Forests and Forest Products Journal 18:44-52

Interactions between Neighbouring Communities and Management of Okomu National Park in Wildlife Conservation

***Adetola B.O.[1] and Romiluyi O.R.[1]**
[1]Department of Ecotourism and Wildlife Management, Federal University of Technology, P.M.B 704, Akure Ondo State, Nigeria.
Corresponding Author: bukolatomi2@gmail.com, boadetola@futa.edu.ng,

Abstract
Involvement of neighboring communities of protected areas is essential for effective conservation of natural resources in National Parks. This study aimed at determining the interactions of neighboring communities of Okomu national park in park management and to assess their willingness to support conservation initiative. A hundred and twenty (120) questionnaires were randomly administered in twelve (12) communities around the park; 10 respondents were purposively selected in each community. Descriptive and inferential (chi-square) statistics were used for data analysis. Findings from the study revealed that community involvement in park management is high in information sharing (65%), tour guide (30.8%) and decision making (25.8%), while community involvement as informant (spy) is low (10%), there was significant association between the respondent's sources of income and level of involvement ($P<0.05$). However, 85% of respondents were willing to support conservation initiative in the park. Barriers affecting community participation in park conservation include lack of framework to involve communities in park management (66.6%), lack of facilities and incentives to communities (50%) and poor sensitization and mobilization (40%). The study therefore recommends that coherent interaction of neighboring communities of Okomu National park should be the major focus of the protected area manager for effective conservation and management of wildlife resources in the park.

Keywords: community; conservation; participation; management; sensitization

Introduction

Removal of local communities' access to land that have been their major sources of livelihood over the years without adequate compensation might be of short term advantages to biodiversity conservation in protected areas. In situation where there is competition over natural resources and local people are directly dependent on the resources base, local stakeholders must be actively involved and engaged in order for conservation to be effective and self-sustaining into the long-term (Pretty andPimbert,1995; Berke,2004).

Conservation with development has been used as a model for rural transformation in most African countries for the transformation of rural economies where the resources for conservation exist. But the results for these efforts have been mixed over the years both showing success in some areas while in others a complete failure. This has necessitated the need for people to be part of the conservation drive since they have the local knowledge with regard to the resources that are found within their locality. It helps to develop the local people and their areas when they participate. Conservation emerged as a contested terrain where, not just nature as wildlife but nature as the innate character of social being is staked and defended (Saberwal and Kothari 2001). The linkage between communities and protected areas are often very complex and difficult to distinguish but occur along temporal and social organizational levels (individual, household and community) and differ in terms of usage and importance like economic, social and spiritual.

There is very strong evidence that rule enforcement is an essential requirement for successful local resource management institutions and too often there is an assumption that forms of participatory management will result in local engagement in rule enforcement. The resulting lack of meaningful involvement in co-management activities and governance has served to reinforce the marginalization of the poor, ethnic communities and women. New management models and perspective are needed to address these constraints, through a system of truly participatory governance. Therefore this arise the need to investigate the interactions between neighbouring communities and management of Okomu National Park in wildlife conservation

Methodology

Okomu National Park covers a total area of 181 $km^2$and is situated between longitude 5° and 5° 30' east and between latitude 6° 10' and 6° north

(Figure 1). The park lies 45km west of Benin-City and immediate south of Udo town. It derives its name from River Okomu which flows southwest to join the Osse River (Emelue, 2014).

Okomu National Park lies within the humid lowland rainforest zone of Nigeria (Orhierre, 1992). Tree species found in the park include; *Millicea excelsa, Triplochiton scleroxylon, Nauclea diderichii, Terminalia* species and *Ceiba pentandra*. The park is endowed with different fauna resources some of which include: Mona monkey (*Cercopithecus mona)*, White throated monkey (*Cercopithecus erythrogaster),* Red-capped mangabey (*Cercocebus torquatus)*, Putty nosed monkey (*Cercopithecus nictitans,* Maxwell duiker (*Cephalophus maxwelli,* Red-flanked duiker (*Cephalous rufilatus*), Yellow-backed duiker (*Cephalophus sylvicultor)*, Cusimance mangoose (*Crossarchus obscures)*.

The rainfall in the area is well above 2500 mm per annum. The area is within 300 meters above sea level. Ikhuoria (1993) described the soil in this area to be ferrallitic, composed of quartzite and kaolin from tertiary secondary sedimentary rocks.

Many communities around Okomu in Edo State trace their decent to the ancient Benin Kingdom. Hence there is a lot of linguistic and cultural affinity among the communities, the main language spoken is Edo. There are three religious groups namely; Christianity, Islam and Traditional worshippers. The main Ethnic groups in the host communities are; Edos, Afemais, Esans, Owaans and Akoko Edos, and the major occupation of these people is Agriculture.

Figure 1: Location Map of Okomu National Park
(Source: Emelue, 2014.)

Data Collection

Multi-stage sampling technique was used to select 50% of the total number of park neighboring communities (24) by stratification (Figure 2). These communities were selected due to their proximity to the park. Communities selected are: Agekpukpu, Iyayi,Ikoka, Sunday Camp, Hassan Camp, Tunde Camp, Annah Camp, Asamara (Aghrebon), AT&P (Mairoghinoba), Awori (Mile 3), Iguowan and Nikorogha. A hundred and twenty questionnaires (120) were randomly administered representing purposive selection of ten (10) respondents in each of these communities. Descriptive (percentages, bar and pie charts) and inferential (chi-square) statistics were used for data analysis.

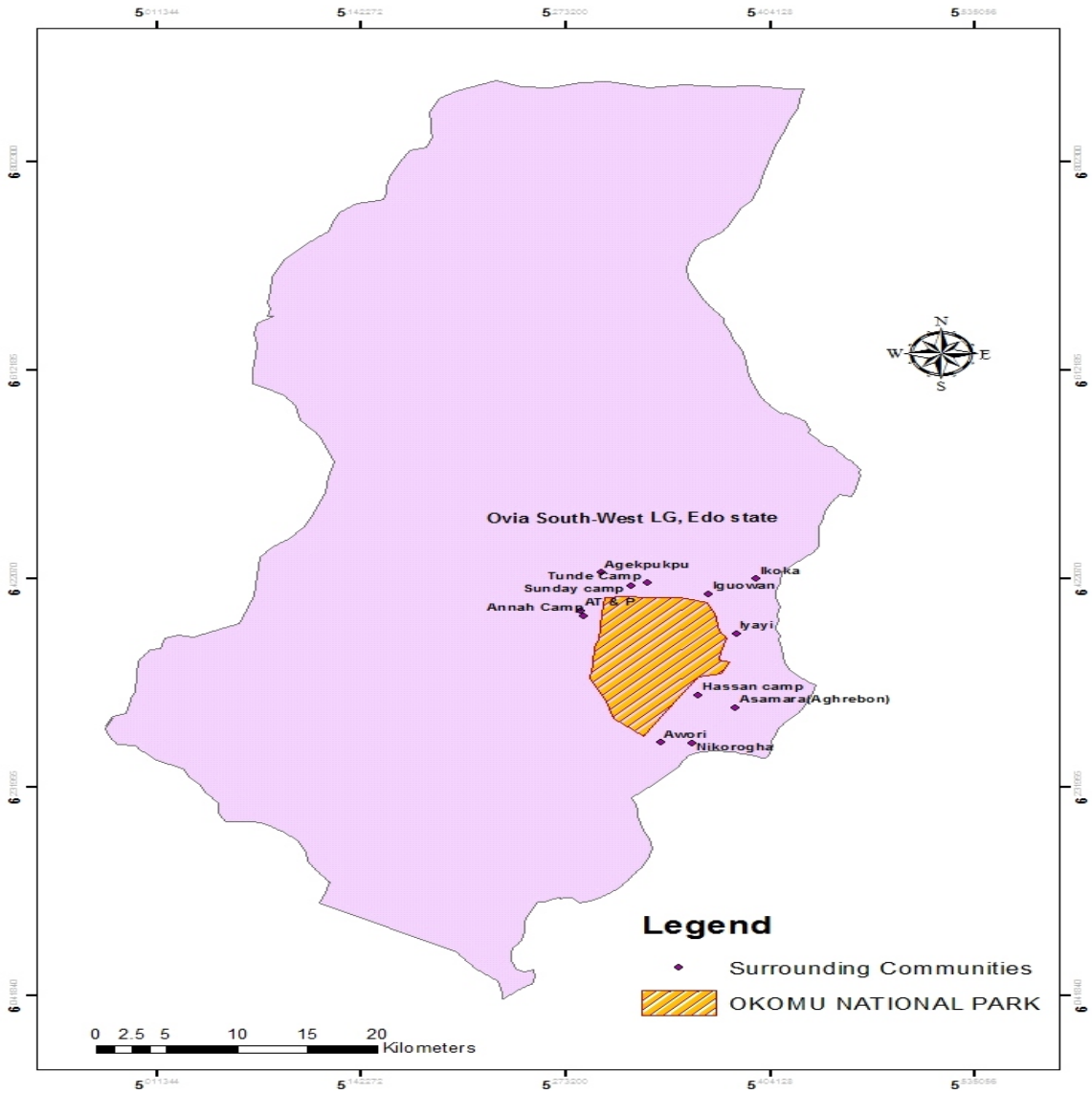

Figure 2: Location of the Sampled Communities Surrounding Okomu National park.
Source: Field Survey, 2015

Results

Table 1 revealed the socio-demographic characteristics of community respondents. 63.3% were male and 36.7% female, 20.8% had no formal, 31.7% attended primary school, 28.3% had secondary school education, 12.5% attended training college and6.7% had University education. Also, 6.7% are unemployed, others are into farming (46.7%), fishing (0.8%), Business (10%), wage labourers (3.3%), civil servant (10%), student (10%), artisan (3.3%), business owners(6.7%), clergy (0.8%), company worker (0.8%) and rubber tapper (0.8%). Moreover, 20.8% of the respondents were single, 78.3% were married and 0.8% divorced . The mean age of respondents was 38.41.

Table 1: Socio-demographic characteristics of Neighbouring Communities of Okomu National park

Variables	Frequency	Percentage
Gender		
Female	44	36.7
Male	76	63.3
Education level		
None	25	20.8
Primary	38	31.7
Secondary	34	28.3
Training college	15	12.5
University	8	6.7
Occupation		
Unemployed	8	6.7
Farming	56	46.7
Fishing	1	0.8
Business	12	10.0
Wage labourer	4	3.3
Civil servant	12	10.0
Student	12	10.0
Artisan	4	3.3
Own business	8	6.7
Clergy	1	0.8
Company worker	1	0.8
Rubber tapper	1	0.8
Marital status		
Single	25	20.8
Married	94	78.3
Divorced	1	0.8
Age		
<20	15	12.5
21-40	59	49.1
41-60	38	31.7
61-80	8	6.7
Mean Age	38.41	

Figure 3 show different levels of involvement of local communities in park conservation 15%, and 11% were actively and partially involved respectively as Partners in the Planning of Protected Area Management (Decision Making) while 74% are not involved, 21% were actively involved, 9% were partially involved and 70% were not involved in advocacy and sensitization, information Sharing had 31% actively involved, 34% partially involved and 35% not involved. Informant (Spy) had 10% as actively involved and 90% were not involved. Also, 15% were actively involved, 15.8% partially involved and 69.2% were not involved as tour guide. 13.3% actively involved, 7.5% partially involved and 79.2% were not involved as park staff. Members of conservation club had 8.3% actively involved, 9.2% partially involved and 82.5% not involved.

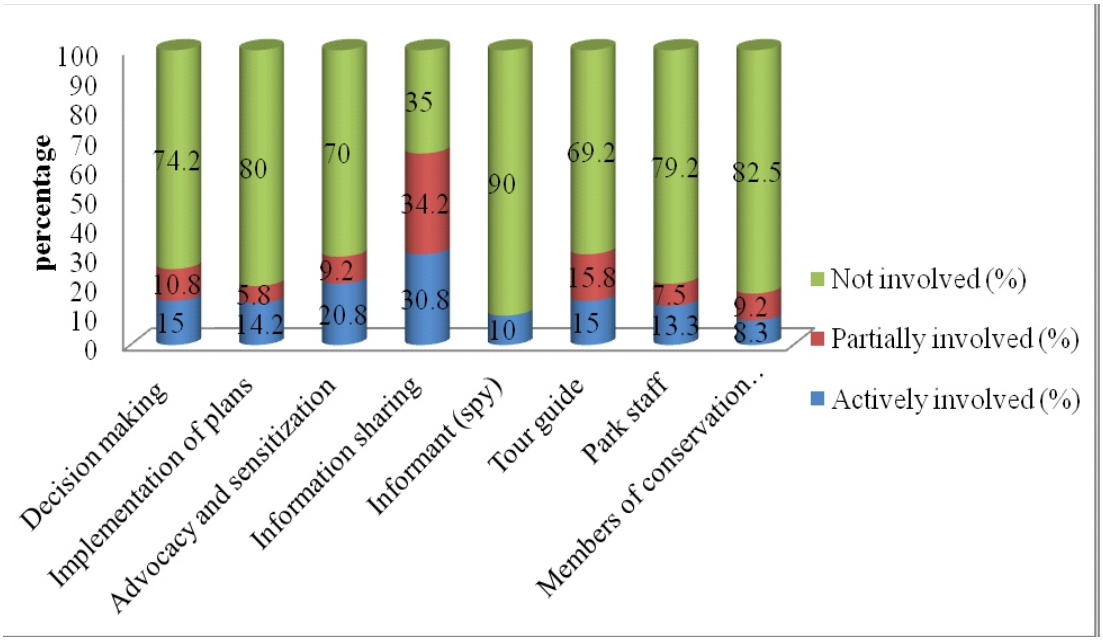

Figure 3: Level of involvement of communities of Okomu National park in park conservation

The Chi-square analysis in Table 2 revealed that occupation and gender were not significantly related with the level of involvement of neighbouring communities of Okomu National park in wildlife conservation ($p>0.05$), however their sources of income had significant association with their level of involvement in park conservation ($p<0.05$).

Table 2: Relationship between Socio-demographic characteristics and community involvement in park conservation.

	χ^2 value	Df	P value	Remark
Gender	23.696[a]	15	.070	N.S
Occupation	1.177[a]	112	.332	N.S
Sources of income	79.139[a]	48	.003	S

Source: Field survey, 2015.
P<0.05 Significant, P>0.05 Not significant
N.S – not Significant

Relationship between community and park management in Figure 4 has been shown to be 33% poor, 17% fair and 50% good.

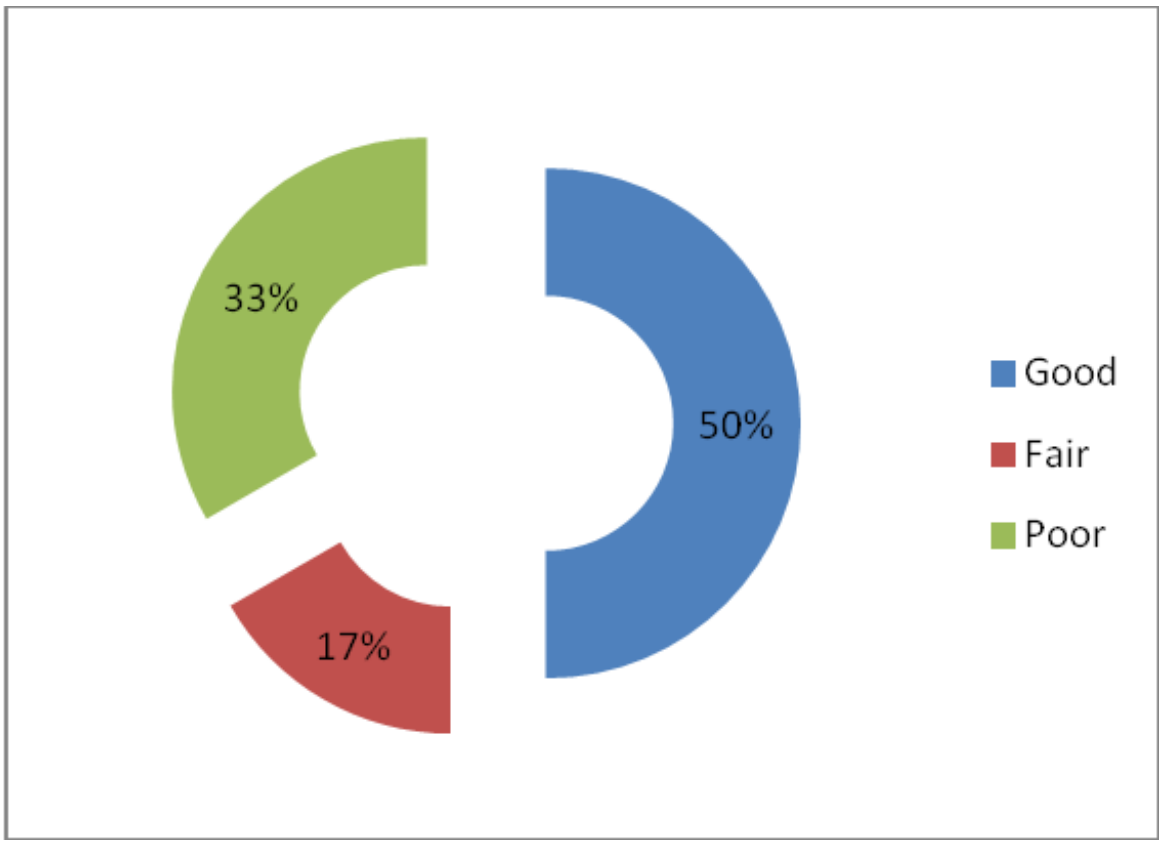

Figure 4: Relationship between Park Management and Communities

Figure 5 revealed that 85% of the respondents within the neighbouring communities of Okomu National Park were willing to Support Conservation initiatives within the park while only 15% were not willing.

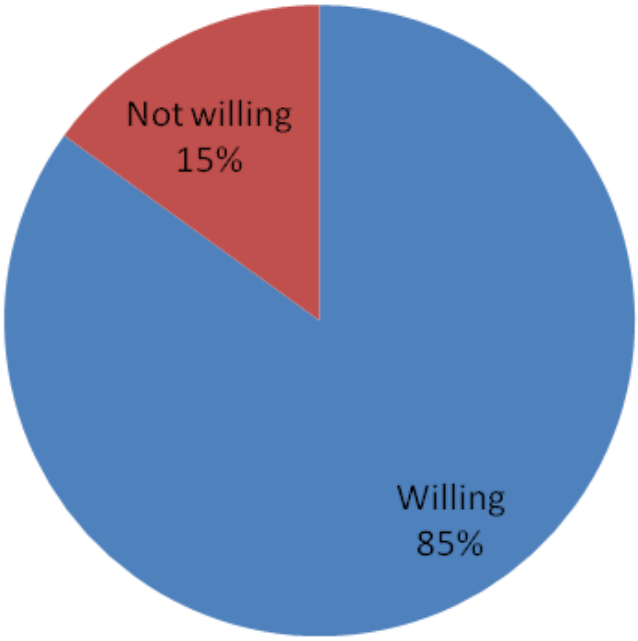

Figure 5: Willingness of Neighbouring Communities of Okomu National park to Support Conservation Initiative

Findings in Figure 6 show respondents' opinion regarding the barriers affecting their participation in the management of Okomu National Park. Lack of framework to involve communities in park management had 66.6% agreed, 6.7% no opinion, 26.7% disagreed. Poverty due to denied access to farmland or forest resources had 30% agreed, 10% no opinion, 60% disagreed. Poor sensitization and mobilization had 40% agree, 7.5% no opinion, 52.5% disagreed. Lack of government facilities/incentives to community also had 50% agreed, 10.8% no opinion, 39.2% disagreed and Lack of interest had 23.3% agreed, 18.3% no opinion and 58.3% disagreed.

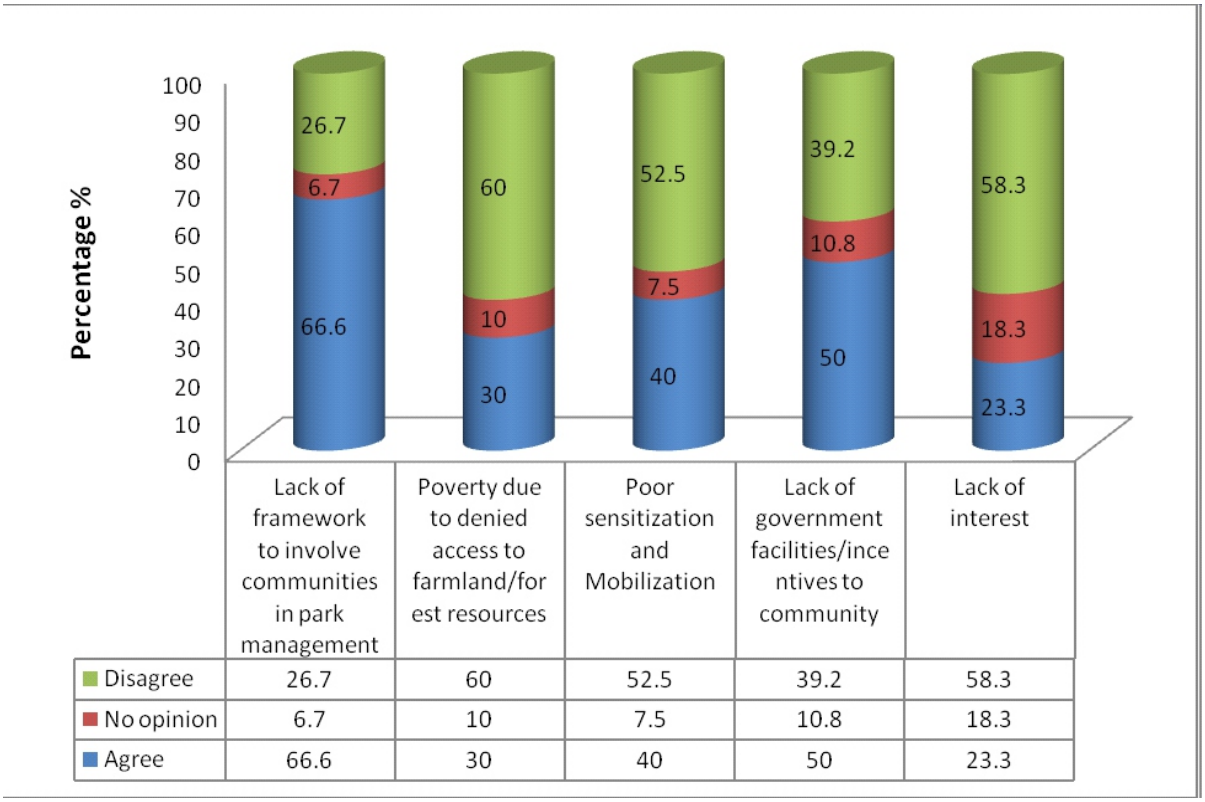

Figure 6 : Barriers affecting community participation in the management of ONP

Discussion

The result shows that respondents that were married constitute the major population in this study which means they are emotionally stable. It was also deduced that larger proportion (63.3%) were male which agreed with Global Gender Office of IUCN (2012) that traditional gender roles reflecting men's participation in commercial spheres and women's in domestic spheres have disadvantaged women in their ability to engage in environmental decision making. Respondents mean age is 38.41 which indicated high level of maturity needed to provide required information for the study. Educational background of the surveyed population shows that 79.2% were educated while only 20.8% had no formal education. This is in agreement with adult literacy rate of 55% in 2005 (NMEC, 2008). Major occupation of the people living around Okomu National Park is agriculture, as 57% engaged in farming and fishing, this shows that the local communities depend on forest resources as their means of survival which can affect their participation and reasoning towards effective conservation, due to denied access to farmland and restricted use of natural resources (Eric and Nobert, 2014).

Interaction between the park management and community in Figure 3 varied. Community level of involvement in park management is high in information sharing (65%), tour guide (30.8%) and decision making (25.8%) while their involvement as informant (spy) is low (10%), this is in agreement with Fatima (2008) that it has become quite necessary for communities to participate in the management of forest resources because their participation can improve the value of the resource and their participation will encourage them to take good care of the resource so as to ensure its sustainable use. There was significant association between their sources of income and level of involvement ($P<0.05$) indicating that the community sources of income contribute significantly to their involvement in park conservation (Table 2). However, there has been good relationship between the park management and the local communities as indicated by 50% respondents while 85% were willing to support conservation initiative in the park. This corroborates the findings of Adetola and Alade (2014) in Old Oyo National Park where local communities indicated high level of willingness to manage park resources.

The most pronounced barrier highlighted by residents of the neighbouring communities around Okomu National park was lack of framework to involve communities in park management, others includes poverty due to denied access to farmland or forest resources , poor sensitization and mobilization, lack of government facilities/incentives to community and lack of interest as barriers affecting their participation in park conservation .This is consistent with the findings of Emilio (2009) on barriers and triggers to adopting a participatory model for conservation in the Cordillera Azul National Park, Peru, which illustrates that the potential barriers to participation in conservation management are likely to be affected by the levels of participation as well. If community members are expected to participate in the management of protected areas, then local people need to perceive that the benefits of participating in the management process will be greater than the costs (Emilio, 2009).

Conclusion

This study revealed the interaction of neighboring communities of Okomu National Park in park conservation. Majority of the people were willing to be involved if framework for involving communities in park planning and management were put in place. Therefore, public awareness of right to participate in natural resource management should be improved to foster local pride. Incorporating the views of these local people in the process of decision-making and providing alternative livelihood are important steps towards successful wildlife conservation in Okomu National Park.

References

Adetola B.O. and Alade A. A. (2014). **Local Community Participation in the Management of Old Oyo National Park, Nigeria.*Nigerian Journal of Forestry* 44 (1) 17-23**

Berkes, F. (2004). Rethinking community-based conservation. *Conservation Biology* 18 (3) 621-630.

Emelue, G. U. And Ukandu, M. (2014). Perception of Host Communities toward the implementation of Park Laws in Okomu National Park. *Journal of Research in Forestry, Wildlife and Environmental* 6 (2) 2-6

Emilio R.I (2009). Barriers and Triggers to Adopting a Participatory Model for Conservation in the Cordillera Azul National Park, Peru. MPhil. Thesis in the Department of Geography, Environment and Earth Sciences pp 6-11

Eric D. N and Nobert N. T (2014). **Socio-Economic Impacts of Protected Areas on People Living Close to the Mount Cameroon National Park. *Parks* 20 (2)** 129-137

Fatima E. (2008), **Community Participation in the Management of Forest Resource: *A Means to Reduce Poverty for Sustainable Development The case of Kakum National Park. Mphil Thesis in the Department of Sociology and Human***

Geography, University of Oslo. Pp 76

Gibson, C., Ostrom, E. and Ahn, T.K. (2000). The concept of scale and the human dimensions of global change: a survey. *Ecological Economics* 32: 217–239

Ikhuoria I.A. (1993). Vegetation and land-use Changes in a Rainforest Ecosystem. *Nigerian Journal of Remote Sensing* 1: 73-82.

International Union Conservation of Nature (2012). The Art of Implementation. Global Gender Office. Washington, D.C. USA.

NMEC (2008). *Non-Formal Education in Nigeria: Policy Issues and Practice*. Abuja. UNICEF Nigeria Publications, pp 15.

Orhierre, S. S. (1992). Okomu Wildlife Sanctuary: Okomu Forest Reserve, Edo State. *Nigerian Field* 57: 91-102.

Pretty, J. and Pimbert L., (1995). The many interpretations of participation. *Focus.* 16: 4-5.

Saberwal, V.M. R and Kothari A. (2001): People, Parks and Wildlife, Towards Coexistence London: Sangam Books. Pp 206.