

WOMEN INVOLVEMENT, EMPOWERMENT AND CONTROL OF NON-TIMBER MANGROVE FOREST PRODUCTS IN RIVERS STATE

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ABSTRACT

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The provision of livelihood benefits to women in the forest environment they live and function are for two reasons which include coping with changes in the economic, social or bio-physical situations and daily uses of the forest products as an integral aspect of support. The study shows major areas of women involvement, potential empowerment and control in forestry activities. These areas include mangrove exploitation, that is, within the forest and the coast, farming, non-timber mangrove forest product collection and trading. Though the women are directly engaged in all these activities, they are limited in the hazardous ones like timber exploitation and off-shore fishing. The way forward for empowerment and control is to involve women in capacity building methods that would replenish the degrading forest, stop youth restiveness, overlook the forest specific religious and cultural barriers, set up vocational programmes that would preserve resources and at the same time satisfy interrupted basic needs of women attainment. In addition, their level of awareness, sustainable knowledge, satisfaction, adoption of initiatives and implementation were considered to ascertain their willingness for changes which will bring about control of resources. The growing recognition of the importance of women in the informal sector is linked to increasing uses of non timber forest products.

Keywords: *Women, Mangrove forest product, Empowerment, Involvement, Sustainability*

INTRODUCTION

In forestry, gender issues are considered for an effective participation since it focuses on the activities of men and women to achieve defined objectives. In other words, to facilitate efficient and effective sustainability, the women, men and sometimes the children must cooperate and participate for mutual benefits. Gender role differ from place to place, in Nigeria, men are given the more difficult jobs like tree felling, climbing, fishing or beekeeping, etc while women mostly deal with the marketing of products. Except in the Niger Delta region where women are involved in fishing and cutting of mangroves for various other uses. In Thailand and India, women collect non-wood forest products like herbs, mushroom and medicinal plants, while in Sri Lanka both women and men harvests tree products (FAO, 1995). However, women constitute a large labour force in forestry field operations. Generally, according to Amika (2003), the greatest strength of women is in the areas of species recognition, collection, gathering processing, marketing and use of non-timber forest products (NTFPs). In addition to these, women tend, weed, transplant and water plantation nurseries for afforestation projects, transportation of nursery stock to the field, plant and weeding the plantation when due. This paper attempts to identify the effective areas of involvement and prospects of awareness of women in forest management, the NTFPs in mangrove forest state of the forest development and the way forward for women involvement, empowerment and control.

Mangrove forestry and development

Deforestation in Nigeria mangrove forest has continued to increase despite efforts from the rural people such as slash and burn agriculture, domestication of non-timber forest products, restrictions through maintaining evil forest and burial places, government and NGOs. In the last three decades, proper management of the forest has come to the forefront of the plans of several institutions, development agencies, non-governmental organizations and increasingly that of national and local government (Adeyoju and Warizeribe (2005). In this respect, sustainable empowerment of the local people has been a major strategy unfortunately empowerment programs are seen as humanitarian event instead sustainable empowerment in forestry perspective These are folks with pre-existing mind-set that chokes every strategy they hear or try to apply. Research has it that knowledge is doubling every five years. So if the empowerment programmes is not seen as a perspective or don't keep growing, it will end up with coping skills that no longer match the challenges in the world today. The woman of today has had split rails with an axe, so they are agitating to know the value of empowerment and control of the mangrove forest.

Though lands in the rural areas have multiple uses and claims, that has to be accommodated, community forestry was introduced to support the control, management and uses of forest and tree resources by local communities. According to Warizeribe (2008), the projects took advantage of their awareness to forestry activities and products with respect to gender, age groups and relationship with NGOs. FAO (1994) suggested that participatory integrated forestry is a new concept, which if successfully implemented should go a long way towards saving the

mangrove forest, biodiversity and improving the rural economy of the mangrove communities. In the Niger Delta, identification of conflicting goals and process of identifying and resolving conflicts was embarked on, that involves negotiations, discussions and deliberation by various stakeholders and commissions. This is due to multiple land use conflicts that exist as a result of changes in land use by petroleum resources operators, which do not appear to have a sustainable alternative in the changing environment for the rural community.

Furthermore, with the activities of these oil companies, it is expected that the forest is relieved of pressure by men earning high wages which makes the forest exploitation less attractive to invest on. The controversy is that if technology is saving us all the time and energy, how come we're so frazzled when it comes to managing the remaining forest in the rural areas. Fortunately none can change the situation in isolation because the rural communities have no alternative to meeting their subsistence needs. The initiation of a driving force (women) and opportunity of the declining state of the forest in areas of accessibility as a result of depletion, low wages from the valuing of forest produce and local knowledge of identification and location of NTFPs will motivate the people toward implementing management strategies that will enhance proper utilization of resource capital (forest). This study intends to assist government, NGOs and rural people in determining areas of priority for women empowerment and the level of prospective awareness in forest activities that can speed up sustainable management processes.

Contributions of women involvement in forest activities

Women facilitate coordination, participation, cooperation for mutual benefit, confidence and transparency in forestry projects. Stimulate and influence gender participation in benefit and risks sharing for efficient and effective sustainable management. Create feasible impact awareness to stakeholders, government and cooperate bodies. Compensation for lack of other types of capital to ensure survival during periods of hardship (poverty) and insecurity from communal clashes, trends and security from communal clashes, trends and seasonalities. Good resource for social capital (assistance from donors of community development) implementation such as health care, education, etc. Ability to identify and locate places of NTFPs concentrations and it's scarcity.

Attributes of women exemption in forestry development

Views of women exemption are thus:

Women education is an unnecessary assistance or addition to another man benefits apart from bearing children which is her primary obligation. Due to cultural and religious beliefs that women are exclusively housewives. However successful a man is, the bulk of his wealth are harnessed or inherited by his wife/wives and children. Where there are capable women competition arises due to polygamy, benefit sharing, fashion, jealousy, politics, fame, children education, festivities (marriage and burial rites). The markets are dominated by women and their children. Cooperate groups are dominated by women. Women and children are being marginalized in a forest the very resources they need to sustain their entire livelihood, for example in the Ijaw communities fishing is a woman occupation and majority of them own boats or canoes for their expedition.

METHODOLOGY

The study covers a mangrove forestland in Bolo Community, Rivers State, Nigeria. The bulk of the population resides in smaller fishing villages and mostly involved in fishing on the coast, logging in the mangroves, and then farming, trading and hunting in the inland. This is an area consisting of moist tropical lowland rain forest, mean annual rainfall in the region of 3000mm, the monthly relative humidity is not less than 97 percent and dominated by mangrove vegetation. The research was based on interviews and personal observations. A questionnaire was offered to a random sample of 344 households on the basis of the importance of women involvement in the mangrove community enterprises for effective and efficient sustainable management in the Niger Delta.

RESULTS AND DISCUSSION

From the interviews, NTFPs (Table 1) were identified in the different areas of women endeavours. The most valuable for the local women were food-, fruit-, medicine- and craft- related produce. The people also value the mangrove tree for much more uses. The roots, leaves as fodder, seedlings for fishing craft, fuelwood and barks for curing of various diseases which was not consistent among the different households. The food – related produce were mostly from the coast: fishes, mullusc and crustaceans were exploited daily for consumption and sales.

The women mentioned high tide, soil degradation by oil spillage, bare ground (mangrove depletion), youth restiveness or *Nypa* palm invasion as the most important factors for indication of poor sustainable mangrove forest development. The various indicators combined at different rates to affect the forest marine life and people's livelihood and enterprises. The mangrove forest resources are harnessed in three areas, these are from the marine, forest and farmland. Among these areas, there are specific resources intensively collected by women such as fuelwood, oysters and vegetables. There is need for integrated forestry practices that would involve either or two

of these areas. For instance women having other occupations like trading who may have home gardens could play significant roles in the production of these products.

The results in table 2 reveals that majority of the men who are not involved in forest exploitation are engaged in fishing (12.5%) and collection of other NTFPs (5.6%). This is a reverse of the Ijaw situation where women are more in fishing. Twenty-five percent of the women are engaged in the collection of timber associated with sea shell foods while the cut wood later serves as fuelwood for domestic use. Also women dominate in farming (18.7%) and trading (6.3%) especially after exploitation activities by men.

Obviously, women use the mangrove forest for household economy, but the parts with dense vegetation are hard to harness and therefore has increase women vulnerability to danger. Out of these 344 respondents, 238 were chosen on the basis of the importance of gender role in the forest and inland enterprises. Fuelwood from the forest accounted for 58.4% men of the gender contribution to household in table 3. People consider land terrain problems as part of their constraints to women decline to forest use. However, the female folk are more investors (16.8%) in fuelwood marketing in the inland than men. The collection and sales of oysters by women generally compensate for the hired labour and high (flow) tide in logging because oysters grow on the stems of mangroves, walls of old barges, canoes, boats and jetties. The stems were later sold or used as fuelwood or scaffold. The residues (shells) are removed from the stem, barges, canoes, boats and jetties and piled up, resulting in accumulation of oyster shells in some houses as chippings for building or checking of erosion. Further analysis in table 4 shows the frequency distribution of gender participation in sustainable forest exploitation management. The table revealed that 39.0% of the female respondents participated regularly in exploitation management while males seldom (21.5%) participate suggesting that women were receptive to forest community management participation than in forest exploitation participation.

Results in Table 5 also revealed that respondents' involvement in forest management depends on the demographic characteristics of the people. The chi-square analysis showed that there is a significant association between demographic characteristics of respondents and participation in forest management. All the variables tested gave a significant association. Some variables were also considered on the level of prospective awareness in forest activities. Probit analysis was carried out on 9 variables and it was observed that 62.5% which include knowledge of sustainability (2.1218), satisfaction of forest location (0.3774), adoption of new forest technology (1.7680), involvement in social organization (0.6153) and interest in tree planting (0.0052) were found to be significant. The high figures of the significant regressors (written in brackets) are proxy measure of the model fitness. The figures revealed that the variables has significant ($X^2 = 42.86$, $P < 0.05$) but positive influence on prospective awareness and conforms to prior expectations while the variables with negative figures indicates that proximity to mangrove forest (-0.2126), change of forestry orientation (-0.0792), benefit from organization (-0.4566) and conflict in benefit sharing (-1.1545) does not have prospective awareness in forestry awareness. This implies that sustainable planners will use the knowledge of sustainability of the people in mangrove forest, the satisfaction of location to establish management programmes being sure of great support from respondents and extension in community. The people pay less importance to involvement in social organization thus drives for involvement is a great potential for awareness which will aid quick facilitation of objectives. In addition, technology adoption will also enhance awareness hence the focus of sustainable planners is to increase the extent of respondents adoption of new initiatives.

Empowerment considerations for women in forestry activity

Three decades ago, when majority of the land was covered by forest vegetation, women were not allowed to enter some sacred areas of the forest due to cultural or religious beliefs. These beliefs are gradually facing out as technology does not consider sacred land or gender to attain its objectives, the sacred land has become the only source of livelihood and survival of not only the fittest but the entire community has set in. Realizing the talents of women and their multiple indispensable roles in NTFPs, it is imperative to take recognition of gender differences in the needs and interest in the role they traditionally play in the home and in the community. Women could be empowered to encourage them return to the forest in skill acquisition, development of capacity, provision of NTFPs credit facility, access to NTFPs and education and provision of sustainable management opportunities. This conforms to the Nepal situation where the women play pivotal role in the sustainable management of forest, as they are directly involved in farming, fuelwood and fodder collection and household activities (Pokharel, 2003). As deforestation rate increases, the women attainment effort for the household decreases as well. In this respect, women are found devoting much time on activities for which they hardly get any recognition especially in monetary terms. However, the determination and willingness to adopt forestry innovations to a large extent reduces or eliminates the hindrances women face in carrying out her God given obligation.

CONCLUSIONS AND RECOMMENDATIONS

Women attach more importance to participation in fuelwood, farming and trading in the community than in the mangrove forest and fishing in the coast. The factors that force women to decline in sustainable use were rather related to natural and human factors such as poor conservation approaches and markets. Development of markets for integrated uses and sales on food- and craft- related NTFPs would significantly contribute to the household revenue, thus allowing interested persons to invest on shells and crafts, and foster relationship with government and NGOs. FAO (2001) reported that the sale of forest resources is one of the major ways in which government interact with the people through the generation of economic, social and cultural activities. Charcoal making, which is an indigenous knowledge of rural

people, was not seen as a practice because they relied on the quick burning nature of mangrove wood. It is expected that pyrolysis of wood at 700 °C in a short time would save the forest drain lead to conservation and regeneration of the mangrove resource base as well as open ways for more income generation. The domestication of oysters offers considerable scope for enhancing the nutritional and economic security of women. Finally, sustainable management in this community demands professional strategies and prospective awareness of the rural people to adopt technological innovations. This would empowering them on how to have control over their resources by knowing their level of awareness, indigenous sustainable knowledge, satisfactions, involvements, adoption of initiatives and implementation.

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Table 1: Types of Non-Timber Mangrove Forest Products Collected and Marketed by Women in Bolo

Uses	Types of NTFPs	Source of extraction	Method of collection	Time of expedition	
Food	Oysters	Mangrove stems	Mangrove cuttings	Ebb tide	
	Priwinkles, Mud skipper	Mangrove floor	Hand picking	Ebb tide	
	Prawns, crab	Mangrove floor	Basket	Ebb tide	
	Vegetables	-			
	Honey	Mangrove Nectar			
	Nuts,	Nypa palm			
	Salt yield plants	Mangrove stems & other plants			
	Alcohol, juices	Nypa palm			
	Medicine and cosmetics	Bark	Mangrove stem		
		Land snail intoxicant	Crab	Crab mesh	
Medicinal plants		-			
Chewing stick					
Spirit		Nypa palm			
Vinegar		Nypa palm			
Soil (chicoco mud)		Mangrove floor		Ebb tide	
Tannin		Mangrove			
Crafts	Liquid chalk	-			
	Artifacts	River bottom		Ebb tide	
	trinkets, decoration chippings	Nypa palm	Gathering		
	Fish traps, mats, baskets, frames	Mangrove seedlings		Ebb tide	
	Musical instrument	Mangroves stem			
	Spatula	Mangroves stem			
Gum	Mangrove stem				

Field Survey 2010

Table 2: Areas of Women Dominance in Household Activities

Gender	Timber exploitation	Fishing	NTFPs collection	Farming	Trading	Others	Totals
Male	14(8.8)	20(12.5)	9(5.6)	4(2.5)	9(5.6)	2(1.2)	64(40)
Females	40(25)	16(10.0)	6(3.7)	30(18.8)	10(6.3)	-	96(60)
Totals	54(33.8)	36(22.5)	15(9.3)	34(21.3)	19(11.9)	2(1.2)	160(100)

Percentage in parenthesis
Field Survey 2010.

Table 3: Gender distribution of timber exploitation

Gender	Timber in forest	Timber in inland	Totals
Male	139 (58.4)	14 (5.9)	153 (64.3)
Female	45(18.9)	40 (16.8)	85 (35.7)
Totals	184 (77.3)	54 (22.7)	238 (100)

Percentage in parenthesis
Field Survey, 2010

Table 4: Gender participation in sustainable forest exploitation management

Gender	Regular	Occasionally	Seldom	Totals
Male	16(10)	14(8.5)	34(21.5)	64(40)
Female	62(39)	14(8.5)	20(12.5)	96(60)
Totals	78(49)	28(17)	54(34)	160(100)

Percentage in parenthesis
Field Survey, 2010

Table 5: Summary of demographic characteristics of respondents and participation in forest management activities

Demographic characteristics	df	X ²	Cramer's V	Probability level	Significance	Degree of significance
Gender	2	21.97	0.37	<0.05	Significant	Weak
Marital status	2	26.08	0.40	<0.05	Significant	Fair
Age class	6	66.03	0.45	<0.05	Significant	Fair
Education	4	106.47	0.58	<0.05	Significant	High
Occupation	6	35.08	0.33	<0.05	Significant	Weak

Field Survey, 2010.