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## EFFECT OF DISPLACEMENT ON LIVELIHOOD ACTIVITIES OF RURAL DWELLERS WITHIN OMO FOREST RESERVE OF OGUN STATE, NIGERIA

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### ABSTRACT

*The study assessed the effect of displacement on livelihood activities of the rural dwellers within Omo Forest Reserve in Ogun State. Multistage sampling procedure was used to select 108 respondents. Data on livelihood activities, sources of information, effect of displacement on livelihood activities as well as constraints faced by respondents due to displacement with respect to livelihood activities were collected through structured interview schedule. Frequency counts, percentages, Chi-square, PPMC and t-test were used to analyze the data. Results reveal that most (67.5%) of the respondents were below 50 years, married (58.5%), males (72.8%) and 89.8% had educational level up to secondary school. Little above half (53.7%) were indigenes and 97.2% had experienced displacement thrice or less. Change in government policies was regarded as the major cause (89.9%) of the displacement. Displacement reduces both cash and arable crop production most and the effect was high on majority (68.5%) of the respondents. Major constraints to involvement in livelihood activities were transportation ( $\bar{x}=2.98$ ) and fear of untimely displacement ( $\bar{x}=2.89$ ). There were significant relationships between marital status ( $\chi^2=18.454$ ), years of formal education ( $\chi^2=18.659$ ), effect of livelihood activities ( $r=-0.460$ ); causes of displacement ( $r=-0.460$ ); constraint to involvement ( $r=-0.329$ ) and level of involvement in livelihood activities. Displacement had negative implications on the respondents' livelihood activities. It is recommended that participatory and sustainable approaches that would resolve displacement issues should be designed so as to prevent conflict and disruption of livelihood.*

**Keywords:** Effect of displacement, livelihood activities, rural dwellers.

### INTRODUCTION

Agriculture and its allied sector of forestry drive rural development all over the world. Forestry is the art, science, practice and management of forests and related natural resources. Forest serves as an engine of growth that propels economic activities especially for a nation that is endowed with abundant forest resources. Nigeria benefited immensely from forest especially timber products before the commercial exploration of petroleum. That was in the pre-independence time before petroleum occupied the centre stage of commercial activities. Then, forestry and agriculture played a dominant role in the sustained growth of the economy.

Forest reserves are protected areas in the forest; protected areas are defined by the World Conservation Union (WCN) as areas of land, sea or forest dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources (UNEP-WCMC, 2007). Forest reserves are portions of state lands where commercial harvesting of wood products is excluded in order to capture elements of biodiversity that can be missing from sustainably harvested sites. The greatest social impacts of protected area, relate to population displacement which has a direct impact on livelihoods (Chatty and Colchester, 2002, Mc Elwee, 2006).

The concept of livelihood has remained a subject of utmost importance to its inevitable role to human existence. Livelihood focuses on the totality of means by which people secure a living, have or acquire in one way or the other the requirement for survival and the satisfaction of their needs as defined by people themselves in all aspects of their lives (Olawoye, 2000). Livelihoods are essential for survival and are common to all society and the inhabitants, whether residing in the rural or urban area to meet their livelihood need for food, clothing, shelter and income (Hassan, Olawoye & Nnadozie, 2002). Forests can be simultaneously recognised as a 'daily net' and a 'safety net' for the rural dwellers that use forest resources. It is estimated that 90% of the world's poor depend on forests for at least a portion of their income (World Bank, 2000; Scherl *et al.*, 2004; USAID, 2006). In Nigeria, users of forest products include forest dwellers, nearby farmers, commercial users (including small traders, producers and employees) and the urban poor.

The steady rise in the number and geographical coverage of forest reserves in Nigeria has been accompanied by a rise in the number of conservation refugees - people who have been displaced as a consequence of conservation programmes. The nature of human impacts on forest reserves is a subject of much debate between those who advocate the continued use of forest resources by local communities and those who argue for the creation of protected areas. The displacement of local people from protected areas is one of the most controversial and contested aspects of protected areas and is often used to highlight the conflict between biodiversity conservation and poverty reduction (Nepal, 2002; Borgerhoff & Mulder, 2005; Brockington, 2004). The case is the same in the forest reserve areas in Nigeria, because the high level of poverty of people

in the rural communities has amplified the dependence of rural communities on forest resources as their sources of livelihood (Atilade, 2001). In Omo Forest Reserve, there is much pressure on forest reserves by the people living at the forest edge communities whose source of livelihood depends on forest trees and forest products; the reserve serves as the major supplier of food products to Ogun state and the country in general (Atilade, 2001).

The Ogun state government's determination to reclaim its various forest reserves had led to conflict and displacement of the people from the reserve. The move, the government claimed, was to secure the forest for the unborn generations as the Omo Forest Reserve provides significant economic, social and ecological benefits for the citizenry (Ajibode, 2009). Several buildings were demolished and properties worth millions were lost including farmlands, both arable and cash crops on the farmlands were destroyed when government agencies invaded the forest reserve. This did not go well with the people living around the reserves because their livelihood and livelihood activities were seriously affected which is now leading to serious conflict between the people and government. Against this background, this study ascertained the effect of displacement on livelihood activities of rural dwellers within forest reserve. Specifically, the study accomplished the following objectives because it

1. Determined the differences in livelihood activities of the rural dwellers before and after the displacement.
2. Identified the sources of information available to the respondents before and after displacement.
3. Assessed the effect of displacement on respondents' livelihood activities.

4. Ascertained the constraints faced by respondents due to displacement with respect to livelihood activities.

#### METHODOLOGY

The study area was Omo Biosphere Reserve, the largest reserve in Ogun state situated in Ijebu East and North Local government areas in the southwest of Nigeria. The area covers about 130,500 hectares and there are more than 50 communities/enclaves within and around the Reserve with a population of 59,100 (NPC, 2006). The vegetation of Omo Forest Reserve is characterized by the mixed moist semi evergreen tropical lowland rainforest especially in most of central and southern part while the northern portion contains a dry mixed semi deciduous rainforest.

The population of the study was rural households in the forest communities within the J4 enclaves of Omo forest reserve. Multistage sampling method was used in selection of samples for this study. Purposive sampling was used to select J4 zone (comprising 27 enclaves) out of the four zones that make Omo Forest based on records of displacement. Random sampling method was used to select eight enclaves while proportionate sampling method was used to select 108 respondents from the household list of the eight enclaves.

The dependent variable of the study, level of involvement in livelihood activities, was measured by asking the respondents to tick livelihood activities engaged before and after displacement based on a 3-point scale of regularly, occasionally and rarely. The mean value for each of the variables was then used as a benchmark for categorization into low (less than mean) and high (equal to and/or greater than mean) involvement respectively.

#### RESULTS AND DISCUSSION

##### Personal characteristics of respondents

The data presented in table 1 indicates that most of the respondents (49.1%) were within the age groups of 31-50 years while 32.4% were above 50years. This implies that majority of the respondents are in their active age and therefore actively involved in various livelihood activities. This is in line with Akinbile (2007) that population within 21-50 years constitutes the active workforce in any community engagement. Result also shows that 72.2% of the respondents were males, which indicates that male dwellers can cope better with the stress associated with displacement and threat of any form than their female counterparts. Ola-Adams (1999) informed that religion plays a key role in livelihood activities of rural dwellers. This view was reflected in the religious belief of the respondents as 45.4% were Christians, 44.4% Muslims and 10.2% practiced other faiths. Most (32.4%) of the respondents had a household size of 4-6 members, which could provide labour that can be used to improve livelihood activities. The result also reveals that farming (78.7%) was the major primary occupation of the respondents. This informs that their main income generating activity is from agriculture and this corroborates Olayemi (2002) that agriculture is the predominant occupation and principal livelihood in rural areas and Nigeria as a whole. On the other hand, data shows that 40.7% were traders while 59.3% engaged in other livelihood activities such as hunting, lumbering and civil service as secondary activities. This buttresses the fact that livelihood activities refer to the totality of income generating activities an individual is involved, since nearly all the dwellers engaged in more than one livelihood activities as opined by Hassan *et al* (2002). The study further reveals that majority (89.8%) of the rural dwellers had formal education, thus they are

aware of the importance of protected areas and may not disobey law if they are gainfully employed. Regarding nativity of the respondents Table 1 shows that 53.7% of the respondents were indigenes. The fairly large size of non-indigenes (46.3%) confirms the viability of the study area in terms of income generating and livelihood activities which attracted people from other areas. Majority (47.2%) of the respondents had lived in the study area for between 1 and 10 years. This implies that most of the respondents would have experienced one form of displacement or the other, inferring they are likely to be used to displacement and its attendant effects. Also, 97.2% had experienced displacement at least once in the area. This emphasizes the suitability of the area for this study.

Table 1: Respondents personal characteristics

Variable	Frequency	Percent
<b>Age</b>		
21-30	20	18.5
31-50	53	49.1
51-70	35	32.4
<b>Sex</b>		
Male	78	72.2
Female	30	27.8
<b>Marital Status</b>		
Single	20	18.5
Married	63	58.5
others	25	23.0
<b>Religion</b>		
Christian	49	45.4
Islam	48	44.4
Others	11	10.2
<b>Household size</b>		
1-3	23	21.3
4-6	35	32.4
7-9	31	28.7
10 & above	19	17.6
<b>Primary Occupation</b>		
Farming	85	78.7
Others	23	21.3
<b>Secondary Occupation</b>		
Farming	17	15.7
Lumbering	11	10.2
Hunting	16	14.8
Trading	44	40.7
Civil servant	18	16.7
Others	2	1.8
<b>Formal education</b>		
Primary	56	51.9

Secondary	41	38.0
Non formal	11	10.2
<b>Indigene</b>		
Yes	58	53.7
No	50	46.3
<b>Years spent in the area</b>		
1-10	51	47.2
11-20	14	13.0
21-30	29	26.9
>30	14	13.0
<b>Number of displacements</b>		
1-3	105	97.2
4-6	3	2.8

Source: Field survey, 2011

### Livelihood activities of the dwellers before and after displacement

Data on Table 3a reveals that majority of the respondents were into cash crop and arable crop production with both at 87.0% each as their activities before displacement. This is in line with the findings of Hassan *et al*, (2002) that livelihood of the most rural dwellers is farming.

The livelihood activities of the dwellers in the area of cash crop production reduced drastically after displacement. Majority of cocoa farmers (51.9%) are now unable to plant and harvest their cocoa from the plantation due to government action which might affected the availability of cocoa in the market thus threaten food security and agricultural development in the country. This conforms to the findings of Ola-Adams (1999) that the bulk of cocoa from the south-western part of Nigeria was from Omo forest reserve in Ogun state. Dwellers' involvement in the arable crop production also declined with 51.9% rarely involved while 25.9% never engaged in arable crop production again. Furthermore, displacement also affected livestock production in the area with 90.7% of the respondents decided never to engage in the livestock production while just 9.3% were still keeping fowls and goats. Livelihood activities such as cassava and oil palm processing also felt

the impact of the displacement because 59.3% and processing.  
87.0%, respectively, stopped engaging in

Table 3a: Livelihood activities of respondents before and after displacement

Livelihood Activities	Level of livelihood activities					
	Before			After		
	Always	Rarely	Never	Always	Rarely	Never
Cash crop farming	87.0	3.7	9.3	4.6	43.5	51.9
Livestock Farming	10.2	13.0	76.9	0.0	9.3	90.7
Fish Farming	1.9	0.0	98.1	0.9	0.0	99.1
Palm wine tapping	0.0	3.7	96.3	0.0	97.2	2.8
Pasture crop farming	3.7	0.00	96.3	0.9	2.8	96.3
Arable crop farming	87.0	5.6	7.4	22.2	51.9	25.9
Cassava processing	41.7	18.5	39.8	16.7	24.1	59.3
Oil palm processing	19.4	0.9	79.6	10.2	2.8	87.0
Hunting	23.1	5.6	71.3	14.8	7.4	77.8
Trading	71.3	12.0	16.7	39.8	30.6	29.6
Gathering of non-timber forest product	13.9	11.1	75.0	8.3	13.0	78.7
Catering	0.0	2.8	97.2	0.0	0.0	100.0
Civil servant	2.8	2.8	94.1	3.7	0.9	95.4

**Level of involvement of dwellers in livelihood activities before and after displacement**

The categorisation of the level of involvement in livelihood activities of the respondents before displacement by their mean score as presented in Table 3b shows that majority (63.0%) had high level of involvement in their livelihood activities before displacement, and the mean score was 17. This high level of involvement connotes that these livelihood diversification was a formidable means of income generation among respondents in the study area. On the other hand, categorisation of the respondents' level of involvement in livelihood activities after displacement (Table 3) indicates that majority (60.2%) had low level of involvement, having a score below mean. It becomes evident that displacement has a considerable effect on the livelihood activities of the respondents which in

turn amplifies the dependence of rural communities on forest resources as their sources of livelihood as stated by Atilade (2001).

Table 3b: Categorisation of Respondents by level of involvement in livelihood activities before and after displacement

Category	Frequency	Percentage	Mean
<b>Before</b>			
<b>Displacement</b>			
Low (1-16)	40	37.0	17
High (17-25)	68	63.0	
<b>After</b>			
<b>Displacement</b>			
Low (1-20)	65	60.2	21
High (21-28)	43	39.8	

Source: Field survey, 2011

**Effect of displacement on respondents livelihood activities**

The effect of displacement on the respondents was categorized into low and high level using the mean effect value as the benchmark (Table 4). It can be seen from the table that the effect of displacement was high on the majority (68.5%) of the respondents. It is apt to state here that one of the effects of displacement is disruption or total loss of livelihood activities which can result in loss of income sources thereby predisposing one to poverty. Displacement is considered to have both direct and indirect effects by Godwin(2009), when he reflected that direct displacement leads to the actual displacement of people from their locations and indirect displacement leads to a loss of livelihood.

Table 4: Categorisation of the Effect of Displacement on Respondents

Category	Frequency	Percentage	Mean
Low (1-133)	34	31.5	134
High (134-150)	74	68.5	

Source: Field survey, 2011

**Constraints faced by respondents on their livelihood activities**

Table 5 shows that 99.1% of the respondents indicated transportation as a serious constraint affecting their livelihood activities. This confirms the finding of Ola-Adams (1999) that the major constraint in Omo Forest Reserve is that of transportation. A similar scenario was that of marketing of produce which 88.9% believed was a serious constraint by affirming that they find it difficult to evacuate their produce from the reserve due to very strict security measures at the reserve gates. Fear of untimely displacement (90.7%), conflict between the indigene and non-indigene (82.4%) and inadequate supply of social amenities (96.3%) were likewise considered serious constraints by the respondents. However these are common experiences across Nigeria. Meanwhile, extortion by forest guard (91.7%) was not a constraint, and this buttresses the assertion of Osalusi *et al*(2011) that the relationship between the dwellers and the people in the forest reserve is cordial.

Table 5: Distribution of respondents by constraints faced in their livelihood activities

Constraints	Serious constraint	Mild constraint	No constraint	Mean	Standard deviation
Transportation	107 (99.1)	0 (0.0)	1 (0.9)	2.98	1.090
Extortion by the forest guard	1 (0.9)	8 (7.4)	99 (91.7)	1.09	0.322
Marketing of product and produce	96 (88.9)	11 (10.2)	1 (0.9)	2.88	0.354
Fear of untimely displacement	98 (90.7)	8 (7.4)	2 (1.9)	2.89	0.370
Conflict between the indigene and non-indigene	89 (82.4)	16 (14.8)	3 (2.8)	2.80	0.469
Inadequate supply of social amenities	104 (96.3)	0 (0.0)	4 (3.7)	2.93	0.379

Source: Field survey, 2011

**Relationship between personal characteristics of respondents and level of involvement in livelihood activities**

The test of relationship between selected personal characteristics of respondents and level of involvement in livelihood activities in Table 6 reveals that marital status ( $\chi^2=18.454$ ,  $p=0.000$ ), household size ( $\chi^2=0.021$ ,  $p=0.009$ ) and years of formal education ( $\chi^2=18.659$ ,  $p=0.000$ ) had significant relationships with level of involvement in livelihood activities. It implies that both married and unmarried people were involved in various livelihood activities, although married people tend to be more involved because of their responsibility to their families. Education helped the respondents to use acquired knowledge, skills and attitude to perform effectively in their various livelihood activities in the reserve while families with more household members tend to extract more forest resources (Gutanilake 1998; Hedge and Enters

2000). In the same vein, effect of displacement ( $r=-0.460$ , and  $p=0.000$ ) and causes of displacement ( $r=-0.329$ ,  $p=0.001$ ) also had significant relationship with respondents level of involvement in livelihood activities. This means that in an atmosphere of peace (i.e. absence of displacement) there may not be restrictions to the level of engagement in livelihood activities which can result in higher productivity, whereas displacement can result in less engagement in livelihood activities thereby leading to decrease in productivity. Also, during the course of the respondents' engagement in their livelihood activities in order to meet their needs, they may end up infringing on forest regulations. Hence, the long-term survival of protected areas in developing countries will be jeopardized if the needs, aspirations, and attitudes of local people are not accounted for (McNeely, 1993).

Table 6: Relationship between personal characteristics of the respondents and level of involvement in livelihood activities

Variables	$\chi^2$	df	p-value	Remark
Sex	2.694	1	0.101	NS
Religion	18.454	3	0.922	NS
Indigene	0.442	1	0.506	NS
Marital status	18.454	3	0.000	S
Household size	0.021	5	0.009	S
Formal education	18.659	2	0.000	S
Variables	r-value		p-value	Remark
Effect of Displacement	0.460		0.000	S
Causes of Displacement	0.329		0.001	S

**Test of difference between respondents' level of involvement in livelihood activities before and after displacement**

The result (Table 7) reveals that there was a significant difference between the respondents' level of involvement in livelihood activities before and after displacement ( $t = 16.908$ ,  $p = 0.000$ ).

From the means of pre and post levels of livelihood activities, which were 21.0 and 17.4 respectively, it implies that there was a reduction in the level of engagement in livelihood activities by the respondents, which was also observed earlier. It suggests that most of the respondents were unable to actively engage in their respective livelihood



activities they used to before displacement, or decided to completely abandon them.

Table 7: Test of difference between respondents' level of involvement in livelihood activities before and after displacement

Livelihood Activities	N	Mean	SD	t-value	Df	p- value	Decision
Before	108	21.0370	2.52807	16.908	107	0.000	S
After	108	17.4167	2.60167				

**CONCLUSION**

The major livelihood activities of the respondents were cash crops, arable crops farming and trading, while the major constraints to the livelihood activities included transportation, fear of another displacement, inadequate provision of social amenities, conflict between the indigene and non-indigene and problem of marketing of their produce. Displacement had a negative effect on the livelihood activities of the respondents, which resulted in decline in their level of involvement in these activities. Government should take prompt and necessary action to resolve the issue related to causes of displacement amicably to prevent resurgences upon little provocation. Also, policies, strategies and interventions that aim at reducing peoples' dependence on natural resource (forest and forest resources) should give due attention. Finally, participatory and sustainable approaches such as compensation or relocation should be employed where displacement is inevitable. .

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