

Factors Influencing Gender Participation in Forest Resources Management in the Cross River National Park Enclave Communities, Nigeria

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Abstract

This study was designed to assess factors/constraints to gender participation in the exploitation and management of forest resources within the protected areas of the Cross River National Park enclave communities. The quantitative research design was adopted for the study. A null hypothesis of no factors/constraints to gender participation in the management of forest resources was formulated. 638 respondents were sampled using the stage-wise random sampling technique from a population of about 4249 people living within the six enclave communities of Okwangwo, Okwa 1 and 2, Mkpot, Abung and Iku all within Boki and Akamkpa local government areas of Cross River National Park, of Okwangwo and Oban respectively (15%). The instrument for data collection was a well structured questionnaire divided into two sections with four point likert scale response options. Data collected using the instrument was coded and transformed into SPSS version 16 and analyzed using the multiple regressions analysis. Ten factors: Sex, age, marital status, educational status, cultural factors, religion, household income, occupational status, household heads and property rights were suggested as being responsible for gender participation in the management of forest resources. The result of the regression analysis shows a yielded coefficient of regression correlation (R) of .351 and a multiple regression R-square (R²) of .123, and adjusted R² of .109, at .01 significant level, the result is significant, the result also shows that an analysis of variance (ANOVA) of the multiple regressions produced an F-ratio of 8.817, while the f-critical value is 1.91 (2-tailed). The standardized regression beta weight ranged from -.021 to -3.980, the beta weight of four factors (sex, -3.980, marital status, -2.056, educational status, -3.111 and occupational status, -2.618) were significant at 0.05 level of significance, while the other six factors (age, .462, cultural factors, .395, religion, 1.052, household income, -.123, household heads, -.021 and property rights, -.660) were not significant at 0.05 significant level, meaning that they might not necessarily contribute to gender participation in forest resources management. It was therefore recommended that women in every society should be given free hands to participate in management activities and all cultural and social barriers acting as hindrance to gender participation in management activities should be removed to allow women contribute their ideas in situation and decisions that may affect them most.

Keywords

Gender Participation, Forest Management, Enclave Communities, Cross River National Park, Gender Equality and Ecofeminism

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1. Introduction

In most countries around the world, people living in rural areas have lower incomes and are generally less prosperous than their urban counterparts. The reasons for this are often complex and vary from country to country. However, it is generally acknowledged that rural areas have fewer opportunities for creating employment and wealth due to their distance from markets; lack of infrastructure and in some cases natural disadvantages. In light of such disadvantages, many governments have made several attempts to promote the development of rural areas on the grounds of social equity. Due to these natural disadvantages of poor infrastructures, near absence of employment opportunities and access roads and other facilities, rural development strategies often focus on one factor of production that rural areas usually do have, which are natural resources such as forest, water and agricultural land (Ezebilo, 2010; Ezebilo and Mattsson, 2010). But how these natural resources base are managed within the rural forest communities leaves more to be desired. Who manage the forest resources within these forest communities, the male, female or both? Two advocates of participatory development, observed with consternation that “the broad aim of participatory development is to increase the involvement of socially and economically marginalized people in decision-making over their own lives” (Guijt and Shah 1998; Goetz, 2003).

Dalton, (2008) defined participation as “the ability of people to share, influence, control, design, partake in decision-making, and authority in development projects and programs that affect their lives and resources”. Participation in the context of this work refers to different mechanisms for people to express opinions and ideally exert influence regarding the management of forest resources. For well-informed participation to occur, some version of transparency e.g. radical transparency, accountability and responsibility is necessary, but not sufficient. This is necessary because those most affected by a decision should have the most say while those that are least affected should have the least say in a topic. Eneji, *et al.*, (2009) therefore observed that participation encompasses the various activities that citizen’s employ in their efforts to influence policy and decision making in order to redistribute benefits to the disadvantaged and marginalized groups in the society. Torri (2010) went further to conclude that while this is true, criteria for participation and representation of women interests in management programs is always considerably more ambiguous and unclear. This is true because management actors do not always give criteria for gender participation.

From citizen’s viewpoint, participation enables individuals and groups to influence agency’s decisions in a representative manner. So the extent to which women participate in any committee or organizational management determine to a greater extent the influence, benefits and gains derived from such participation.

It is however observed that many efforts at forest resource management in Nigeria and other parts of the world failed because government and other forest management organization paid inadequate attention to the various stakeholders’ interests involved in the exploitation and management of these forest resources (forest communities, logging companies, government and other agencies). In Nigeria today, local people, government and other conservation agencies like World Wildlife Fund for Nature (WWF), Nigerian Conservation Foundation (NCF), Biodiversity Group, Center for Education Research and Conservation in Primates in Nigeria (CERCOPAN), Rainforest Resources Development Center (RRDC), PANDRILLUS, Human Rights and Environmental Care (HURCARES), Non-Governmental Organization Coalition on Environment (NGOCE) among others, take part in forest resources management.

By stakeholders we mean all those who have a stake in the exploitation and management of forest resources, including forest dwellers and local farmers, logging companies, forest and other government departments, local, national and international policy makers and planners and other conservation agencies. Each stakeholder has rational but different interest concerning the exploitation and management of forest resources. Failure to recognize these different stakeholders with potentially conflicting group interests and what each stands to lose or gain from exploitation or conservation has frequently led to local resistance to policies, which therefore fail to meet their intended objectives of conserving and management of forest resources (Mwaipopo-ako, 2000; Mwangi *et al.*, 2011).

Both male and female in every forest communities participate in the exploitation of forest resources, but hardly do they equally participate in the management of these forest resources. Studies abound where there is equal gender participation in project and forest resources management (Arnold,1998; Crook and Manor, 1998; Buchy and Subba, 2003; Hasalkar and Jadhav, 2004; Agarwal and Gupta, 2005; Colfer, 2005;Agrawal and Chhatre, 2006; Bolzendahl and Brooks, 2007; CIFOR, 2008 and Agarwal, 2009), female in these countries are the principal managers of forest resources and they have adequate knowledge of most forest resources, their names, uses and management strategies (Doss, 2001; Agarwal, 2001; Golder and MacDonald, 2002; German *et al.*,

2008; Ezebilo, 2010; Agrawal, 2010; Ezebilo and Mattsson, 2010; Ezebilo, 2010). A survey in Sierra Leone by Ong'ayo (2001), demonstrated that women could name 31 forest products that they gathered or made from the nearby bush while men were able to name only just very few. It is in this pursuit that various government (local, state, national and international) at different times and levels have introduced different forest management strategies. All these attempts by successive government failed because they did not consider the views and interests of the various stakeholders in the forest industry during their program design and planning-forest community members, conservation agencies, state, etc. (Agarwal, 2001; Brockington, 2003; Buchy and Subba, 2003; Agarwal and Gupta, 2005; Colfer, 2005; Komarudin *et al.*, 2008; CIFOR, 2008; Christie and Giri, 2011; CRNP, 2011; Ezebilo, 2010; Ezebilo and Mattsson, 2010; Eneji, *et al.*, 2009; Agarwal, 2009; Ogunjobi, *et al.*, 2010).

Gender participation looks at how well women's interests are represented through political institutions and things that can be done to increase women's participation. Goetz (2003) study revealed that the political effectiveness of women depends on the nature of women's engagement in a range of institutions in civil, political society (parties and trade unions), and the state itself. It is paramount that women move beyond simple access to these institutions, and seek instead to transform accountability systems within such systems so that power-holders (including women political representatives) answer to women, and answer for gender equality. This is being responsibly accountable to the people one is expected to represent in any organization or society; this is so because the essence of management is all about leading people and forest stock (Goetz, 2003).

It is in this perspective that Arnstein (1969) observed that the critical issue of participation as simply a categorical term for citizen power, where there is a redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future. It is the strategy by which the have-nots join in determining how information is shared, goals and policies are set, tax and other resources are allocated, programs are operated, and benefits like contracts and patronage are parceled out. Arnstein ladder of participation should be used as gauge or guide to effective participation; these eight rungs are broadly categorized into three basic stages thus:

- Citizen power: Citizen Control, Delegated Power, Partnership.
- Tokenism: Placation, Consultation, Informing.
- Non-participation: Therapy, Manipulation.

This was further shown by Pretty who segmented

participation into manipulative participation, passive participation, participation by consultation, participation for material incentives, functional participation, interactive participation and self mobilization (Tanya, 2006; Eneji, *et al.*, 2009; Ezebilo, 2010; Agarwal, 2009 and Mwangi *et al.* 2011).

Gender role analysis refers to methods used to assess and understand the differences in the lives of female and males, girls and boys and the relationships between and amongst them including: their access to resources and opportunities, their activities, and the constraints they face relative to each other. It is a process that identifies the varied and different roles and responsibilities that female and males, girls and boys have in the family, the community, and in economic, legal, political, and social structures (Rocheleau *et al.* 1996). Rocheleau *et al.* (1996), observed that the "science of survival is largely in the hands of women." When women's work, such as gathering firewood or using non-timber forest products (NTFPs) for household goods or handicrafts, are not considered as a measure of economic activity, it means then that the usefulness of women is overlooked and underrated. Based on this, Agarwal, (2009) posited that it is now apparent that limiting access to the forest or dwindling availability of forest products has drastic impacts on women's livelihoods.

Kuhns *et al.* (2004) and Lachapelle *et al.* (2004) carried out a research on gender roles analysis in the management of forest resources in Nepal and came up with the finding that privatization of forested lands or natural resource protection that excludes stakeholders from sustainable resource use threatens women's role of completing the "daily management of the living landscape". These findings corroborated the earlier findings of Rocheleau *et al.* (1996), Lidestav and Ekström (2000), Lama and Buchy (2002), who concluded respectively that women suffer more from negative forest policies than men. Koirala *et al.* (2008), in their study concluded that forest resource management therefore is not a gender-neutral venture, but should explicitly consider women's interests and their roles in the exploitation and management of these resources and also in project implementation. Indeed, for 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; Buchy and Subba, 2003 and Loudermilk, 2004).

The value chains of three internationally important dry forest NTFPs, namely gum arabic, gum olibanum (frankincense) and honey from Burkina Faso, Ethiopia and Zambia respectively, were assessed in terms of the roles played by

women and the benefits they obtain from their involvement by Shackleton, *et al.* (2011). The authors observed that women perform a variety of functions at different stages in the value chains, but their roles tend to be poorly visible and inadequately acknowledged, largely because they are either operating in the informal sector, as part-time employees, or they carry out their activities at home between family responsibilities. Shackleton, *et al.* (2011) further posited that where women's roles are more prominent, this is primarily due to gender orientated interventions by external agencies. They concluded that several constraints to fostering women's empowerment were identified, with some easier to overcome than others. Particularly difficult to address are gender based, social-cultural barriers. The authors therefore proffered suggestions for enhancing women's benefits to include: greater recognition of informal markets, the opportunities and constraints associated with them, and their position relative to export markets; improved support for collective action where this can provide women with greater voice, negotiating power, and help with economies of scale; more targeted training that addresses areas identified by women as useful and important to them; time-saving technologies and support systems such as child care; and creating greater gender awareness amongst stakeholders (Shackleton, *et al.*, 2011).

In attempts to foster sustainable forest management practices, Coulibaly- Lingani, (2011) observed that participation of local communities has become widely recognized as a better alternative than the traditional protectionist approach. This study analyzed factors influencing local people's participation in forest management program in Sissili and Ziro provinces, southern Burkina Faso based on data collected through a household survey of 165 members of forest management groups using factor analysis and multiple regression. Factor analysis resulted in a three-factor solution, which accounted for 64.82% of the total variance. Participation in decision-making, followed by participation in forest conservation and economic benefits were found to be the main factors influencing participation in the forest management program.

Gender, household size, income source, land tenure status and technical assistance also appeared to influence members' participation in the program. The authors further found out that participatory management program can be enhanced by changing the administrative structure of forest management groups in order to empower members in decision-making processes. They also found out that, increasing women's participation and more equitable benefit-sharing among user groups are essential in improving the success of the participatory forest management program. The authors therefore concluded that, policies reforms to improve the

structure of the forest management groups and to establish equitable benefit-sharing mechanisms are essential to improve the participation of women in the forest management program and, hence, require immediate attention. Therefore if the local communities see the benefits they derive from participation in tangible forms, they will be encouraged to participate and contribute more, hence benefits is a correlate of participation in this regard (Oloruntoba and Adetokumbo, 2006; Williams, 2007; Rammel, *et al.* 2007; German, 2008 CIFOR, 2008; Eneji, *et al.* 2009; Torri, 2010 and Mwangi *et al.* 2011).

In their study on gender roles in community forest resource exploitation and management, Giri *et al.*, (2008b) observed that gender roles in any forest resources exploitation and management or intervention project should address the following questions: what are the roles available? Who exploit, use, manage and benefits from the resources, what practical and cultural constraints do both male and female face in relation to the use and management of these resources? And what are the views of male and female on the tradeoffs they are prepared to make between forest exploitation, conservation, livelihoods and lifestyle needs? Who controls the use of these resources? And if tariffs and royalties are paid in the communities, who is it paid to and who authorize usage of such funds? These roles are further confirmed by Suman and Aneela (2000) and Meyers (2004) when they observed that gender roles analysis provides information and data on the differential impact of a specific activity on females and males and on gender relations (Agrawal and Chhatre, 2006; Green, 2006 and Cudd, 2006).

Koirala *et al.* (2008) therefore concurred that this predisposition therefore makes women become more committed to the exploitation of NTFPs and less of timber product, whereas men become more committed to the exploitation of timber and less of NTFPs. Women are mostly involved in the harvesting of NTFPs and are always close to the forest, therefore excluding them from participating in any forest exploitation and management activities will mean neglecting their all important roles in the forest. This conclusion has also been confirmed by Eneji *et al.* (2009); other authors share this view and conclusion, (see Mwangi, *et al.*, 2011; Agrawal, 2007; Agrawal and Redford, 2006). Other timber forest products exploited by men are also useful to the rural economy of the forest communities.

Halting the rapid depletion of Africa's natural resources (forest) is critical to the continent's economic development. Women, however, are often invisible in the role of managing African forest and their needs are always ignored (Komarudin *et al.*, 2008). Mawdsley (2004) was of the view that factors affecting gender inequality in participation in any development endeavor are a complex combination of

economic structure, politics, culture, society, history, and geography specific to that country and region. Therefore, to attain impact that are equitably beneficial for both women and men, sex disaggregated information on beneficiary groups, needs and project impact should be assessed during the project planning process. This is also in line with the findings of Rigg (2006), Momsen, (2007) and German *et al.* (2008) respectively. CIFOR (2008) found out that in male dominated society, female participation is greatly handicapped by cultural and traditional belief systems, the participation of women in resources management is impeded, like in most Arab and Islamic countries. Some women are Muslim, so they practice the ‘*purdah*’ system and do not mix freely with their male counterparts. Agarwal and Gupta, (2005) also found out that for cultural reason, women may lose access to land, even if they retain property rights in the absence of a husband, they must work longer hours to make up for the lost labor of the spouse. Christie and Giri (2011) further posited that lack of property rights as permitted by some culture, religion and customary laws to own private and personal properties, constrains women from having access to certain rights and benefits which they would ordinarily have, hence their conspicuous absence in resources and project management (Follo, 2002; Gurung, 2002; Johnson *et al.*, 2003; Lachapelle, 2004; Kuhns *et al.*, 2004; Sainath, 2007; Contreras *et al.*, 2008).

While Lachapelle (2004); Kuhns *et al.*, (2004); Sainath, (2007) and Contreras *et al.*, (2008) dwell their arguments on the poor status of women’ education as prescribed by some culture, religion and norms of the society deprive most women from achieving reasonable education that will enable them participate effectively in resources management. High rates of illiteracy and low levels of education among women have been shown to constrain women’s productivity and may affect their receptivity of new techniques and skills in conservation. Sainath, (2007) cited evidence that literacy raises the demand for fertilizers, and results in increased output, such information can only be provided to farmers through extension services, and because this service is often offered only to landowners or to male heads of households, women are always excluded, (Hasalkar and Jadhav, 2004; Mwangi *et al.*, 2009).

With the current international attention shifted to women’s emancipation, there are the provision of international charters, treaties, conventions and national policies made on gender equality which has greatly improved the lives of women. The Beijing Declaration, the 35% Affirmative Action for appointment, election and occupation of women in public offices and governance, the National Gender Policy by Nigerian government, the Equal Pay parity Rights for both men and women in public office in the US, improvement on

the rights of women to own private properties, the employment of women in public places, the formation of women group towards the promotion of women rights like the National Union of Women Journalist, Women in Nigeria, Women in Education in Nigeria, National Council for Women Lawyers, National Council of Women in Nigeria and the deliberate creation of the Ministry of Women Affairs in Nigeria and most other countries. The ratification and implementation of the contents of the agreement has influenced the improvement of the status of women in the society globally and nationally thereby enhancing their participation in public realms (Yong, 2006).

It is however disheartening to note that various studies have found the relationship between forest resources and livelihood condition and income, forest management, (Agarwal, 2001, Brockington, 2003, Buchy and Subba, 2003, Agarwal and Gupta, 2005, Colfer, 2005, Komarudin *et al.*, 2008, CIFOR, 2008, Christie and Giri, 2011 CRNP, 2011, Ezebilo, 2010, Ezebilo and Mattsson, 2010, Eneji, *et al.*, 2009, Agarwal and Gupta, 2005, Agarwal, 2009; Eneji, *et al.*, 2009, Ogunjobi, *et al.*, 2010), unfortunately none has critically assessed factors /constrains to gender participation in forest resources management within the park enclave communities, hence this study therefore is designed to fill this gap.

2. Design and Methodology

This research is carried out in the Cross River National Park enclave communities, Nigeria; the park is a protected area for the conservation of forest and wildlife species in their natural ecosystem. The Cross River National Park was established under Decree 36 of 1991 of the Federal Republic of Nigeria and is one of the seven National Parks in Nigeria (Ogunjobi, *et al.*, 2010). The Park lies between latitude 5° 05’ 49.63” and 6°29’N, and longitude 8° 15’ 54.16” and 9° 30’E and covers a landmass of 4000km² in the south-east corner of Nigeria, lying south and east of a loop of the Cross River and extending along the Republic of Cameroun border. The park is segmented into two non-contiguous divisions: the Oban division (Akamkpa Local Government Area) in the southern part covering 3000Km² and the Okwangwo division (Boki Local Government Area) in the northern part covers 1000Km² which is ecologically contiguous with the Karup National Park and Takamanda forest reserve (proposed national park) all in the Republic of Cameroun respectively. The two divisions of the park are surrounded by 66 villages in Okwangwo and 23 villages in Oban with a total of 105 support zone villages and 6 villages as enclaves within the two divisions. In Okwangwo, the enclaves within the park are Okwangwo, Okwa I and OkwaII, while within the Oban

division are Mkpot, Iku and Abung villages.

Both quantitative and qualitative research design was adopted for this study (Probst, *et al.*, 2003; Berg, 2009). Scholars of gender studies have criticized researchers using either qualitative or quantitative design only. Those adopting quantitative design argued that narrative or listening to women's experience and drawing conclusions through action research rather tend to be bias in their judgment with no indicators to gauge objectivity, veracity or authenticity of their claims; whereas those adopting qualitative design also argued that the data collected for quantitative research are gender biased. So this justifies the need for adopting a combination of both qualitative and quantitative research. The instrument used for the collection of data is a structured interview questionnaire, divided into two sections, section A is the respondent's socio-demographic characteristics, while section B is the main questionnaire items with four point likert scale response options for eliciting responses from the respondents to measure factors/ constraints to gender participation in forest resources management. The six enclave communities within the park were used for the study (Mkpot, Iku and Abung, Okwa 1, Okwa 2 and Okwangwo) because there are directly within the two park divisions (Oban and Okwangwo). The six villages have a combined population of about 4249, out of 15% is randomly selected to form the study sample. This sampling procedure was done using the mathematical model as shown below:

Let P_T = population of all the six villages = 4249,

Let S_t = total sample size desired = 15% of P_T , $S_t = 15\% (P_T) = (P_T \times 15/100) = 0.15 P_T$; $(15/100 \times 4249 \text{ or } 0.15 \times 4249) = 638$.

Let S_i represent sample size for each village, where P_i = population of each village, therefore

$$S_T = (0.15 \times P_T), \text{ or } S_t = 0.15 \sum_{i=1}^6 P_i, S_i = \sum_{i=1}^6 (0.15)P_i$$

To test for factors influencing gender participation, multiple regression analysis was used, the choice of Multiple Regression is because the beta weight helps to measure how each factor contributes to constrain or influence gender participation in forest resources management. These factors as used in this study include: Sex, age, marital status, educational status, cultural factors, religion, household income, occupational status, household heads and property rights.

3. Results and Discussion

In assessing these factors/constraints to gender participation in the management of forest resources within the park enclave communities, a null hypothesis was formulated thus: there are no factors/constraints to gender participation in the management of forest resources within the allowable forest land in the park enclave communities (H_0). To establish whether these factors influence or constraints gender participation in forest resources management, a regression analysis was carried out and the result is presented on table 1.

Table 1. Regression Analysis of the Factors/ Constraints to Gender Participation in Forest Management (N=638).

Model	R	R Square		Adjusted R Square	Std. Error of the Estimate	Change Statistics							
		R Square Change	F Change			df1	df2	Sig.	F Change	R Square Change	F Change	df1	df2
1	.351(a)	.123	.109	.76604	.123	8.817	10	627	.000				
		Sum of Squares			Df	Mean Square	F	Sig.					
1	Regression	51.742		10	5.174	8.817		.000(a)					
	Residual	367.933		627	.587								
	Total	419.676		637									

a Dependent Variable: Mgt of Forest resources

The result of the analysis on Table 1, shows a yielded coefficient of regression correlation (R) of .351 and a multiple regression R-square (R^2) of .123, and adjusted R^2 of .109, at .01 significant level, the result is significant, meaning that there are factors/constraints to gender participation in forest resources management. The result also shows that an analysis of variance (ANOVA) of the multiple regressions produced an F-ratio of 8.817, while the f-critical value is 1.91 (2-tailed), since the calculated F-value of 8.817 is greater than the critical F-value of 1.91, at .05 significant levels, (2-tailed), the result is also significant at 0.05 Levels. A test of regression weight was carried out to find out the relative contribution of each factor/constraints, the result

shows that the standardized regression beta weight ranged from -.021 to -3.980, the beta weight of four factors (sex, -3.980, marital status, -2.056, educational status, -3.111 and occupational status, -2.618) were significant at 0.05 level of significance, while the other six factors (age, .462, cultural factors, .395, religion, 1.052, household income, -.123, household heads, -.021 and property rights, -.660) were not significant at 0.05 significant level.

The implication of this result is that these four factors account for about 13% influence on gender participation in forest resources management, when these factors (variables) are taken individually, only four factors, namely: sex, marital status, educational status and occupational status

significantly influence gender participation in the management of forest resources within the Park's enclave communities. The result shows that age, cultural factors, religion, household income, household heads and property rights were factors that could not constrain as well as influence gender participation in forest resources management. In true situation, it was discovered that all the factors listed greatly influence gender participation either positively or negatively in forest resources management within the enclave communities of the Cross River National Park. The result further shows that sex, marital status, educational status and occupational status has the highest significant contribution to gender participation in forest resources management within the allowable forest land. Sex as used here as a factor indicates that the sexes of respondents is a factor influencing gender participation in forest resources management within the enclave communities of the Cross River National Park.

This study is in line with the earlier findings of Nussbaum, (2000); McElroy, (2002a); McElroy, (2002b); Buchy and Subba, (2003); Loudermilk, (2004) and Shackleton, *et al.* (2011) who found out that the more education one attains helps one better in forest resources management, if one is not educated, it is difficult to attend forest management meeting, discussions may not be understood especially if it is done in English outside the mother tongue of the people, it is also possible that if one is educated, he may be engaged in other productive ventures that he may not be disposed to even attend such management meetings. Marital status also play an important role, married women are expected to cook the family meal, care for the children, in most communities, meetings for purposes like this are held in the evening and may last long into the nights, most men may not allow their wives to stay out that long, and many at times, these are times when family meals are supposed to be cooked. Occupational status also play a significant role in forest resources management, most persons working outside their community may not be chanced to attend forest management meeting, insome cases, some people whose occupation is out of the community may miss serious meetings, while some may be completely working out of their communities, in situations like this, attendance and sharing of discussions in meetings are seldom done, this tend to negatively affect decision concerning forest management.

This result takes one back to the position of Coulibaly-Lingani, (2011) who posited that there are some factors which act as hindrance or a boost to effective gender participation in the management of project, leadership and resources. These factors which are both hindrance and a boost include education, income, occupational status, household income, property rights and others. The fact that

these factors were not significant does not mean these factors do not constrain gender participation in forest resources management, but rather the implication of the result of the regression analysis is that there are some pertinent factors which this research did not add here as such the result showed an inverse relationship. In the exploitation of forest resources, factors like age, sex, occupational status, educational qualification and marital status were influential. It is also pertinent to mention that some religion forbid their female members from associating freely with men, in this situation, electing these women as members of forest management committee will only amount to nothing since they may not attend meetings and issues concerning the welfare of women may be discussed during such meetings when they may be absent.

However, from this study and from most literature reviewed, factors like educational status, income levels, occupational status, property rights, and mobility among others had significantly and positively influenced gender participation in the management of forest resources (Nussbaum, 2000; McElroy, 2002a; McElroy, 2002b; Buchy and Subba, 2003 and Loudermilk, 2004; Shackleton, *et al.*, 2011). The extent to which women are educated, their occupational status, their household income, their socioeconomic status all contribute to encourage women to positively participate in forest resources management. This is the tenets of the Beijing declaration and the fulcrum of the globally proclaimed affirmative action for women empowerment. This finding also supported the findings of Komarudin *et al.* (2008) who were of the suggestion that women are often invisible in the role of managing African forest and their needs are always ignored. This finding has further corroborated the earlier findings of Mawdsley (2004), who found out that a complex combination of economic structure, politics, culture, social/society, history, and geography specific to that country and region were some factors that affect equal gender participation in forest resources management. The authors went further to suggest that to attain impact that are equitably beneficial to both women and men, sex disaggregated information on beneficiary groups, needs and forest management impact should be assessed during the forest management planning process (see also Rigg 2006; Momsen, 2007; German *et al.* 2008).

Findings from this study also revealed similar result to that of CIFOR, (2008) who found out in its study that in male dominated society, women participation in forest resource management is greatly handicapped or impeded by socio-cultural and traditional belief systems, while Christie and Giri (2011) further posited that lack of property rights as permitted by some culture, religion and customary laws to own private and personal properties in most African and

Asian countries, Nigeria inclusive, constrains women from having access to certain rights and benefits which they would ordinarily have, hence their conspicuous absence in resources and project management (see also Gurung, 2002; Kuhns *et al.* 2004; Lachapelle, 2004; Connell, 2005; Cudd, 2006; and German *et al.*, 2008; Contreras *et al.*, 2008; Christie and Giri, 2011).

Hence for women to become emancipated and allowed free hands to participate in most community development activities, society should make provision to do away with most of these obnoxious laws and customs that are detrimental to the development and progress of women in the forest communities. It is however sad to note that despite the knowledge women have about forest resources, their location, their relative abundance, harvesting and management; they are completely excluded from forest management activities. This is not unconnected then with the factors which the regression analysis shows as constraining gender participation (Hasalkar and Jadhav 2004; Yong, 2006; Nightingale, 2006; Mwangi *et al.* 2009).

It is therefore regrettable then to know that women in these forest communities are completely excluded from forest management activities while their regular presence in the forest during their daily exploitation of forest products could have been useful in forest monitoring and management. If their exploitation of these forest resources which they harvest is done almost on a daily basis, then it means they harvest what they needed at a particular time. It is a fact then that their harvesting methods may be most sustainable. If this assertion is considered very critically that men's exploitation of forest timber has affected the forest resources seriously, then it therefore means that women are more concerned about the conservation of these forest resources, that is why they harvest what they needed at any given time. It is in this thinking that the Ecofeminists posited that men's rush to make income out of these forest resources has put more and more people and animals under pressure and control and pushed the ever giving earth (forest) to the point of crisis. This compelled Morgan, (1992) to posit that the earth as goddess and the animals as kins are now calling to these women for help. In other words, the women's method of forest resources exploitation is more sustainable, while those of the men are environmentally unsustainable and unfriendly.

This situation therefore can be likened to what Abbott (1990) termed "the cries of factory farm animals, the suffocation of fish in poisoned waters, the sound of flood waters rustling over deforested lands and the emptiness of the forest land, these are also voices that must be heeded to. It is in this reasoning that it is observed that women's exploitation needs to be encouraged while those of men on timber needs to be reassessed for continuity or sustainability of these forest tree

species. If women are embedded with such sustainable and wonderful knowledge of forest resources and their management, it is therefore inimical and detrimental to both the environment and man to ostracize women from the management of these resources for which they have so vast management knowledge about.

This finding though from a different cultural setting is similar to that made by Clark (2003) when he studied factors influencing women participation in resources governance titled "feral ecology", Clark (2003) maintained that education, property rights, cultural and belief systems, marital status, occupation and wages were factors influencing gender participation in resource governance. Based on these factors, William (2007) in his study of gender in political space, therefore observed that some factors have contributed in influencing women participation positively in political space, these factors have given women the leverage they needed to compete favorably well with their male counterparts. Drawing from the conclusions of Clark, (2003), Krishna, (2004), Nightingale, (2006), Rigg, (2006) and Williams, (2007), it is evidently clear that factors such as education, employment, property rights, improvement in women socioeconomic status amongst others can greatly influence gender participation in management of forest resources within the park communities. These have also greatly influence women's occupation of public office and their participation in management positions in government, public and private enterprises within and outside the country. It is therefore worthy of note that if given every opportunity, women can excel in any chosen career including management and leadership positions.

4. Conclusion

From the study, it has been established that there are some factors which constrain or influence gender participation in forest resources management, those factors which constraint women from participating in forest management activities if corrected can become a moral booster for gender participation in resources management. It was also gathered that there is a high dependence of these forest communities' on forest resources, while this is so, the women are very knowledgeable about the availability, relative abundance and conditions of most of these forest species, but it is regrettable to know that these indigenous knowledge so endowed on women are hardly exploited for the management of these forest resources. The exclusion of women in forest resources management is still very worrisome, as the women are excluded from the forest management activities within the forest communities, their interest, ideas, knowledge and situations are not always considered or taken into consideration. It is therefore very

necessary that management actions should involve women who will represent other women's interest thereby bringing a harmony between male and female in the exploitation and the management of forest resources within the park enclave communities. When this is done, decision concerning management activities is collectively and jointly carried out with the women who bear the brunt of both positive and negative forest management policies and impact as integral part of such management decisions.

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