

THE IMPACT OF THE DEPARTMENT FOR INTERNATIONAL DEVELOPMENT (DFID) ON COMMUNITY PARTICIPATION IN FOREST RESOURCES MANAGEMENT IN CROSS RIVER STATE

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Abstract

This paper examines the impact of the past and present participatory forest management system (PPM) sponsored by the Department for International Development (DFID) from 1997-2003. Using participatory rural appraisal and participatory learning and action methods targeted at three rural forest communities in Ikom Local Government Area, it highlights the traditional forest management and participatory forest management in terms of analyzing the level of involvement in forest management activities/operations of the rural people with the view to assessing their contribution to the income and well-being of Ikom local communities. The result shows that participatory forest management protects the forest and improves the standard of living of the local communities. Recommendations are proffered to eradicate or ameliorate the perceived problems and needs. Overall, this study idea is aimed at providing relevant information, which would be inestimable in promoting sustainable forest management.

Introduction

Effort towards the effective management of Tropical Rain Forest for sustainable forest products extraction and the need to protect the forest for future use is one of the primary interests of the Department of International Development (DFID). Perhaps this, great interest or concern is based on the fact that Tropical Rainforests (Selvas) are of inestimable value, because of their complex ecosystems and distinctively high biodiversity. The values of these rainforests also include their ability to provide natural resources for food, wrapping leaves, gum Arabic species, resin, wood panel, fuel wood, paper board, sawn dust and hardwoods like *Brachystegia spp* (Achi), *Baillonella taxisperma* manusop, *Mellicia 'excelsa* (iroko), *Term in alia ivorcensis* (Black Afara) *Nauclea diderricliiii* (Opepe), as well as numerous non-timber forest products (NTFPS) (Balogun, 1994). All these tend to introduce and encourage other types of forest uses, According to Parks (1992), there exists a: distinct difference between theoretical and present distribution of rainforest, which reflects human disturbance. This occurs in two different ways, which are degradation and depletion. Degradation, involves the total loss of forest, which might be cut down and replanted by open agro-forestry activities. The loss is permanent. However, "Depletion" involves some extent of changes in forest ecosystems, but not a total removal. Some plant species are lost, but the forest remains. Both degradation and depletion combine to make up the phenomenon known as deforestation, a problem which proportionately has highly contributed to commercial logging amongst other causes. Participatory forest management is now a significant and increasing feature of forest policy and practice throughout the world (Brown, 1999). It is also noted that apart from ecological problems, high exploitation of forest product is associated with problems like famine, migration sickness etc (Falconer, 1991). Further damage to the ecosystem may occur through repeated harvesting without allowing sufficient time for recovery and regeneration of the forest products. The contemporary concept of natural resource management must embrace not only the physical resources but also the socio-economic aspect of the resource environment. To this end, DFID (forestry assisted) project in Cross River State turned its attention towards involving the general society as well as fringe communities to learn how to rear snails, grow Afang (*Gnetum africanum*) and rattan cane and other PFM activities. Presently CRS has a land area of 21,265 km² 34% covered by Tropical High Forest (THF) the bulk of which is found in Akampa, Boki and Ikom Local Government Areas. The state therefore has about 40 percent of the remaining threatened rainforests of Nigeria. The areas covered by these forests are homes to several rural people. At least 75 percent of the total population of the state live in rural areas (Balogun, 1994). Although the Cross River State National Park with a forested land area of about 4,000sq km was established in 1994 the depletion of the rainforest within and outside its delineated boundaries through commercial logging, and other processes is alarming.

Method

This study employed both the primary and secondary data collection methods. [I adopted essentially the participatory rural appraisal (PRA) and participatory learning and action (PLA) methods. The PRA and PLA tools consisted of participatory simple mapping and modeling to determine and delineate community land use such as vegetation and land use plane, landscaping regions, soils and watersheds. The semi-structural interview (SSI) techniques were employed to characterize the various land use systems. Households were randomly interviewed on the important roles in providing vital information especially on household income and occupation. The direct observation method was employed to observe the events and processes of Participatory Forest Management (PFM) such as raising A fang, Atarmi, Fditan and Bush mango. These help to provide responsible answers to semi-structural interviews (SSI), review PRA, and identify indicators for assessment. The stock survey method (SSM) was used to collect primary data from the tropical high forest with different levels of Participatory Forest Management (PFM) activities.

The measurement and data collection were carried out in four sample forest areas demonstrated and named as un-managed high forest, lightly managed, moderately managed and intensively managed high forest.. The secondary data utilized in this study were obtained from textbooks, journals published and un-published, and reports. The need for Community Land Use and Forest Resource Map was essential to identify, delineate, and map out the forest/study areas in order to ease participatory forest management (PFM) activities.

The study area selected for this work includes three rural communities located in the tropical rainforest (TRF) area of the Local Government Area. These include Akam (Latitude 05.57 20N and Longitude 08.37 18H); Ekukunela (Latitude 06.00 27N and Longitude 08 33'37"H) and Okuni (Latitude 05.57'03" and Longitude 08.37'58Ti) (Federal Surveys, 1999).

Results and Discussion

Stock survey of sample forest areas in an unmanaged, light managed, moderately managed and intensively managed forest areas were carried out.

The data obtained in the four sample forest areas showed a considerable change in the tropical rainforest of Akam Ekukunela and Okuni as a result of the introduction of participatory forest management (PFM). This assesses the past and present system of forest management and the factors that are responsible for the changes. It also determines the impact of PFM on the quantity and quality of logged and unlogged timbers, Non Timber Forest Products, as well as shrub and climber species. The population of timbers and Non Timber Forest Products as well as the level of PFM activities are shown and determined in Appendix I.

Impact of participatory forest management (PFM) on the income and well being of the rural communities

In order to ascertain the results of the data obtained from the field, statistical analysis (ANQVA) was carried out on the field data presented in Appendix I. The ANOVA was carried out with income and well being of the rural people denoted by (INCWELLB) as the dependent variable, and factored by the forest category. The result presented in shows a very high F value of 17.729 and a small P-value less than 0.05. From this, we can reject the null hypothesis, which states that participatory forest management has no significant impact on the income and wellbeing of the rural communities. This shows a significant impact in the activities of PFM in the communities with an increase in the incomes for a good standard of living of the rural people. Since the P-value is relatively low it shows that the probability for a difference in the wellbeing of the people not to exist is highly unlikely.

It is observed in Table 2 that the active engagement of the people in Jogging and collection of NTFPS in different levels of forest management really improved their incomes and standard of living. This can be seen from the mean values for income and wellbeing with the unmanaged forest having the value of 1.44 and the intensively managed forest having a very high value of 4.83. The mean differences (LJ) for the unmanaged (f) and managed (.1) forests given showed a negative value but with an increasing absolute value indicating that the managed forest have more in terms of income and well being for the rural communities than the unmanaged forest. Thus, it is interpreted to mean that participatory forest management has significantly affected the incomes and wellbeing of the rural people.

Though, it may appear not to have shown any impact, the knowledge acquired from PFM activities like nursery and plantation development, forest maintenance and forest sustain ability serves as a source of more incomes and increase in the standard of living. Table 1

Analysis of variable highlighting statistical differences on the effect of PFM on the income and well being of rural communities. An ova Incwellb

	Sum of squares	Df	Mean Square	F	Sig-
Between Groups	573.613	3	919.204	17.729	.000
Within Group	3968.860	368	10.785		
Total	4542.473	371			

Table 2

Descriptive statistics highlighting the mean "income and wellbeing" of rural communities from different levels of forest management.

Descriptive
INCWELLB

	N	Mean	Std Deviation	Std Error	95% confidence interval for mean		Min	Max
					Lower bound	Upper bound		
Unmanaged	93	1.4409	1.3060	.1354	1.1719	1.7098	.00	9.001
Lightly managed	93	3.7634	3.1978	.3316	3.1049	4.4220	.00	23.00
Moderately managed	372	3.8172	3.2099	.3328	3.1561	4.4783	.00	21.00
Intensively manage		4.8280	34.5722	.4741	3.8863	5.7696	.00	27.00
Total		2.4624	3.4991	.1814	3.1056	3.8191	.00	27.00

Table 3

Statistical means of Differences in participatory forest management Multiple comparisons

Dependent Variable: INCWELLB Schelfe

(i) Category of Fore	(J) Category of Fore	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
Unmanaged	Lightly Managed	-2.3069*	.4834	.000	-3.6646	-.9492
	Moderately Managed	-2.3607*	.4834	.000	-3.7184	-1.0030
	Intensively Managed	-3.37124	.4834	.000	-4.7292	-2.0137

The means difference is significant at the .05 level.

Participatory Forest Management Activities and Occupations

Table 4 shows data on major occupation and PFM activities engaged by members of households in the study areas. The occupation and PFM activities are grouped into three, forest product, farm and related activities and other activities. The study reveals that forest pro* activities account for sixteen household members occupation, farm and related activities show activities while other activities indicated 10 occupations. These show the distribution of major occupation and PFM activities of sampled population in the three communities. We also observed that farm and related activities with 24.5% is of high importance to the people of Ekimkunle as compared to Okuni with 18.3% and Akam 20%.

Table. 4

Major Occupation of Sampled Household

Occupation	Akam	Ekukunela	Okurti	Total	%
Forest Products					
Hunting	19	17	13	49	2.91
Fishing	0	0	7	7	0.42
Carving	2	2	0	4	0.24
Palm wine taping	3	0	3	6	0.36

Timber loading	6	3	3	12	0.17
Roof mat marking	4	2	4	10	0.59
Traditional Medicine	0	1	1	2	0.12
Fruit/ spice collection	45	36	39	120	7.12
Chain saw operations	7	5	9	21	1.25
Honey collection	4	2	4	10	0.59
Wood furniture	6		7	17	1.30
Collection of Wrapping leaves	18	15	24	57	3.38
Cane Furniture marking	2	0	1	3	0.18
Snail /periwinkle collection	2	2	28	42	2.49
Palm wine distribution	2	3	2	7	0.42
<i>Farm and Related Activities</i>					
Farming	255	310	220	785	46.56
Farm labourer	46	51	34	131	7.77
Land leasing	0	0	0	0	0.00 ;
Edible leaf collections	46	49	52	147	8.72
Post harvest food gattering	0	3	2	5	0.30
<i>Other Activities</i>					
Bush meat trading	5	3	2	10	0.59
Civic service	25	20	40	85	5.04
Teaching	5	2	35	42	2.49
Military/ Police	4	1	3	8	0.47
Bur owner	2	5	2	9	0.53
Motor Bike transport	6	4	2	12	0.17
Taxi / Bus operators	3	1	2	6	0.36
Native Gin marking	10	0	1	1	0.06
Retail food workshop	14	3	2	9	0.53
Processing and sales of food stuffs	3	18	20	69	4.09
	562	562	562	1686	100.00

Source: PRA Field Work (2007)

The Effect of PFM Activities on Rural Households Population and Community Environment In order to assess the consequences of PFM activities on rural household population and community forest, a total of 115 household members were interviewed. These show 385 household members randomly selected from each of the three communities under study. The interviewees were asked to state one important effect of PFM activities on household population and community forest.

Table 5
Consequences of Participatory forest [Management on Rural Household and Community Environment

S/n	Possible consequences of PFM Activities	Akam Community 1		nkunkunela Community 2		Oku ni Community 3		Cumulative (1-3)	
		No	%	No	%	No	%	No	%
1.	Deprive free farming system	80	20.78	60	15.58	69	17.92	209	18.10
2.	Decrease direct income	65	16.88	45	11.69	70	81.18	180	15.58
3.	Increase crime rate	102	26.49	72	18.70	20	5.19	194	16.80
4.	Population Decrease	10	2.60	25	6.49	30	7.79	65	5.63
	Reduce Building Materials	22	5.71	31	8.05	42	10.91	95	8.23
6.	Reduce the rate of land use	56	14.55	32	8.31	40	10.39	128	11.08
7.	Introduction of permit for timber & NTFPs	20	5.19	70	18.18	72	18.70	162	14.03
8.	Reduce availability of forest products	30	7.79	50	12.99	42	10.91	122	10.56
	<i>Total</i>	385	99.99	385	99.99	385	99.99	1155	100

Source: Researcher (2007)

Caps or Defects Detected After DFIO Exit

The exit of DFID really caused far-reaching impacts on the attitude, perceptions and activities of the

indigenes towards the forest, it also hinder the people their unique opportunities of discussing or negotiating with logging companies or individuals from a position of strength and better understanding of the correct value of their forest resources. Within a community, it is common to find that it is the poorest households, with less agricultural land, livestock, labour, etc that are the predominant collectors of forest products (Falconer, 1990; Hedge and Daniel 1992; Lecup 1994). This has resulted in gaps in our understanding of the contribution of forests to sustainable livelihoods (DFID, 1999). Forestry commission should have engaged the communities as continuous facilitators in mobilizing their social resources for collective action, embark on continuous enlightenment programme by empowering and building the capacity of the communities towards taking on initiatives and responsibility for the development of their forests and facilitate the process future arrangements for working out a participatory forest management plan between communities and eternal agencies. This is to ensure that socio-economic interest of the communities and integrity of the environment are protected. This will also lead to plan for the management and conservation of Non-timber Forest Products (NTFPs) through guided and regulated harvesting.

Conclusion

To ensure attainability of forest management, the right of the local communities living within or near forest reserves to collect and utilize some forest products should be upheld. Sharing of benefits from the forest resources between the state and Local Communities that own the land will also encourage the rural population to participate in forest protection. Rural women and rural population should be encouraged to participated in forest management in their own interest to enhance sustainable community forest management, Developing and implementing education and training policies for women, especially young ones and those entering the labour market, to provide skill to meet the needs of changing socio-economic context for improving their employment opportunities should be made a priority.

The selected fore communities which, Ekukunela and Okuni were found to have benefited considerably from royalties, employment by NTFs collectors, and capacity building by DFID.

It was discovered [hat (here is a significant correlation between annual logging rates and qualifies of NTITs harvested by household members, and that as logging intensities increase, the quantities of NTFPs harvested reduces. This suggests an increasing trend of biodiversity losses, which may have multiple consequences on the indigenous people and the environment. This research further discovered that incomes from logging activities have made significant contribution to total household incomes "Incomes from NTFPs" contributed more, than other sources of incomes of community forestry activities.

In conclusion, it could be pointed out that PFM have considerably contributed to (he socio-economic development and general wellbeing of the rural communities of Akam, Bkukunela and Okuni.

However, there is a dire need to guard against the detrimental ecological consequences of loss of bio-geo-chemical services of the THFS of rural communities.

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