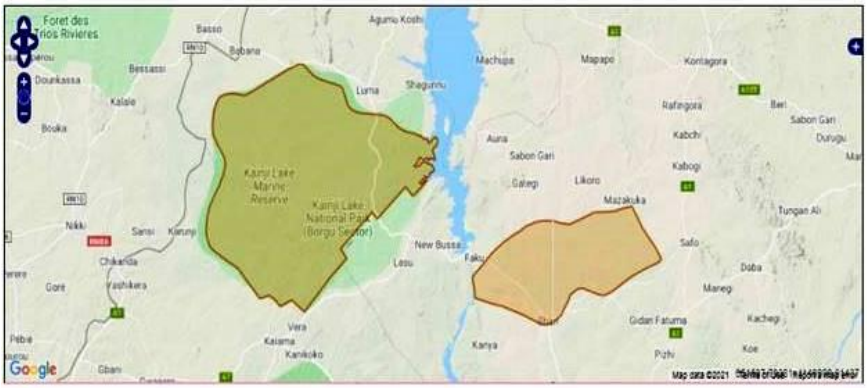


Figure 2: Map of Kainji Lake National Park showing Borgu and Zugurma sectors
Study Design and Data Collection

Data for this study was derived from primary and secondary sources. The primary data was collected using structured questionnaires while Journals, Proceedings, Texts, Brochure, and manuals were used to elicit information for secondary data.

A multistage random sampling method was used. This method, made use of 7 sub divisions (ranges), 5 under Borgu and 2 under Zugurma sectors that made up Kainji Lake National Park. A random selection of three villages neighboring the park was done from each of the sub divisions making a total of 21 villages. Under Borgu sector the following 15 villages were selected, Kuble, Sansani, Lumma, Kali, Woro, Wawa, Duruma, Kemenji, Tinubu, Doro, Malale, Loko-mini, Wuro-Makoto, Nuku and Vera while 6 villages were selected under Zugurma sector viz: Ibbi, Patiko, Shafini, Kulho, Fanga and Mazakuka. Twenty (20) questionnaires were administered in each of the communities making a total of Four hundred and twenty (420) questionnaires for the study area. Structured questionnaires were administered randomly in homes at each village. In addition, scheduled interviews were also employed to elicit information from the respondents.

Data analysis

The statistical tool used for achieving the objective of this study is the descriptive statistics comprising of means, percentages, tables and graphs.

Results and Discussion

Socio-economic characteristics of respondents

The socio-economic characteristics of the respondents are shown in Table 1. The age distribution of respondents shows that 125 (29.8 %) were between 18-27 years of age, 173 (41.2 %) 28-37 years, 70 (16.7 %), 38-47 years, 34 (8.1 %) 48-57 years, 11 (2.6 %) were 58-67 years and 7 (1.7 %) of respondents were greater than 57 years of age. These indicate majority (87.7%) of the women are within the age bracket of 18 and 47 years. This is the energetic group of a society. The implication is that no physical wildlife management activity requiring agility will pose a challenge to the communities. Under the marital status 301 (71.7%) were married, 85 (20.2%) single, 23 (5.5%) Divorced, and 11 (2.6%) were widows. From the result most of the respondents in the study area are married. This could be that they have responsibility such as feeding, school fees, health and other contingencies which make them to venture in to utilization of these products. The result also shows the religious status of the respondents, there are 278 (66.2%) Muslims, 127 (30.2) Christians and 15 (3.6%) traditional worshipers. There is no indication that religion played a role in the extraction of *NTFPs*. The Table reflects that 118 (28.1%) had an informal education, 231 (55.0 %) had gone to primary school, 57 (13.6 %) of respondents attended secondary school and 14 (3.3%) of the respondents acquired tertiary education. The result of distribution of educational attainment of respondents indicates that majority of them had one form of education or the other. Education will enable the respondents to read and understand any issue about conservation. The implication is that the creation of awareness on wildlife conservation programmes will face little or no challenges. This finding is in consonance with the report of Tukur and Ray (2009). Primary occupation is topped by crop farming with 176 (42.0 %) then House wives 108 (25.7%), Business 78 (18.6 %), Livestock farming 33 (7.9 %), Civil servants 16 (3.8%) and others 9 (2.1 %). Furthermore, the indication from the result is that farmers are in the majority in the study area. Therefore, the business of wildlife management may not be alien to the people. Result of monthly income of respondents showed that 116 (27.6 %) of the respondents earned between #1000- #5000, 202 (48.1 %) #6000- 10,000, 52 (12.4 %) ₦ 11,000-₦ 15,000, 27 (6.4 %) ₦ 16,000- N20,000 and 23 (5.5%) of respondents earned greater than ₦20,000. Result of monthly income of respondents showed that majority live below the level of $ 2.00 per day recommended by World Health Organization (WHO, 2017). It is hoped that the integration of wildlife management and production into the agricultural production system will enhance the revenue base of the rural dwellers and consequently emancipate them from poverty.

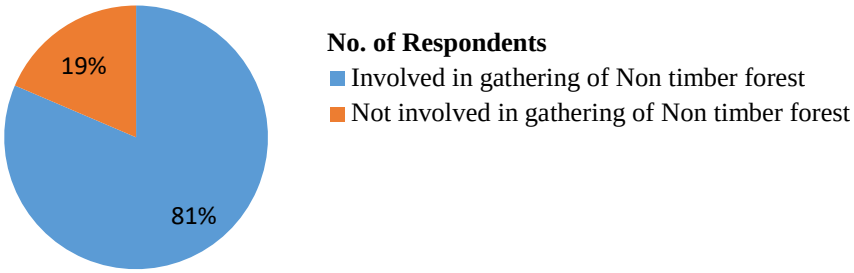
Table 1: Socio-economic characteristics of the respondents in KLNP

Variable	Frequency	Percentage (%)
Age		
18-27	125	29.8
28-37	173	41.2
38-47	70	16.7
48-57	34	8.1
58-67	11	2.6
Greater than 67	7	1.7
Total	420	100
Marital Status		
Married	301	71.7
Single	85	20.2
Divorced	23	5.5
Widow	11	2.6

Total	420	100
Religion		
Islam	278	66.2
Christianity	127	30.2
Traditional	15	3.6
Total	420	100
Educational level		
Informal	118	28.1
Primary	231	55.0
Secondary	57	13.6
Tertiary	14	3.3
Total	420	100
Primary Occupation		
Crop faming	176	42.0
Livestock faming	33	7.9
Business	78	18.6
House wives	108	25.7
Civil servants	16	3.8
Others	9	2.1
Total	420	100
Income		
₦ 1000 - ₦ 5,000	116	27.6
₦6,000 - ₦ 10,000	202	48.1
₦ 11,000 - ₦ 15,000	52	12.4
₦ 16,000 - ₦20,000	27	6.4
₦21,0000 and above	23	5.5
Total	420	100

Involvement in the extraction of Non timber forest products

Majority of the respondents 342 (81.4%) are involved in gathering of Non timber forest products while the remaining 78 (18.6 %) were not involved (figure 3). 289 (84.5 %) get this products outside the park, 35 (10.2 %) of the respondents get this products from inside the park and 18 (5.3 %) of them get this products from both inside and outside the park (figure 4). 310 (90.6 %) of the respondents are part time gatherers of this products while the remaining 32 (9.4 %) are full time gatherers of this resources (figure 5). Furthermore, most of the respondents claimed to be involved on part time basis, indicating that majority of the respondents have other means of survival aside *NTFPs* exploitation and that they engaged in *NTFPs* as a means of augmenting their major source of livelihood. This is in agreement with the work of Raufu *et al*., (2012) in a study of economic analysis of rural women income from *NTFPs* in Ife South Local Government Area of Osun State, which stated that rural women have found *NTFPs* as alternative source of livelihood.



Figur 5% in Gathering of Non-timber Forest

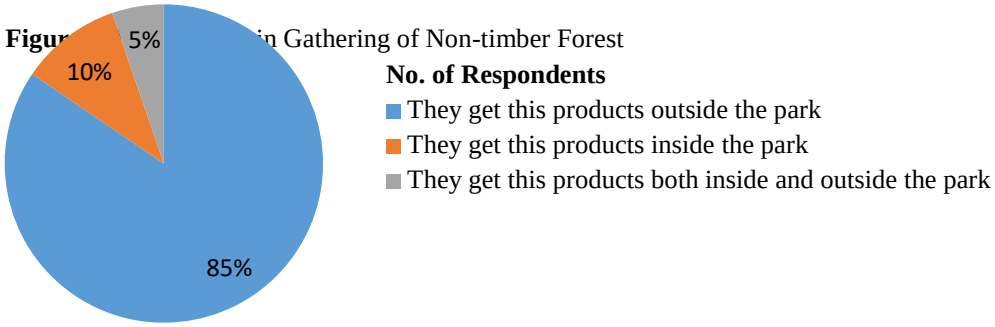


Figure 4: How they Get their Products

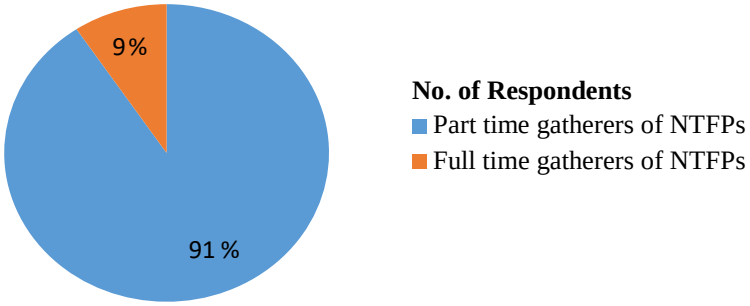


Figure. 5: Gatherers of NTFPs

Utilization of NTFPs by respondents

Table 2 shows the list of nineteen (19) non-timber forest products utilized for food according to respondents. This is topped by *Parkia biglobosa with 146 (12.6%) followed* by *Vitellaria paradoxa* with 131 *(11.3 %)* then *Bombax costatum* came third with 106 (9.1 %). The least among the list is Gardenia *aqualla* 16 (1.4 %). Table 3 shows the list of twenty nine (29) non-timber forest products utilized for fuel according to respondents. *The list is topped by Afzelia Africana with 203 (8.2 %) respondents followed by Parkia biglobosa with 191 (7.7 %) then Maesopsis emini with 188 (7.6 %). The least on the table is Entada africana 9 (0.4 %).*

Table 4 depicted the list of twenty two (22) non-timber forest products utilized for medicinal purpose according to respondents with *Annona senegalensis 76 (9.7 %), Parkia biglobosa 72 (9.2%) and Pilostigma thonningii 69 (8.8 %) ranking first, second and third respectively. The least on the table is Boswellia dalzieelii 6 (0.8 %). Table 5 shows the list of Ten (10) animals and animal products for consumption as food* according to respondents *with cane rat 65 (13.8 %), honey 56 (11.9 %) and frog 51 (10.8 %) ranking first, second and third in that order. T*able 6 shows the List of three (3) non timber forest products gathered for Handcrafts according to respondents. *Khaya senegalinsis 44 (22.6 %), Adansonia digitata 41 (21.0 %) and Elaeis quineese 36 (18.5 %)* as first, second and third respectively. The result of this study indicated that these Communities depend on this resources for their livelihood. *This agrees with the findings of* Chikamai and Kagombe, (2013) that Traditionally, households, especially rural women living around forest areas in Nigeria collect various NTFPs and such households are, therefore, dependent on the continued growth of forest products. On the various types of uses according to respondents, it is also in tandem with the report of Jimoh *et al*., (2012) that Collection and selling of NTFPs is therefore not only an important source of income by increasing their purchasing power, but also provides Fuelwood, handcraft, medicine and contributes to food security in the household. The result further agrees with the findings of Ellis and Allison (2004) and Olaniyi *et., al* (2013) that Rural women have vast indigenous knowledge on the medicinal, nutritional, spiritual and economic uses of a wide range of NTFPs. Hence, they are increasingly taking advantage of such products because of the immense contributions to

their subsistence, daily life, their welfare and in general the development of rural economies.

Table 2: List of plants gathered by women for food

S/No	Scientific name	Parts of plant	Frequency	Percentage
1	*Parkia biglobosa*	Fruit and seeds	146	12.6
2	*Vitellaria paradoxa*	Seeds	131	11.3
3	*Bombax costatum*	Fruit and flowers	106	9.1
4	*Annona senegalensis*	Friuts	87	7.5
5	*Elaesis guineensis*	Seeds and leave	81	7.0
6	*Senna singueana*	Seed and fruits	75	6.4
7	*Prosopis afrcana* .	Seed	71	6.2
8	*Vitex domiana*	Fruit	68	6.1
9	*Detarium microcarpun*	Fruits	66	5.7
10	*Adasonia digitate*	Leaves and fruit	62	5.3
11	*Khaya senegalensis*	Seeds	51	4.4
12	*Tamarindus indica*	Fruits	45	3.9
13	*Maesopsis emini*	Fruits and Leaves	39	3.4
14	*Brachystegia eurycoma*	Seeds	31	2.7
15	*Borassus aethiopum*	Fruits, roots	28	2.4
16	*Strychnos spinosa*	Leave	22	1.9
17	*Entada Africana*	Seed	21	1.8
18	*Berlinia grandiflora*	Leave	17	1.5
19	*Gardenia aqualla*	Leave and seed	16	1.4
	Total		1163	100

Table 3: List of NTFPs gathered by women for fuel (Fire wood)

S/No	Scientific name	Frequency	Percentage
1	*Afzelia Africana*	203	8.2
2	*Parkia biglobosa*	191	7.7
3	*Maesopsis emini*	188	7.6
4	*Annona senegalensis*	176	7.1
5	*Combretum molle*	165	6.7
6	*Detarium microcarpun*	155	6.3
7	*Anogeissus leiocarpa*	152	6.1
8	*Khaya senegalensis*	147	6.0
9	*Senna singueana*	138	5.6
10	*Brachystegia eurycoma*	126	5.1
11	*Crossopteryx febrifuga*	118	4.8
12	*Ficus spp*	101	4.1
13	*Bridelia ferugginea*	97	4.0
14	*Vitex domiana*	83	3.3
15	*Vitellaria paradoxa*	69	2.8
16	*Bombax costatum*	52	2.1
17	*Adasonia digitate*	49	2.0
18	*Elaesis guineensis*	47	1.9
19	*Erythrophleum suaveolens*	38	1.5
20	*Burkea Africana*	29	1.2
21	*Isoberlinia doka*	29	1.2

22	*Hymenocardia acida*	23	0.9
23	*Tamarindus indica*	21	0.8
24	*Prosopis Africana*	18	0.7
25	*Grewia mollis*	16	0.6
26	*Gardenia sokotensis*	15	0.6
27	*Daniellia oliveri*	12	0.5
28	*Pterocarpus erinaceus*	11	0.5
29	*Entada Africana*	9	0.4
	Total	2478	100

Table 4: List of NTFPs gathered by women for Medicine

S/No	Scientific name	Frequency	Percentage
1	*Annona senegalensis*	76	9.7
2	*Parkia biglobosa*	72	9.2
3	*Pilostigma thonningii*	69	8.8
4	*Sterocarpus setiqera*	63	8.1
5	*Daniellia olivera*	60	7.7
6	*Vitellaria paradoxa*	55	7.0
7	*Prosopis Africana*	51	6.5
8	*Kigelia Africana*	47	6.0
9	*Detarium microcarpun*	42	5.4
10	*Anogeissus leiocarpa*	41	5.2
11	*Khaya senegalinsis*	34	4.3
12	*Aspilia Africana*	31	4.0
13	*Nuclear lotifolia*	27	3.5
14	*Bombax costatum*	21	2.7
15	*Strychnos spinose*	19	2.4
16	*Pterocarps erinaceus*	17	2.2
17	*Ziziphus mauritiana*	13	1.7
18	*Peeudocedrala kotshyl*	11	6.0
19	*Gardenia aqualla*	10	1.3
20	*Lanea acida*	10	1.3
21	*Crossopteryx febrifuga*	7	0.9
22	*Boswellia dalzieelii*	6	0.8
	Total	782	100

Table 5: List of Forest animals and animal products gathered by women for consumption as Food

S/No	Scientific name	Frequency	Percentage
1	Edible fruits	65	13.8
2	Fish	56	11.9
3	Fodder and Forages	51	10.8
4	Honey	44	9.3
5	Hedgehog	43	9.1
6	Gum Arabic	39	8.3
7	Wrapping leave	35	7.4
8	Monitor lizard	31	6.6
9	Frog	28	5.9
10	Cane rat	24	5.1

11	Tortoise	21	4.5
12	Mushrooms	18	3.8
13	Bush rat	16	3.4
	Total	471	100

Table 6: List of NTFPs gathered by women for Handcrafts

S/No	Scientific name	Parts of plant	Frequency	Percentage
1	*Khaya senegalinsis*	Bark	44	22.6
2	Adansonia digitate	Bark, Roots	41	21.0
3	Elaeis quineese	Palm fonds, Leaves	36	18.5
4	Borassus aethiopum	Fruits	30	15.4
5	*Bombax costatum*	Bark	25	12.8
6	*Tamarindus indica*	Roots	19	9.7
	Total		195	100

Purpose for collection of non-timber forest products

Table 7 shows the reasons for collection of non-timber forest products in the park. It was topped by Poverty with 127 (19.4%), followed by *Unemployment* 111 (17.0%) and then Loss of community forest to the park 102 (15.6%) as first, second and third in that order. Table 8 reflects the solutions to the reasons for collection of none timber forest products in the park. It was topped by Provision of employment opportunities 138 (14.1%), followed by Provision of credit facilities 129 (13.1 %) and then *Establishment* of the community forest 121 (12.3%). Finding a lasting solution to these problem in the study area is in line with the observation of Inah (2012) who stated that the efficient management of wildlife resources in the protected areas cannot be achieved without the consideration of the socio-economic wellbeing of its Support Zone Communities. As this would dissuade the negative attitudes of the communities towards conserving wildlife resources, and as well create moral support and harmonious working relationship between the protected area and the Support Zone Communities.

Table 7: Reason for collection of NTFPs from the park

S/No	Purpose	Frequency	Percentage
1	Poverty	127	19.4
2	Unemployment	111	17.0
3	Loss of community forest to the park	102	15.6
4	The product outside the park have been destroyed	98	15.0
5	Communities do not participate in park programme	87	13.3
6	The product is less outside the park	54	8.3
7	Communities do not benefit from park project	43	6.6
8	Lack of awareness about reason for creating the park	31	4.7
	Total	653	100.0

Table 8: How to stop collection of NTFPs from the parks

S/No	Solution	Frequency	Percentage
1	Provision of employment opportunities	138	14.1
2	Provision of credit facilities	129	13.1
3	Establishment of the community forest	121	12.3
4	Allow participation of SZC in the management of park projects	118	12.0
5	Enhancement of conservation education programme	102	10.4

6	Collaboration between government and NGOs to aid the local SZC	96	9.8
7	Train residents on sustainable means of livelihood	68	6.9
8	Provision of infrastructure to SZC	56	5.7
9	Punishment of offenders	51	5.2
10	Allow the use of buffer zone	43	4.4
11	Initiate the use of cooking gas	31	3.2
12	Development of tourism potentials in the SZC	28	2.9
	Total	981	100.0

Conclusion

Based on the results of the findings, it is therefore concluded that majority of the women are involved in the utilization of non-timber forest products in the study area. Most of them are part time users of this resources. These products are obtained and processed in one way or the other and sold for the purpose of generating income, consumed as food, firewood, health care, and craft making. The nature of their livelihoods makes it imperative for them to have access to these resources. The Support Zone Communities have started the encroach of the park territory for extraction of NTFPs so it is high time that the park management work In harmony with the SZC for a sustainable conservation of natural resources in the park at the same time meeting the basic needs of these Communities.

Recommendation

i. Provision of cooking gas at subsidized rate would serve as an alternative means to fire wood which is predominantly used as cooking fuel.

ii. There is the urgent need for improved livelihood for women in areas such as modernized farming, trading, tailoring machine to increase the income of women in the Support zone communities.

iii. Government, park management and donor agencies should make efforts to provide the basic necessities of lives to the park communities, this will better their living conditions and reduce dependence on forest resources, thereby reducing illegal poaching and harvesting in the main park area.

iv. Enhanced Conservation education programme to dissuade pressure on park resources

v. Establishment of community forest will reduce pressure on the park resources.

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