

Socio- Cultural Importance of Sacred Forests Conservation in South Southern Nigeria

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Abstract

Sacred forests have been an important part of many African traditional societies for decades. This is an example of *in-situ* biodiversity conservation, which has supported various ecosystem functions. This study highlighted various approaches used by communities to enhance the socio- cultural importance of sacred forest conservation in south southern, Nigeria. Data were generated through sample survey using semi-structured questionnaires supplemented with other participatory research approaches such as focus group discussions, In-depth in view and among others. Majority of the respondents (60.30%) were above 40years while Christianity is the most accepted religion (64.90%). Among all the activities permitted within the sacred forests felling of trees were strictly prohibited. About 51.00% of the respondents have minimal interaction with the sacred forest while 48.20% had maximum interaction with sacred forest in accordance to their different cultural beliefs. Also, 59.90% never visited the sacred grove. Majority (79.70%) of the respondents disagreed with the intervention by government agencies on the preservation of sacred sites with reason being the fear of desecration, lack of tenure rules, indiscriminate exploitation and extraction of resources and loss of traditional cultural beliefs and conservation values. Indigenous traditional knowledge, beliefs and cultural systems was observed to enhance nature conservation in the study area and should be sustained by incorporating them into modern and national biodiversity conservation strategies in Nigeria. Thus, awareness campaign

targeting relevant stakeholders and on the potentials of sacred forest *in-situ* conservation can go a long way in strengthening sacred forest sustainability.

Keywords: Sacred forest, conservation values, culture, beliefs, traditional interaction

Introduction

Sacred forest are native vegetation traditionally protected by local communities with various cultural beliefs that are unique with special spiritual significance to humans thus, this is a typical examples of *in situ* biodiversity conservation system (Sunitha and Rao, 1999; Upadhaya et. al., 2003; Mugmia and Oba, 2003; Udeagha et. al., 2013; Onyekwelu and Olusola, 2014; Ray et al., 2014; Daniel et al., 2015; Ray et al., 2015; Daye and Healey, 2015). These preserved forest patches are usually close to human settlement, thus, forming an integral part of traditional rural communities (Ray et al., 2014). It represents an important long-held tradition of conserving specific land areas that have cultural and often religious significance (Udeagha et al., 2013; Daniel, 2010; Ormsby and Bhagwat, 2010). In addition to its cultural significance, a number of studies have suggested that sacred groves are important refuges for biodiversity and wildlife, including edible plants, medicinal plants and vegetables which contribute to household income, even within highly humanized landscapes (Udoakpan et al., 2013; Ray et al., 2014; Balachandran et al., 2015; Daye and Healey, 2015). However, these groves are currently threatened by numerous factors ranging from the need for development, population increase and changes in land use pattern, which resulted in increased pressures for timber and other forest products as well as demand for more fertile land for agriculture and generally changes in cultural and traditional values (Ormsby and Bhagwat, 2010; Daniel, 2010; Udeagha et al., 2013; Ray et al., 2014; Daye and Healey, 2015). Sacred forest grove vary widely in their size; some of them are small fragments of forest (<1 ha) while others are more extensive, spanning >100 ha (Daniel et al., 2015; Bhagwat et al., 2014; Udoakpan et al., 2013). Despite the size limitations, sacred groves conserve local biodiversity and offer important ecological, environmental and social services to their host communities and also enhance local hydrological dynamics (Daye and Healey, 2015; Balachandran et al., 2015; Ray et al., 2015; Udeagha et al., 2013; Hu et al., 2011; Chandran et al., 2010). Regardless

of the variation in size, one common feature of all sacred forest grove is their association with gods and goddesses (Chandrakanth et al., 2004), which often results in their protection by local communities on religious or spiritual grounds (Onyekwelu and Olusola, 2014). However, most local's people are now embracing widespread Christianity as an alternative religious belief (Appiah-Opoku, 2007; Eneji et al., 2012; Udeagha et al., 2013; Babaola et al., 2014), which could encourage the erosion of some indigenous traditional religious beliefs and values and by extension affects decades of in-situ conservation of biodiversity in associated sacred groves. Conversely, the growing human intervention in form of urbanisation and deforestation has equally contributed more to the disappearing of the most sacred forest (Udeagha et al., 2013; Ray et al., 2014). Change in land use system is contributing to the decrease of sacred forest since their small size and increasing edge density indicates high vulnerability, especially where an erosion of the traditional belief systems reduces their protection (Daye and Healey, 2015). Often time the degradation that occur within the sacred grove system are as result of weakening indigenous traditional belief system and associated laxity in grove protection (Daye and Healey 2015; Ray et al., 2014; Chandrashekara and Sankar, 1999), leading to loss or obliteration of valuable biodiversity and its ecological and social services. Despite literatures abounding on sacred forest/groves importance in-situ conservation of biodiversity, very few studies has been conducted in Nigeria to uncover the historical and anthropological background of sacred groves aiming at understanding the traditional cultural values and others practices used by the locals communities in the conservation of sacred forests in changing human landscape. In addition, due to fast changing in religious and cultural beliefs of most communities in Nigeria, these studies become very pertinent. The interactions of the locals with sacred grove are changing. This study is therefore aimed at contributing to this knowledge gap especially in the area of anthropological studies with the view to examining cultural influence on the conservation of sacred grove within south southern, Nigeria.

Methodology

Study area

This study was carried out in Akwa Ibom and Cross River States, South Southern Nigeria. Akwa Ibom State lies between latitudes 4°32' and 5°53' North and longitudes 7°25' and 8°25' East while Cross River State is

between latitude 5°45' and 5°75' North and longitude 8°30' and 8°50' East. Akwa Ibom state has a total land mass of 8,412km² with only about 15.2% of it under forest cover (FORMECU,1999) while Cross River State (CRS) has a land area of 20,156km² and boast of approximately 50.00% of the total remaining areas of tropical high forest of about 6,102km² in Nigeria (Oyebo et al., 2011). In Akwa Ibom State, rainfall ranges from 2000mm per annum on the coast to about 3000mm per annum while the temperature are generally high all year round and ranges from 26°C to 28°C (Etukudo, 2003). Though sharing a common border, Cross River has an annual average rainfall of between 2500mm in the northern part to 4000mm in the south (Udeagha, 2015) with an annual mean temperature range between 30.90°C and 32.03°C, respectively (Udeagha, 2015).

Sampling procedure and sample size

Multi-stage sampling procedure was used to select the study samples. Akwa Ibom State was divided into three clusters based on the main ethnic groups (Ibibio, Oron and Annang). Random sampling procedure was employed to select two Local Government Areas from each cluster. Purposive sampling procedure based on availability, accessibility (cultural restrictions) and size of the forests, was finally utilized to select one sacred forest from each LGA. For Cross River State, existing strata, which are the three senatorial districts (Northern, Central and Southern Cross River State) was used as the first stage since there were many ethnic group (Table 1). Purposive sampling was hereafter adopted in selecting two (2) LGAs from North and Central senatorial districts and one sacred forest was studied in each of the selected LGA. In both cases, only the forest whose sizes were approximately one hectare (1ha) and above, were considered in order to accommodate the sampling units. However, both states have a common traditional administration setting, which makes the village head the traditional head of the village/community, supported by the family heads who together with some other selected indigenes, constitute the village council. Group heads, Clan heads and Paramount rulers are the other traditional rulers in both states, responsible for protecting the culture of the people.

Table 1: Sampled areas, sacred forest and located communities

State	Cluster/ Stratum	Location/ L. G. A.	Sampled Sacred forest	Community located
Akwa Ibom	1) Ibibio	(1) Ikono	Abaam Itak	Ikot Efre Itak
		(2) Mkpato Enin	Akoho Itit	Ikot Eti/Ikot Akpa Okop
	2) Oron	(1) Okobo	Akai Mbiam	Ammamong
		(2) Oron	Akai Uya	Uya Oron
	3) Annang	(1) OrukAnam	Akai Anwa Ibok	Ntak Ibesit
		(2) EtimEkpo	Utai Ikot	Ikot Akpakpan
Cross River	1) Northern	(1) Obubra	Evat Quna	Okorobe-Ochun
	2) Central	(2) Biase	Odim Akerot	Abini

Structure and methods of data collection

Semi- structured questionnaires was used in the collecting both quantitative and qualitative data on ecological and indigenous knowledge systems used in the conservation of identified sacred forests. In addition other ethnographic research and participatory approaches such as field observation (participant observation), focus group discussions, In-depth interview and transect walk were employed to supplement the quantitative and qualitative data (Crewell, 2003; Bernard, 2011). In order to ensure comparison, variation and representativeness in the sub-units (villages) in this study, 30 respondents who are indigenes of various sacred forest host communities were randomly selected from each of the 8 communities using lottery method. In line with this, Angelsen et al. (2011) stipulated, as a rule of thumb, a minimum sample size of 25-30 respondents from a community as appropriate in other to ensure comparison. Thus, this study adopted Angelsen et al. (2011) approach in selecting respondents for this study. In all, a total sample size of 240 respondents was selected for administering the semi-structured questionnaire for the study. Descriptive statistics such as graphs, tables and frequencies was employed in analysing the data generated.

Results and Discussion

Demographic and socio-economic characteristics of the respondents

The results presented in Table 2 revealed that majority of the respondents (60.30%) were within the age class of 41 years and above. This agreed with (Msalilwa et al., 2013) and (Ermias et al., 2014) inference from

their studies that how long a person live in a place impacts their perception of that particular environment and the culture surrounding it. Also, majority of the respondents (91.0%) have formal education. By implication, high rate of literacy among the respondents is also expected to positively impact their perception of any change in the environment and cultural beliefs. This concurred with the finding of Msalilwa et al. (2013), which affirmed that educational level influenced people's perception about changing conditions in their environment. However, more than three quarter of the respondents (64.90%) were Christians and the remaining (35.10%) claimed to be salient believers of African Traditional Religion (ATR), thus worshiping and believing in the gods of their ancestors. This did not sharply deviate from the findings of Babalola et al. (2014), Udeagha et al. (2013), and Eneji et al. (2012) from related studies. Also, the majority of the respondents were married with a mean household size of five persons per household, which is an indication of huge demand on them to generate enough income to sustain their family's needs. Majority of the respondents were artisans (23.9%) while (22.1%) were farmers and the remaining (20.3%) were traders.

Table 2: Demographic characteristics of respondents in the study areas

Socio Characteristics	Sacred Forest Community Frequency										Total
	Ik. Eti / Ik. AkpaOkop		Amammong			Ikot Akpakpan		Okorobe Ochun		Abini	
		Ik. Efre Itak	Uya	Oron	Ntak	Ibesit					
Age											
21 - 30	4 (14.30)	4 (15.40)	5 (17.90)	4 (3.80)	1 (3.80)	2 (2.70)	0 (0.00)	2 (7.40)	22 (9.90)		
31 - 40	11 (39.30)	6 (23.10)	7 (25.00)	13 (44.80)	4 (15.40)	5 (16.70)	11 (39.30)	9 (33.30)	66 (29.70)		
41 - 50	7 (25.00)	7 (26.90)	7 (25.00)	7 (24.20)	6 (23.10)	9 (30.00)	7 (25.00)	8 (29.70)	58 (26.10)		
51 - 60	1 (3.60)	5 (19.20)	7 (25.00)	5 (17.20)	9 (34.60)	8 (27.70)	7 (25.00)	6 (22.20)	48 (21.60)		
60 and above	5 (17.90)	4 (15.40)	2 (7.10)	0 (0.00)	6 (23.10)	7 (23.30)	3 (10.70)	2 (7.40)	28 (12.60)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		
Religion											
Christianity	17 (60.70)	18 (69.20)	21 (75.00)	19 (65.50)	17 (65.40)	14 (46.70)	19 (67.90)	19 (70.40)	144 (64.90)		
Others	11 (39.30)	8 (30.80)	7 (25.00)	10 (34.50)	9 (34.60)	16 (53.30)	9 (31.20)	8 (29.60)	78 (35.10)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		
Level of Education											
No Formal Edu.	2 (7.10)	2 (17.70)	1 (3.60)	1 (3.50)	6 (23.10)	3 (10.00)	3 (10.70)	2 (7.40)	20 (9.00)		
Primary Edu.	6 (21.50)	3 (11.50)	4 (14.30)	4 (13.80)	8 (30.80)	14 (46.70)	7 (25.00)	4 (14.80)	50 (22.50)		
Secondary Edu.	9 (32.10)	11 (42.30)	16 (57.10)	13 (44.80)	8 (30.80)	11 (36.70)	14 (50.00)	14 (51.90)	96 (43.20)		
Post Sec. Edu	8 (28.60)	6 (23.10)	6 (21.40)	8 (27.60)	4 (15.40)	2 (6.70)	4 (14.30)	5 (18.50)	43 (19.40)		
University Edu	3 (10.70)	4 (15.40)	1 (3.60)	3 (10.30)	0 (0.00)	0 (0.00)	0 (0.00)	2 (7.40)	13 (5.90)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		
Marital Status											
Single	6 (21.40)	7 (26.90)	8 (28.60)	10 (34.50)	3 (11.50)	6 (20.00)	6 (21.40)	5 (18.50)	51 (23.00)		
Married	22 (78.60)	19 (73.10)	20 (71.40)	19 (65.50)	23 (88.50)	24 (80.00)	22 (78.60)	22 (81.50)	171 (77.00)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		
Household Size											
1-5 persons	17 (60.70)	14 (53.80)	9 (32.10)	10 (34.50)	16 (61.50)	18 (60.00)	14 (50.00)	12 (44.40)	110 (49.50)		
6 -10 persons	10 (35.70)	12 (46.20)	17 (60.80)	17 (58.60)	9 (34.60)	12 (40.00)	14 (50.00)	14 (51.90)	105 (47.30)		
11 - 15 persons	1 (3.60)	0 (0.00)	2 (7.10)	2 (6.90)	1 (3.80)	0 (0.00)	0 (0.00)	1 (3.70)	7 (3.20)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		
Occupation											
Civil Servant	8 (28.60)	10 (38.50)	7 (25.00)	4 (13.80)	2 (7.70)	2 (2.70)	3 (10.70)	4 (14.80)	40 (18.00)		
Fishing / Farming	3 (10.70)	3 (11.50)	6 (21.40)	7 (24.20)	8 (30.80)	8 (26.70)	7 (25.00)	7 (25.90)	49 (22.10)		
Trading	5 (17.90)	3 (11.50)	3 (10.70)	4 (13.80)	5 (19.20)	10 (33.30)	10 (33.30)	5 (18.50)	45 (20.30)		
Artisan	6 (21.40)	4 (15.40)	6 (21.40)	10 (34.50)	6 (23.10)	5 (16.70)	7 (25.00)	9 (33.30)	53 (23.90)		
Birth Attendant	0 (0.00)	0 (0.00)	0 (0.00)	1 (3.50)	0 (0.00)	1 (3.30)	0 (0.00)	0 (0.00)	2 (0.90)		
Clergy	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	1 (3.80)	0 (0.00)	0 (0.00)	0 (0.00)	1 (0.50)		
Retiree	3 (10.70)	2 (7.70)	1 (3.60)	1 (3.50)	3 (11.50)	2 (6.70)	1 (3.60)	0 (0.00)	13 (5.90)		
Not Employed	3 (10.70)	4 (15.40)	5 (17.90)	2 (6.70)	1 (3.80)	2 (6.70)	0 (0.00)	2 (7.40)	19 (8.60)		
Total	28 (100.00)	26 (100.00)	28 (100.00)	29 (100.00)	26 (100.00)	30 (100.00)	28 (100.00)	27 (100.00)	222 (100.00)		

() = Figure in parenthesis are percentage value

Cultural control on resource use within the sacred forests

Table 3 presents identified activities by the study, which are allowed and restricted within the studied sacred forests. Majority of the respondents (83.50%) asserted that felling of trees was highly prohibited in all the studied sacred forest as trees was said to be the dwelling place for gods and goddess. This confirmed the findings of Onyekwelu and Olusola (2014), as well as Mgumia and Oba (2003) in south western, Nigeria and Tanzania that tree felling within sacred groves are regarded as an

abomination and rituals must be offered or performed before any tree is felled or removed. More so, traversing was permitted in some of the sacred forest in Akoho Itit, Akai Mbiam, Akai Uya, Utai Ikot and Evat Quna while in others they were seen as taboo and was forbidden. Cutting of poles in Odim Akerot sacred forest was not allowed while in Akoho Itit, Abaam Itak, Akai Uya and Utai Ikotit permission for such action is sought from the village council citing tenable reasons. On the other hand, in Akai Mbiam and Akai Anwa Ibok, only the priest and diviners in charge of the sacred forest issue permission for the cutting of pole, whereas in Evat Quna, there was free access for anybody who wants to cut trees for pole making. In Akoko Itit, Utai Ikot and Evat Quna hunting in sacred forests is permitted while in other locations, hunting is prohibited except in Akai Anwa Ibok where hunting is permitted only for ritual purposes. Some of this measures adopted by the communities to conserve the sacred forest conforms to modern conservation approaches, which encourage wise extraction of natural resources in order to ensure its future sustainability. Thus the postulation by Onyekwelu and Olusola (2014), Eneji et al (2012), Udeagha et al. (2013), as well as Mgumia and Oba (2003) that modern conservation programs should be integrated into traditional/indigenous knowledge systems in order to sustain the conservation and management of natural resources using cultural influences will work in the study area.

Table 3: Activities permitted or restricted within the various sacred forests

S/N Sacred Forests	Activities				
	Traversing	Felling of Trees	Cutting of Poles	Hunting	Collection of NTFPs
1 Akoho Itit	Yes	No	under permission	yes	Yes
2 Abaam Itak	No	No	under permission	no	No
3 Akai Mbiam	Yes	No	only priests	no	only priest
4 Akai Uya	Yes	No	under permission	no	Under permission
5 Akai AnwaIbok	No	No	only diviners	only for rituals	only for rituals
6 Utai Ikot	Yes	No	under permission	yes	Yes
7 Evat Quna	Yes	No	Yes	yes	Yes
8 Odim Akerot	No	No	No	No	No

Functions of sacred forests in host communities

Table 4 presents the identified functions and roles of sacred forests in the study area. Majority of the sacred forests were perceived to serve as 'home' for the spirits of ancestors or that of those who died under questionable or atrocity related circumstances. In addition the people of Ikot Akpa Okop and Ikot Eti reported that those who died violently (through suicide or abortion for example), would be denied a peaceful dwelling in the ghost land and therefore their spirit could only co-habit with those who died in like manners and was always buried in sacred forest. This assertion conforms with the observation made by Udo (1983) that the Ibibios believe in life after death and that until proper action like burying likes among likes are taken, the spirit of the deceased will continue to disturb the peace of the community, live in his own house, using his/her own properties, which include his wife or wives. Nevertheless, some of the sacred forest studied enhances other socio-economic aspirations like serving as meeting point for unique group of people towards taking important decisions. They are also where community kingmakers convene to select and install legitimate king or paramount ruler of associated community prior to the open ceremonial with the view to seeking permission and blessings of ancestors. All these conform to the view of Udeagha et al. (2013) that most sacred forest in south eastern, Nigeria are used for coronation of paramount rulers and are deemed very sacred to non-initiates. Stones which depict the family stools are placed around a *Newbouldia laevis* (Itumo) tree as a totem and are believed to be the god's great tree. Irrespective of this unique characteristic of the sacred forest, this highly esteemed forest still receives other members of the community who visit there for one need or the other. Contrast to this is the Akai Ekpe, a sacred forest at Amammong-Okobo in Akwa Ibom state, which is the exclusive meeting place for members of Ekpe cult. At Akai Ekpe, (Forest of the Masquerade) all uninitiated including visitors, are not allowed access hence it is listed separately from other sampled sites

In Efik and Ibibio land sacred groves such as Awuk' for 'Idiong', 'Ekpo', and 'Ekpe' cults are known to be powerful traditional law enforcement agencies. Sacrifices are performed here to appease the ancestors/ gods either as a consultation for an action to be taken, information for guidance, or a presentation of items earlier requested from an offender. There were also purpose specific groves (some of which had few trees) like the 'Iso Idim Ekpo' meaning 'the head from which Ekpo's

stream flow. It is obvious that this sacred activities has encourage the conservation of biodiversity and wildlife and will continue to do so as long as the traditional cultural rites are performed and associated divine directives followed by the people.

Table 4: Primary functions of the various sacred forests

S/N	Sacred Forests	Category of uses	Explanation
1	Akoho Itit	Burial	Used primarily as a place of burial for people who die from mysterious sicknesses, commit suicide or die during abortion.
2	Abaam Itak	Worship/ Prayer	Used primarily as a place of prayer and worship of ancestors / spirit
3	Akai Mbiam	Oath taking / Divination	Used primarily as a judicial instrument where people swear; ancestors show by miracle where right lay; gods are consulted to know the unknown, foresee future and tell the past.
4	Akai Uya	Worship / Prayer	Same as in No. 2
5	Akai Anwa Ibok	Worship / Prayers / Divination	Combination of Nos. 2 and 3
6	Utai Ikot	Worship / prayer	Same as in No. 2
7	Evat Quna	Meeting / Burial	An abode where kingmakers meet to select a new king, take vital decisions and also a burial site for village chiefs or other 'important' people from the community.
8	Odim Akerot	Spirits' abode	An abode for spirits of the land / ancestors
Other Sacred Forests visited but studies were not allowed by the communities due its sanctity/sacredness.			
9	Iso Idim Ekpo	Water source	A grove which provides the community with water all year round.
10	Owuk Ntuk-enyen	Children burial Ground	Used primarily for burying children who die before attaining the age of 7years, often believed to belong to 'transitory' group.
11	Akai Ekpe	Meeting / worship / Sacrifice	An abode for 'Ekpo' diety where the Ekpe cult members meet and where 'Ekpe host' are consulted to avenge rivals or assist in war.

Level of interaction within the sacred forest ecosystem

The result in Figure 1 indicates the level of accessibility and extraction by the locals from the sacred forest within their domain. Majority

of the respondents at Ikot Efre Itak (79.90%), Amammong (82.10%), Uya Oron (58.60%) and Abini (100.00%) where Odim Akerot sacred forest is located, claimed that there was no form accessibility and extractions within the forest due the cultural beliefs surrounding them, while in Ikot Eti/ Ikot Akpa Okop, Ntak Ibesit, Ikot Akpa akpan and Okorobe-Ochun the locals were allowed maximum access and extraction of resources from the sacred forests. This concurred with the finding of Daye and Healey (2015) that forest patches with sacred status had greater protection by the local communities due the traditional cultural belief systems attached to them.

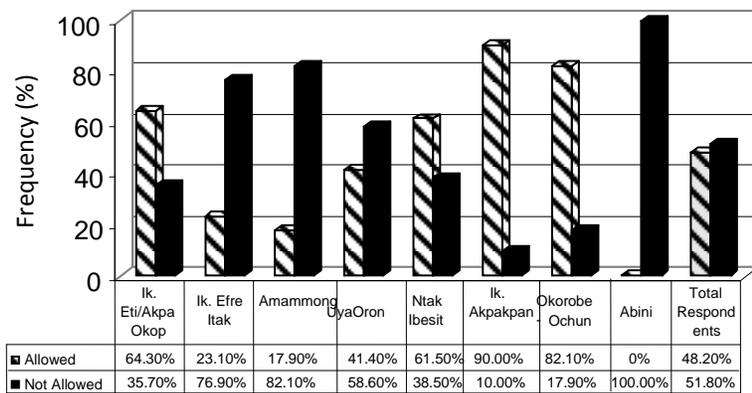


Figure 1: Deposition on the level of interaction and extraction of resources of the sacred forest

Level of visitation to the sacred forest

Majority of the respondents (59.90%) asserted that they have not personally visited the sacred forests under any consideration (Figure 2). Even those from Ikot Eti/ Ikot Akpa Okop (Akoho Itit) and Ntak Ibesit (Akai Anwa Ibok) where extraction of resources are allegedly to be allowed disclaimed personal visitation to those groves for whatever purpose. This portrays that some of these sacred forests are still being highly revered and could sustained high biodiversity as the level of human interaction is still low. The remaining (41.10%) of the respondents claimed that they had frequently visited the sacred forest for one purpose or the other and this group of respondents are believed to have some level of ecological and cultural understanding of the various sacred forests due to the quest to

satisfy their needs from the sacred forest. Even though the priests are the only ones allowed traditionally to extract resources from Akai Mbiam (Amammong) the results showed that about 93% of the respondents have traversed the Akai Mbiam sacred natural site (Figure 2). Further probe during an in-depth interview with the Akai Mbiam chief priest reveals that this forest receives a great number of visitors who; go before the shrine to prove their innocence before their accusers and other witnesses and patronise the forest gods for assistance as it is revered for its ability to assist individuals in need of wealth, jobs, children and healing from strange sicknesses. A contrasting situation to that of Akai Mbiam was observed at Abini in Biase Local Government Area of Cross River State where Odim Akerot sacred forest is located. None of the respondents interviewed claimed to have ever entered the sacred forest including the village head and elders. It was tagged ‘evil forest’ and so revered. However, owners of adjoining farmlands bordering the sacred forest usually ensure that they carry out zero clearing during the land preparation for agricultural activities in order to avert possible spreading of fire into the grove when the farm debris are burnt in order to avoid retribution of the gods. Nobody from the community agreed to serve as a ‘pathfinder’ to the research team even when the community gave permission for the study. Animals, both wild and domestic that find their way into the grove, automatically get protection. This is in line with the postulation of (Udoakpan et al., 2013; Onyekwelu and Olusola, 2014; Behera et al., 2015; Balachandran et al., 2015; Daniel et al., 2015), that sacred forests enhances *in-situ* conservation of biodiversity.

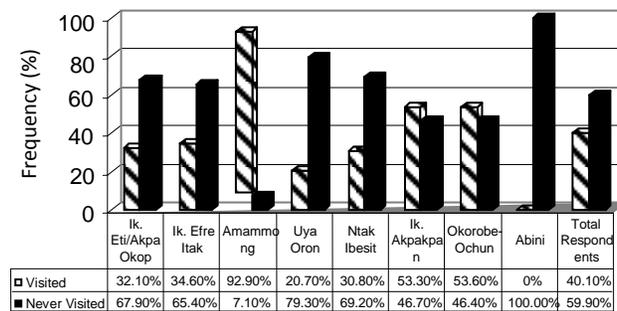


Figure 2: Deposition on the level of visitation to the sacred forest

Overall, majority (79.70%) of the respondents disagreed with interference by the government agencies in the form of law or regulation to protect the sacred sites (Figure 3). However, the respondents strongly believed that this would take management control away from them. These responses were apprehensively informed by the level of mistrust between the local communities and government agencies based on the non-democratic approach in reservation of forest estates in Nigeria both at the state and federal government levels. However, this does not encourage participatory approaches that ensure total inclusion of the locals in the management process. In line with this Ormsby (2013) stated that government ownership of sacred forest could cause alienation of local people from their sacred groves and he further stated that this involvement can be complicated and confusing to the locals. Notwithstanding, majority of the respondents argued that government gazette reserves had no tenure rules; resources are exploited and extracted without constraint and regards and this could cause the infiltrations of foreign belief systems which could degrade their sacred forest. Chandran et al. (2010) stated that the legal ownership of many sacred groves is uncertain, and argued that sacred groves should not be allowed to be classified as state reserve forests. Furthermore, with the high sacred values placed on these forests, the people feared with caution that with government intervention the sacred forest would be de-sacred leading to the attrition of their traditional cultural values and customs reducing local conservation values. In accordance to this Duley et al., (2009) noted that bringing a sacred natural site into a national protection area system can increase protection for the sites, but may compromise some of its spiritual value or even its conservation value and which would not enhance its future conservation. In addition the respondent's further argued that sacred forests should be left as they were without any interference by government agencies and should be management by them using their traditional rules/beliefs and taboos as this have and would encourage its future sustainability. In this context Wild and McLeod (2008) and Bhagwat et al. (2005) emphatically stated that local residents must continue to be involved in sacred forest management, thus this would enhance sustainable conservation of sacred forests.

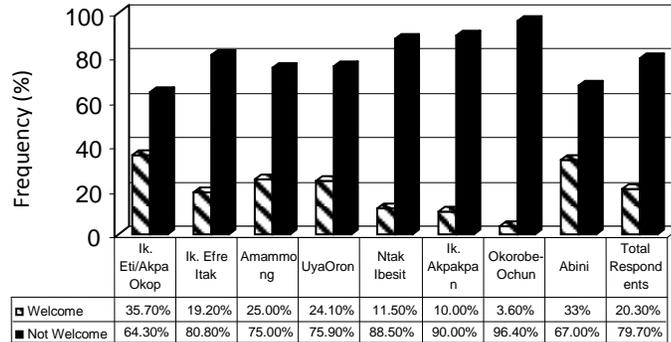


Figure 3: Deposition of respondents to government intervention in conservation of the groves.

Conclusion and Recommendations

Traditional practices and belief systems attached to sacred forest has encouraged local community-driven nature conservation values which has safeguarded *in-situ* conservation of fauna and flora for decades. The study highlights some of activities which have made sacred forest to be alive with its ecological and economic functions. Furthermore, the study examines the activities that are permitted and who gain access or gives permission for extracting the resources of these revere forest fragments and how this has affected its sustainability over time. It reveals that restriction/prohibition on felling of trees in the studied sacred forest, limited access and poor interaction of the local community members with the sacred forest has helped in preserving the fauna and flora species of these patches from indiscriminate exploitation and extraction, thus serving as grove and refuges for wildlife and endangered tree species. The repudiation of the respondents for government assistance in protecting or preserving of these forest fragments indicates the lack of trust and management inefficiency between the rural communities and those in-charges of forest resource administration in the country. This according to them would encourage unsustainable attitude toward the conservation of the sacred groves, and if this is allowed to occur, the indigenous Africa traditions and beliefs systems that had enhances the conservation of the sacred forest would be obliterated. Since there is already on-going modification in traditional/religious beliefs and value systems which are

becoming wild spread in Nigeria. However, this traditional indigenous knowledge system model of achieving a more community landscape level conservation which is embedded in cultural and traditional values need to be sustained and revitalised using proactive policies and should be integrated into national conservation strategies in Nigeria in order to enhance the future sustainability of sacred forests. More so, a comprehensive educational awareness campaign targeting religious groups and government agencies while highlighting the potentials of sacred forests in sustaining natural ecological systems is recommended

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