



GENDER SELECTION OF FOREST PRODUCT SMALL ENTERPRISES IN RIVERS AND BAYELSA STATE, NIGERIA

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ABSTRACT

Gender role in forest products (FPs) enterprise is usually an over-looked perspective to sustainable forest management. The essence is to compare exhaustively the potentials of gender roles that can effectively sustain the lives of people and the forest. This study evaluates the impact of gender in selection of small FPs enterprises with a view to creating a paradigm shift in forest conservation, harvesting, processing, consumption and marketing of products in Bayelsa and Rivers State, Nigeria. The result reveals that the higher the married females and investors in a particular state the less gender role activities in FPs. Increasing age (20-39 and 40-59 years) and level of education result in less gender role commitment than younger ones with low level of education. Also, the respondents who are educated are more efficient in gender role activities. More so, results revealed that frequent involvement of females in fruit, vegetable, fuelwood, nursery and general marketing small enterprise (SE) in FPs are likely to discourage gender role activities. Fuelwood enterprise was more competitive to gender though with gender difference in both states. The role of gender in SE shows that medicinal plant and crafts offer positive and innovative mechanism to sustainability in livelihood and forest management. Among the problems of SE were low demand/price of produce and insecurity due to restive occurrences. The strategies recommended for improved sustainable SE were level of post-harvest innovations in place and the national and international policies to handle standards certification, species adaptation valuation, value addition, new products and new markets.

Keywords: gender role, forest extension, perspective, small enterprise.

INTRODUCTION

Cottage or small enterprises in forestry are small-scale practice that enhances the indigenous livelihood on forest products. Small enterprises predominate as a form of manufacturing where there are factors which favour local processing, such as dispersed raw materials, small markets or high transport costs; where there are economies of small scale, such as in handicraft production; or where subcontracting is more efficient than are integrated operations (Arnold *et al.*, 1988). Unfortunately the rural people are not after the trees but its products. These have brought an indescribable hardship on both human and the environment attributing to climatic factors as a result of overexploitation.

In the midst of climate change and urban greening development, mankind no longer grasps the vital need for trees; rather he vaunts his contemptuous domination of nature. There is need to recognize the beneficial role of forest products among living beings, their enterprises as well as challenges confronting operations.

Small enterprise contribution to rural economy

Small-scale forest enterprises are important contributors to the rural economy in most developing countries usually in an informal form, but have often been overlooked or bypassed in rural development planning because of their size and general lack of a focal point for assistance (Shackleton and Shackleton, 2004; Arnold *et al.*, 1988).

International Fund for Agricultural Development (IFAD, 2008) indicated that forest products such as Non-timber forest products have traditionally provided a source of nutrition, medicine and income for millions of

indigenous women and 80 percent of the people in some of the most remote areas of developing countries. To achieve mutual benefits therefore demands the corporation of men and women (gender) which is the unit of life and consequent sustainable management of the forest. Sustainable forestry development would be achieved if the needs and aspiration of rural and forest dwelling communities is considered as well as acknowledge and deal, in an appropriate and timely way, with the conflicting situations created by competition for the use of forest resources (Shackleton *et al.*, 2011; Akinbile and Adekunle, 1999). Since the aspirations of the rural people are always in small-scale practices, it is wise to explore the numerous gender involvements in small scale forest product enterprises to properly categorize the extent of utilization and efficiency of some trees and non-timber forest products. The importance of learning more about small enterprises lies not in their smallness *per se* but in understanding better to what extent they are the most appropriate way of achieving development in a particular situation (Arnold *et al.*, 1988).

Types of small forest products enterprise

In Nigeria, small scale enterprises in forest products are emerging especially in local areas. These enterprises though small in capacity have over the years been source of sustainable livelihood. Larinde (2003), Warizeribe (2013) identified several enterprises by men and women in forestry. These enterprises are:

- **Fuel-wood Gathering:** Women collect firewood for energy generation; for domestic cooking at home as well as for sales as income supplement to meet other needs.



- **Basket industry/Household craft:** Baskets are of different sizes and are meant for different purposes such as carrier or display plates for consumable and non-consumable products. Leaves from *Nypa*, coconut, oil palm, raffia, fan palm and stems from rattan, mangrove and bamboo are used for the production of basketry works.
- **Fishing craft:** This craftwork is in two forms, that is, fishing device and fish smoking cards platforms. Mangroves are used for the production these crafts. The craft determine the type of catch during fishing while the size of catch determines the type of craft for smoking.
- **Musical crafts:** These are crafts made from woods such as bamboo, mangroves, animal skin used in the production of musical sounds to the delight of listeners. These musical instruments range from drums, flute, bats and others.
- **Carving industry:** Full and half images of living things and their activities are displayed in wood form and in most cases to portray the culture of the people. This also includes wood carving such as wooden utensils.
- **Weaving industry:** Elegant furniture, decorating fittings, handles, mats, fan, thatches, baskets, platforms, beds, ropes, hangers, carriages and fishing crafts are low income generating opportunities in areas identified with poverty and no infrastructure.
- **Poles trading:** Poles are harvested from the natural forest and sometimes in the plantation for use as crop or river stakes, roof, wall, door or window frames for temporary huts or sheds where marketers take rest from sunlight and other forest products are marketed at the fishing settlements and road sides.
- **Wild fruit trading:** Fruits consumed raw are seen at roadsides marketed by women especially in the heat of the day and in the evenings. Also as seasonal fruits surfaces, seasonal sellers emerge creating an awareness of emergency income ratification for the poor or low income earners.
- **Medicinal plant trading:** Sale of edible herbs, honey production, juice, white clay, oil, milk, fats for medicinal purposes are sites at markets, roadsides and traditional healers.
- **Bush bar:** These are buildings that display the elegance of craft work with sale of foods absolutely from the forest and consumed by people who appreciate their natural endowment. Well spiced delicacies like bush meat, dog meat, catfish, mushroom, and snail soup with palm wine are easy to come by.
- **Trade in wild vegetables:** *Gnetum africana*, *Pterocarpus spp*, *Heinsia crinata*, garden egg leaves, pepper soup spices are local name of wild vegetables sold by women whose sources are mainly from the forest.
- **Seedling production:** These are craft buildings that display seedlings of medicinal shrubs and ornamental plants such as curry and bed flower respectively.
- **Charcoal production:** This is the production of charcoal by heat from selected dried woods such as mangroves. The process is called pyrolysis. The decomposed wood is used for cooking, smoking fish, medicine and steam engine.
- **Oil palm production:** Vegetable oil and kernel oil are the major indigenous products of oil palm but the viscosity determines the use of the products such as cooking, soap making, cream, etc. shells are used or sold as chippings.
- **Palm wine and local gin production:** Production of palm wine and dry gin from raffia palm and fermentation of sugar are enterprises located in swampy areas. Their productions are at different levels. Apart from being consumed raw, they are used as medicine and storage media.
- **Rubber factory:** Latex production is done by rural people; the tools used are risible in relation to the luxuriance of plant life. Though a small scale enterprise, it's a sustainable livelihood.

These practices are mostly found in the South-South wetlands of Nigeria. This is due to the tropical and biodiversity nature of the region.

Forest product species in south-south, Nigeria

The forest products identified in these study area include *Gnetum africana*, *Pleurotus tuberegium*, *Elaeis guineensis*, *Aframomum melegueta*, *Raffia hookerii*, *Allanblackia floribunda*, *Nypa fruitican*, *Rhizophora spp.*, *Pentaclethra macrophylla*, *Borassus eathiopum*, *Heinsia crinata*, *Psidium guajava*, *Mangifera indica*, Linn, *Parkia biglobosa*, *Garcina cola*, *Persea americana* Mill., *Chrisophylum abidum*, *Dacryodes edulies* (G. Don) Lam H.J., *Spondia spp*, *Irvingia gabonensis* (Aubry-Lecomte) Baill., *Xylophia aethiopica* and *Coula edulis* Baillon, *Eremosparthan macrocarpa*, *Rhizophora spp.*, *Cola acuminata*, *Garcina cola*, *Cocos nucifera*, and *Bambusa vulgaris* (Olaleye and Agbeja, 2011). These forest products are used as vegetables, fruits, medicinal plants, fuelwood, materials for the manufacture of craft products and means of generating income for rural and urban people (especially women).

Constraints in forest product enterprises

Forest products are numerous and their constraints are in different perspectives. In Nepal the problems identified were raw material shortages, availability of tools and equipment as well as limited technical skills, shortage of finance, insecure markets, managerial weaknesses / capacity and lack of organization of the enterprises (Arnold *et al.*, 1988; Pandit *et al.*, 2008).

In the last decade, proper management of the world's forests has come to the forefront of the plans of several institutions, development agencies, non-governmental organizations and increasingly, that of national and local government. The assessment of the level of gender development with respect to sustainable livelihood, conservation and challenges has shown that there is a missing link which has not been actualized. This



has paved way for analysis of the demographic characteristics, existing enterprises and problems of small enterprise in selected communities in Bayelsa and Rivers States of Nigeria.

METHODOLOGY

This research was carried out in rural areas of Bayelsa and Rivers states. These states are situated in the wet lands of the Niger Delta. Forest activities are still enormous inspite of commercial and oil industry activities. Concern for gender role in conservation, poverty alleviation and sustainable management of the biological and other diversities informed the choice of two states and selected FPs enterprises in this location. The mean annual rainfall of the study area is 3000mm, temperature of 24 - 27 degrees and located in the South-Southern part of Nigeria in the region between latitude 4° 30' N 7° 03' E. A set of questionnaire were purposefully administered to 120 rural inhabitants from twelve (12) communities in four (4) Local Government Areas. The questionnaire considered the demographic characteristics of respondents and value systems of selected NTFPs. Descriptive statistics was carried out on the collected data.

RESULTS AND DISCUSSIONS

Demographic characteristics of respondents in the study area

Demographic information of respondents in Table-1 shows the characteristics of sampled respondents in the study area. The sampled respondents include individuals and marketers dealing with non-timber forest products. The sex distribution indicates that majority of the respondents in the two states were females with 58.9 percent in Bayelsa and 69.0 percent in Rivers. This implies that females dominate in forest product enterprise activities which may be due to nature of the forest or household provisioning but with the males also involved revealed gender sensitivity. The result revealed a level of cooperation between genders and agreed with the report of Amika (2003) which asserted that mutual benefit exist when there is cooperation and participation of gender in effective sustainability.

Furthermore, in Table-1, the age distribution shows that majority of the respondents were between 40-59 years 29.4% in Rivers and closely followed by 28.6% in Bayelsa states respectively. Interestingly, females constitute most of these age classes. Within the age range also, the least were less than 20 years and only in Bayelsa

(1.8%). This implies that the active age group practicing and influencing forestry activities were among young men and women because the numbers of respondents reduced with increase in age except in Rivers where older males are more active (40-59 years). CIFOR (2006) also declared that with the potential to revert the current trend of aged people, the approach to active participation should involve characterization of individuals involved in NTFPs, indigenous knowledge system and practices. However, some respondents, mostly females did not disclose their ages.

The frequency distribution of the marital status in Table-1 also revealed that most of the respondents were married and females especially in Rivers (44.9%) while among the singles the highest was 7.1% in Bayelsa. Overall, majority were married although at different levels. Few of the respondents were widows in both states and were mostly females. This indicates that majority of the respondents have high level of responsibility to their homes and capable of discharging duties that can enhance sustainability of forest and business in spite of the condition of their marriage.

Also in Table 1, most of the female respondents had primary education, 34.5% percent in Bayelsa and 25.0% in Rivers while 34.5 percent had secondary education in Rivers. Overall, the highest form of education (ND / B.Sc) was noticed in Bayelsa, however, the education is not forestry biased. Respondents without formal education in Bayelsa and Rivers were more impoverished and prone to mis-use of forest resources. This shows that the level of education in forestry is still a major factor in sustainability and the educational variations is due to respondents responsibility and nature of forestry activities. This is in line with studies done by Odebode (2003) that the rural areas constitute the greater majority of the poor and yet has little access to control over education, income, land and information.

The table also revealed the highest family size of 5-8 persons (23.2%) in the study area and interestingly majority were females in Bayelsa. Howbeit males had the highest number of children which indicates polygamy. In addition, majority of the respondents which were mostly women did not disclose their family size which could be due to fears that this information might reveal the actual situation of their sustainable livelihood or disorganize the enterprise. This demographic information shows a typical scenario of the rural mentality but with so much potential for project adoption.

**Table1: Demographic characteristics of respondents in the study area**

Demographic characteristics	Bayelsa = 56		Rivers = 58	
	Male = 23 (41.1)	Female = 33 (58.9)	Male = 18 (31.0)	Female = 40 (69.0)
Age				
Below 20	1 (1.8)	-	-	-
20-39	10 (17.9)	16 (28.6)	2 (3.4)	15 (25.9)
40-59	11(19.6)	11 (19.6)	12 (20.7)	17 (29.4)
60 and above	-	1 (1.8)	2 (3.4)	3 (5.2)
None	1 (1.8)	5 (8.9)	2 (3.4)	5 (8.6)
Marital status				
Single	4 (7.1)	2 (3.6)	2 (3.4)	1 (1.7)
Married	17 (30.4)	20 (35.7)	7 (12.1)	26 (44.9)
Widowed	-	3 (5.3)	1 (1.7)	2 (3.4)
None	2 (3.6)	8 (14.3)	8 (13.8)	11 (19.0)
Educational level				
Primary	10 (17.9)	14 (25.0)	6 (10.3)	20 (34.5)
Secondary	9 (16.1)	9 (16.1)	5 (8.6)	20 (34.5)
ND / B.Sc	4 (7.1)	4 (7.1)	1 (1.7)	-
None	-	6 (10.7)	6 (10.3)	-
Family size				
1-4	6 (10.7)	3 (5.3)	4 (6.9)	11 (19.0)
5-8	8 (14.3)	13 (23.2)	4 (6.9)	7 (12.1)
9 and above	1 (1.8)	1 (1.8)	2 (3.4)	-
None	8 (14.3)	16 (28.6)	8 (13.8)	22 (37.9)

Note: Percentages are in parenthesis
Field survey, 2013

Distribution of gender in selected small forest products enterprises

Table2 shows the gender selection of Forest Products enterprises. There were remarkable differences between the states and the type of enterprises. In both states, females dominate in fruit, vegetables, nursery and general marketing enterprises while men dominate in crafts, fuelwood, oil mill, palm wine/gin and rubber production enterprises. In Rivers fruit and vegetable enterprise are solely female businesses. Vegetable enterprise was not attractive to males in both states especially in Rivers with 100% females, while in crafts males dominated with 93.1% in Rivers contrary to male involvement in forest vegetables. This is a strong indication that the males engage in more difficult task than the females. Similar results have been reported for NTFPs marketers in Anambra state, Nigeria (Aiyeloja *et al*, 2012). Though there were several forest products sustaining these people, the capacity of the enterprise could not give a substantial benefit.

Although males dominated medicinal plant enterprise in Rivers, but in Bayelsa both males and females were involved. Fuelwood enterprise in Bayelsa was highest with males (67.9%) while in Rivers, the highest were in females (53.4%). This is the most

competitive enterprise by males and females in both states and by implication taxes are involved. This affirms Pandit *et al*. (2008) position that small forest product enterprises are more competitive and usually subject to higher taxes. This implies that the use medicinal plants and fuelwood enterprises are well-known in these communities and implies high rate timber exploitation. This is a resultant effect of poverty which predisposed rural poor to fuelwood as main source of energy. Poverty pervades in the rural and remote areas and this has become both a cause and an outcome of declining supply of natural resources (Chanthalangsy, 2009). Poverty has become an unbeatable monster in this part of Nigeria but with planned forest extension and education programme involving both the stakeholders and institutions, there would be a head way to changes. Added to this is poor forest management policies, including unrestricted logging and excessive harvesting of fuelwood contributed to environmental degradation (Eastnaugh, 2008).

Furthermore, nursery enterprises were dominated by females especially in Rivers (93.1%). Marketing was a general enterprise but the difference is that some were into general marketing and others were with specific products though as they appear in their season. This is in line with Arnold *et al*. (1988) stating that the large component of



small-enterprise operations in the forest sector reflects the size of rural demand for its products, and the dispersion of these markets across large areas with relatively poor transport. Here majority of the respondents accepted that

marketing should be for female (84.5%) except in few exceptional cases. This shows that the females were the most privileged in enterprise participation.

Table 2: Gender selection of forest products enterprises.

No.	Forest products enterprises	Bayelsa = 56			Rivers = 58		
		Male (%)	Female (%)	Both (%)	Male (%)	Female (%)	Both (%)
1	Fruits	4 (7.1)	37 (66.1)	15 (26.8)	-	58 (100)	-
2	Vegetables	-	42 (75.0)	14 (25.0)	-	58 (100)	-
3	Medicinal Plants	10 (17.8)	9 (16.1)	37 (66.1)	38 (65.5)	16 (27.6)	4 (6.9)
4	Crafts	26 (46.4)	6 (10.7)	24 (42.9)	54 (93.1)	-	4 (6.9)
5	Fuelwood	38 (67.9)	3 (5.3)	15 (26.8)	19 (32.8)	31 (53.4)	8 (13.8)
6	Nursery	2 (3.6)	36 (64.3)	18 (32.1)	1 (1.7)	54 (93.1)	3 (5.2)
7	Marketing	-	38 (67.9)	18 (32.1)	-	49 (84.5)	9 (15.5)

Note: Percentages are in parenthesis
Source: Field Survey, 2013

Problems associated with gender small enterprise in the study area

In forest products small enterprises, problems are in different perspectives. These problems were associated with collection, utilization and protection / management. Table3 reveals some of these problems. In Bayelsa, the problems males or females encounter were proximity to the source of produce, lack of materials for collection, bad road/haulage problems and ants / leech attack, while in Rivers it was contrary except that males have ants / leech attack to deal with. Their problems were associated with collection from the forest and implied there is need for technical know-how. This is in line with findings of Adedokun and Akinyemi (2003) that factors militating against women participation in forestry include difficulties in jobs, high cost of equipment, no access to credit facilities and extension workers and lack of technical know-how.

Low demand / price and insecurity were common and serious problems for both gender and states. This shows that the people involved in small Forest Products enterprise were local and low income earners. In Bayelsa, males don't have problem with season of the year while in Rivers males or females but not both have this problem. This implies that in Bayelsa, males switch to other small forest products enterprises as the season changes but in Rivers males have their problems as well as females. Bayelsa respondents mentioned declining availability of forest products while Rivers claim otherwise. This is as a result of population increase and increasing demand for forest products. Females in Rivers complained of high temperature in forest products enterprise. This is a post-harvest associated problem which was due to the level of innovation in storage and preservation of collected Forest Products.

Table 3. Problems of gender in Forest Products small enterprises.

No.	Problems	Bayelsa			Rivers		
		Male	Female	Both	Male	Female	Both
1	Proximity to the source of produce	X	X	-	-	-	-
2	Lack of materials for collection	X	X	-	-	-	-
3	Low demand / price	X	X	X	X	X	X
4	Insecurity	X	X	X	X	X	X
5	Season of the year	-	X	X	X	X	-
6	Declining availability	-	X	-	-	-	-
7	Bad roads / haulage problem	X	X	-	-	-	-
8	Ants / Leech attack	X	X	-	X	-	-
9	High temperature	-	-	-	-	X	-

Field survey, 2013



CONCLUSIONS

The contribution of Forest Products to the welfare of the rural poor goes beyond their demographic characteristics. Forest extension and education activities would be successful if it counts on the indigenous knowledge, competent age groups, living standards and benefit sharing strategies. Marital status and educational level of the respondents are important factors in influencing gender role and innovative development. Females in forest product enterprise are voiceless extension entrepreneurs in direct use or consumable products. That is, there impacts in the society are not recognized even in the informal economy. Though involved in wild fruit and vegetables, fuelwood, nursery and marketing enterprise, medicinal plants and crafts enterprise encourages gender activities than other investigated ones. This implies that the level of innovations are out of place and can't withstand the national and international standards due to poor certification, value addition and valuation, lack of new products, new markets. Sustainable development incorporates the gender activities, institutional inputs and the forest products. The benefits from forest products were expected to increase gender role, to enhance more participation and consequently lead to sustainable management of non-timber forest products yet poverty still prevail in these areas. These forest products are used as vegetables in most African dishes and in tradomedicine, medicine plants, crafts, fuelwood and nursery operations. Having worked on their gender demographic characteristics, some types of enterprise and associated problems in Bayelsa and Rivers, other areas of interest need are gender control, valuation and market survey.

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