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## Assessment of Wildlife Conservation Awareness and practices in some selected secondary school around Kainji Lake National Park, Nigeria

O. A. Akande<sup>1,\*</sup>, Y. A. Ahmad<sup>2</sup>, H. O. Yusuf<sup>3</sup> and T. G. Akinade<sup>1</sup>

<sup>1</sup>Federal College of Wildlife Management, New Bussa, Niger State, Nigeria

<sup>2</sup>Department of Basic studies, Federal Polytechnic, Bauchi, Nigeria

<sup>3</sup>Department of Zoology, Ahmadu Bello University, Zaria, Kaduna State, Nigeria

\*E-mail address: [akandehmd@gmail.com](mailto:akandehmd@gmail.com)

\*Phone Number: 08035179759

### ABSTRACT

One of the challenges facing wildlife conservation is how to change the way people perceive wildlife. Therefore this study examine wildlife conservation awareness and practices in some selected secondary school around Kainji Lake National Park. Data was collected through the use of pre tested structured questionnaires among six selected secondary school in the study area. The sample of the research was one hundred (100) respondents. Data was analysis using descriptive statistics. The findings reveals that majority of the respondents (74%) are male and age group 15-20 years had the highest with 43%. 63% of the respondents are aware of wildlife conservation in the study area and majority (66%) of the respondent has not visit the Kainji Lake National Park. 50% of the respondents had about wildlife through direct communication. 63% and 80% of the respondents are willing and are ready to support wildlife conservation in the study area. The finding still reveal that awareness is still lacking in most schools among the communities. Therefore more wildlife conservation awareness is needed in our various schools so as to get the interest of the students when they are still young so that generation coming will also be thought.

**Keywords:** Awareness, Wildlife conservation, Practices and Secondary school

## **1. INTRODUCTION**

Wildlife conservation education is a process of disseminating and or acquiring information and knowledge about the sustainable use of wildlife resources and the ability to evaluate such information or knowledge for the benefit of mankind, wildlife and environment (Jacobson *et al.*, 2006).

Conservation education aims to provide learners with the opportunity to gain an awareness or sensitivity to wildlife and their environment, knowledge and experience of the problems surrounding the sustainable use of wildlife, to acquire a set of values and positive attitudes, to obtain the skills required to identify and solve wildlife related problems and, the motivation and ability to participate (Jacobson *et al.*, 2006).

Both formal and non-formal education is indispensable to changing people's attitudes". This highlights the importance of education as critical for achieving sustainable development but also emphasizes that both formal and non-formal aspects have to be included as part of the curriculum. Consequently, environmental education, and therefore conservation education, should be considered to include, not just formal education and training, but also public awareness-raising (e.g. posters and media campaigns), school environmental clubs and transfer of indigenous knowledge etc.

According to Wilson (2002) the world is facing a biodiversity crisis, hence schools, teachers and parents are being urged to prepare students to face the real life issues they will routinely encounter in efforts to sustainably manage the biosphere and integrate biodiversity conservation with other societal goals (Noss 1997).

According to Akinuoye and Abd Rahim (2011) one challenge facing wildlife conservation is changing the way people perceive wildlife. For as long as they can remember, communities living with wildlife have known a great deal about animals nearby.

Some have used them as a source of food since time immemorial and therefore cannot comprehend the fact that wildlife law prohibits any kind of hunting. Since they have always lived with wildlife, they hold indigenous and traditional knowledge which is very useful to contemporary wildlife managers. But there is still a growing population of communities living close to a national park who do not know much about wildlife, National Parks, and nature conservation. Hence there is the need for wildlife continuous learning and through teamwork in partnership with children of these communities and other stakeholders adequate conservation information and knowledge will be achieved. In Nigeria the wildlife conservation implementations are taught in school, especially from the area of biology, ecology, geography and history. Various themes are addressed, among them are conservation, species and forests.

The evolution from nature conservation education to environmental education to education for sustainable development is one that can be characterized by an increasing awareness of the need for self determination, a sense of ownership and empowerment, and finally of the intricate linkages between environment and social equity (Padua, 1994). Academic coverage of environmental topics and ecological principles increases students awareness, and positively affects attitudes, behaviors, values regarding conservation issues (Ramadoss and Poyyamoli, 2011).

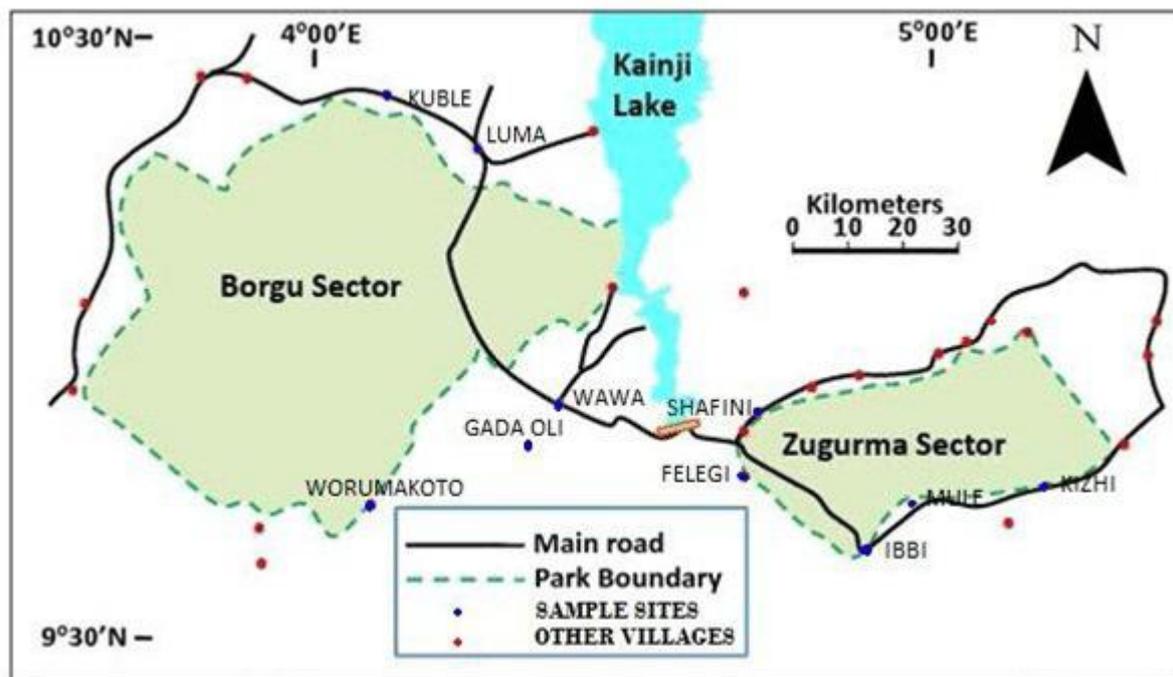
Therefore this study assess wildlife conservation awareness and practices amongst secondary school adjoining Kainji Lake National Park, Nigeria, (Akande et al, 2018, 2019).

## 2. MATERIALS AND METHODS

### 2. 1. Description of the study area



Map 1. Kainji Lake, Nigeria



Map 2. Map of Kainji Lake National Park (Borgu Sector)  
Source (Ayeni, 2007).

Kainji Lake National Park was established in 1979 by the amalgamation of two formal game reserves Borgu and Zugurma under decree 46 of 29<sup>th</sup> July 1997, thereby making Kainji Lake National Park the premier National Park in Nigeria (Ayeni, 2007). Kainji Lake National Park is located in the North West central part of the country between latitude 9°45'N and 10°23'N and longitude 3°40'E and 5°47'E (Maps 1 & 2). It is made up of two sectors (Borgu and Zugurma) situated in Borgu and Kaima/Baruten Local Government Areas of Niger and Kwara State respectively. It covers a total land area of 5,340.825q (Ayeni, 2007).

## **2. 2. Climate**

The major features of the climate of the park are the wet and dry seasons which varies from the year to year. The wet season extends from May to November while the dry season extends from December to April. The mean annual rainfall of the Borgu Sector varies from 1,100 mm in the trends surface analyses of the mean annual rainfall in the sector by Hancock *et al*, 2003, indicated a decrease in rain from the south to the north, an increase rainfall towards the west and east, and generally low condition in the central and northern region, stretches from the north through the central regions, to the south.

Temperature data for the Borgu sector of the park shows a distinct pattern of temperature. It is highly in the dry season just before the rain and lower during the wet season, it picks up again towards the end of the wet season and later drops to the lowest value in December and January during the harmattan. These records show that temperature at 9 hours and 12 hours are higher than at 15 hours and 18 hours. Records for the Zugurma sector shows that the mean monthly minimum and maximum temperature ranges from 18-19 °C and 28-30 °C respectively. The highest temperature are recorded between April and May and between July and August). There is also a marked variation between the Maritain temperature during the day light hours, with morning temperature greater than afternoon temperature. Absolute temperature may be more extreme than average values as during the harmattan, temperature as low as 10 °C may occur in the Oli valley, while diurnal temperature during this period may exceed 30 °C (Ayeni, 2007). The relative humidity appears to increase gradually from value at the beginning of the dry season to a peak during the wet season and in general the relative humidity follows an opposite pattern to that of the temperature. This is both the incidence and duration of the wet season. And considering the year as a whole Northern winds predominate over southern winds in the Borgu sector of the Park. There is also a distinct season trend, with the dry dusty, Northern winds prevailing during the beginning of the dry season i.e. November to February while the moist southern winds prevail throughout the wet season. The change from Northern to Southern wind and vice –versa are not sharp or sudden and a transitional period of variable conditions occur at the end of both the dry and wet season is characterized by strong easterly winds which are associated with line. Information on wind speed within the Borgu sector of the park show that highest speed usually occur in April with value 6.21-6.30 km/hr. while the lowest speed 2.23-2.28 km/hr occur in October. And this period seems to resent the time when the inter tropical convergence zone, the area where the Northeast grade harmattan wind and south-west monsoon wind passes from South to North over the sector (Ayeni, 2007). The major climatic features of the park are the well and dry seasons and these varies from year to year. Two wet season extend from late April to October while the dry seasons extends from November to April. The mean annual rainfall varies from 775 mm in the eastern part to 1220 mm in Western Park. Ayeni (2007) indicate a decrease in rainfall from the south to the north, an increase in

rainfall towards the west and the east, and a generally low condition in the central and northern regions (Ayeni, 2007).

### **2. 3. Drainage**

Major average channel is the river oil took a source from republic of Benin running through the park behind oil based camp and coming out of the park in Kali base camp. This river finally drained into Niger River Timo and Monai and main water source as well they serve the eastern parks of the Borgu sector.

### **2. 4. Flora and Fauna Resource**

All plants growing in a specific area constitute the vegetation of the area. The vegetation of park varies from one sector to the other. While the vegetation of Borgu sector is transitional vegetation between the Sudan and the Northern Guinea savannah types, that of the Zugurma sector is typically that of the Northern Guinea savannah woodland. It is therefore desirable and appropriate to discuss the vegetation of the Lake on a sectoral basis.

The long history of conservation of the area made the park to be a home for a large pool of fauna resources among which are, Lion (*Panthera leo*), Hunting dogs (*Lycaon pictus*), Pangolin (*Manis gigantea*), Aardvark (*Orycteropus afer*), Kob (*Kobus kob*), Hippopotamus (*Hippotamus amphibius*), buffalos (*Syncerus cafer*), hyena (*Crocuta crocuta*), Baboon (*Papio anubis*), Roan antelopes (*Hippotragus equinus*), Warthhog (*Phacochoerus aethiopicus*), Oribi (*Oryx capensis*), Western hartebeest (*Alcelaphus buselaphus*), leopard (*Panthera pardus*), crocodiles (*Crocodilus niloticus*) etc. Birds like Secretary bird (*Sagittarius serpentarius*), White egret (*Egretta alba*), Ground Hornbill (*Bucorvus abyssinicus*), Kingfishers (*Alcedinidea* spp), Barbary Shrike (*Lanius barbarus*), Guinea fowl (*Guttera edouardi*), Senegal Bustard (*Eupodotis senegalensis*) Lily-trotter (*Actophilornis africana*) etc. (Ayeni, 2007). The parks vegetation is that of Northern Guinea savannah, displaying a variety of vegetation type with distinct complex: Burkea/Detarium woodland, Afzelia/Isobertia woodland, Acacia/Anogeissus/Detarium woodland which is interspersed with patches of riparian forests along its major water courses namely Oil, Timo, Menai and Doro in Borgu sector while Manayara and Nuwa Zorugi are located in Zugurma sector of the Park.

### **2. 5. Data Collection and Analysis**

Data for the study were collected through pre tested structured questionnaires. Data were collected from five selected schools in the study area.

## **3. STUDY POPULATION AND SAMPLE SIZE**

The population for this study comprised of five (5) secondary school around Borgu sector of Kainji Lake National Park. The sample of the research study has put at one hundred (100) respondents.

### **3. 1. Sampling Technique**

Five communities secondary school were purposely selected from Borgu sector of Kainji Lake national Park.

### **3. 2. Data Analysis**

Data obtained was analyzed using descriptive statistics where results were expressed in tables, frequency and percentage.

## **4. RESULT AND DISCUSSION**

In Table 1, (43%) of the students were of the age ranged 15-20 years. This means that most of the students that responded to the questionnaire are teenager and young adults. There were more male students than female students in the school under this study, (74%) and (26%) respectively. There are more Muslim students (60%) than Christian students (40%) in the studied school. Table 2 revealed the awareness of Kainji Lake National Park by the respondents, in which 63% of the students under the study had heard about the conservation in Kainji Lake National Park while (37%) of them had not. Table 3 shows trip to Kainji Lake National Park, it was revealed that only 34% of the respondents had visited the park while 66% had never. This is not the best for the future of conservation.

They young citizens must be encouraged to visit the natural area to attract them to nature conservation. The source of awareness about conservation was revealed in Fig. 1, in which 62% of the students were educated by teachers, 18% of them by National Park Staff during visitation, and 12% from the parent through enlightenment. Education by friends is the least with 8%. Fig. 2 revealed medium through which the respondents were educated, direct communication is still the main 50%, source of information to students on conservation education this is follow by flyers and posters, while radio had 13%.

Film shows and television has the least with 7% and 10% respectively. Table 4 indicates that 42% of the total population of the study takes permission before entering the park while the highest population (58%) doesn't take permission before entering the park. Various illegal activities that was carried out in the park was revealed in Fig. 3, in which hunting is the major illegal with 39%, follow by felling of wood with 23%, then follow by fetching of firewood with 20% and fishing carries the least with only 18%.

Table 5 shows that (72%) of the respondents acknowledge the fact that the National Park Management provide them basic infrastructures such as water, solar energy, and health facilities while 28% of the respondents did not believe or accept that National Park Management provide them with basic infrastructure. It can be deduced that a large percentage of the respondents can identified the good work of National Park Management in their communities.

The willingness to adopt conservation is revealed in Table 6, it was shows that 63% of the respondents are ready to adopt the idea of conservation while 37% are not ready to adopt conservation. It can be deduced that a greater percentage of the respondents are convinced about conservation and will go ahead to convince their parent about illegal activities and provide information about natural resources.

Fig. 4 revealed perception towards the park authority, it was revealed that 17% of the study population claims to hate the staff of the park, 54% claim to like them and 29% claim not to know them at all. Cooperation with National Park authority is shown in Table 7, it was revealed that 55% of the respondents are willing to cooperate with National Park Management, while 45% of the respondents are not willing to cooperate with National Park Management.

This implies that there cooperation will create an effective management of the natural resources. Table 8 shows the willingness to support the park in anyway, 80% of the respondents

are willing to support conservation initiative while 20% of the respondents are not willing to support conservation initiatives. This implies that the greater percentage of these will not carryout illegal activities in the park and will not support any of such.

**Table 1.** Demographic Characteristics of the Respondents

DEMOGRAPHIC	CATEGORIES	FREQUENCY	PERCENTAGE (%)
Age	Below 15 years	11	11
	15-20years	43	43
	21-25years	24	24
	Above 25years	22	22
	<b>Total</b>	<b>100</b>	<b>100.0</b>
Sex	Male	74	74
	Female	26	26
	<b>Total</b>	<b>100</b>	<b>100.0</b>
Religion	Christianity	40	40
	Islam	60	60
	Traditional religion	-	-
	Other	-	-
	<b>Total</b>	<b>100</b>	<b>100.0</b>

Source (Field survey, 2018)

**Table 2.** Awareness of Kainji Lake National Park

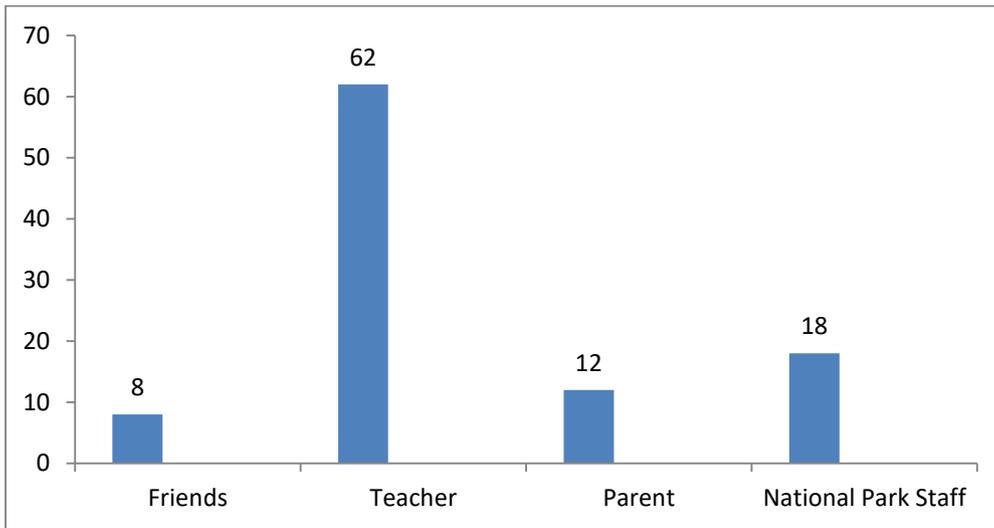
OPTION	FREQUENCY	PERCENTAGE (%)
Yes	63	63
No	37	37
Total	100	100.0

Source (Field survey, 2018)

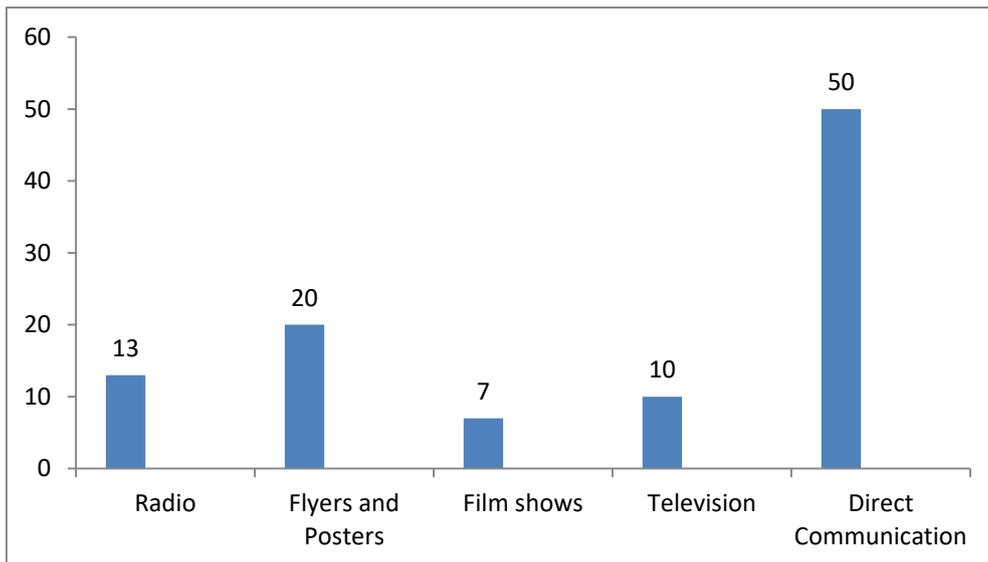
**Table 3.** Trip to Kainji Lake National Park

OPTION	FREQUENCY	PERCENTAGE (%)
Yes	34	34
No	66	66
Total	100	100.0

Source (Field survey, 2018).



**Fig. 1.** Who Educate you about Conservation

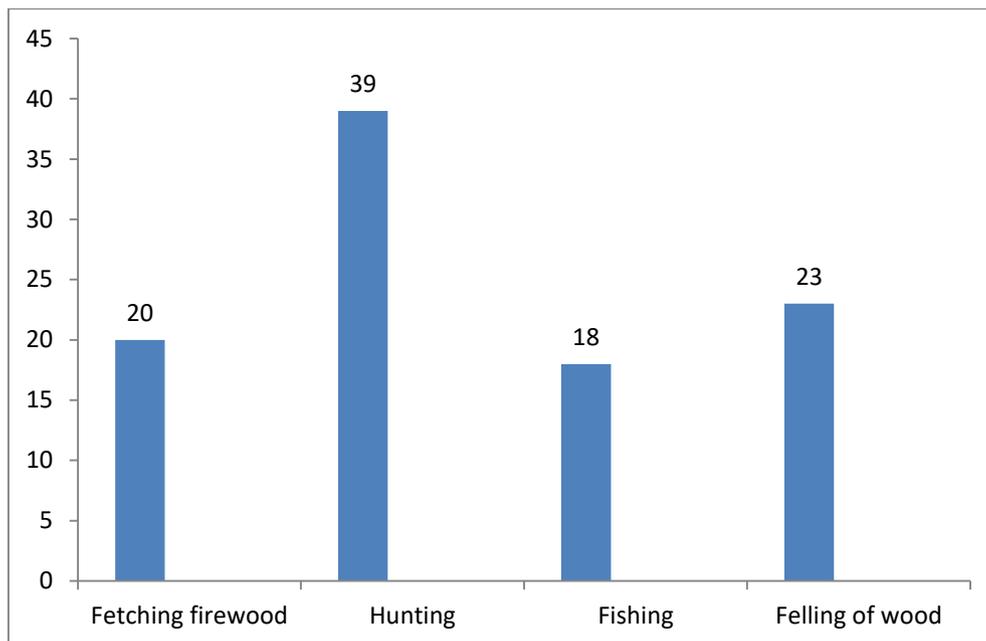


**Fig. 2.** Medium through which the Respondent was Educated

**Table 4.** Permission Before Entering the Park

OPTION	FREQUENCY	PERCENTAGE (%)
Yes	42	42
No	58	58
Total	100	100.0

Source (Field survey, 2018).



**Fig. 3.** The Main Illegal Activity in the Park That You Know

**Table 5.** Do you think National Park Provide Social Amenities for your Community?

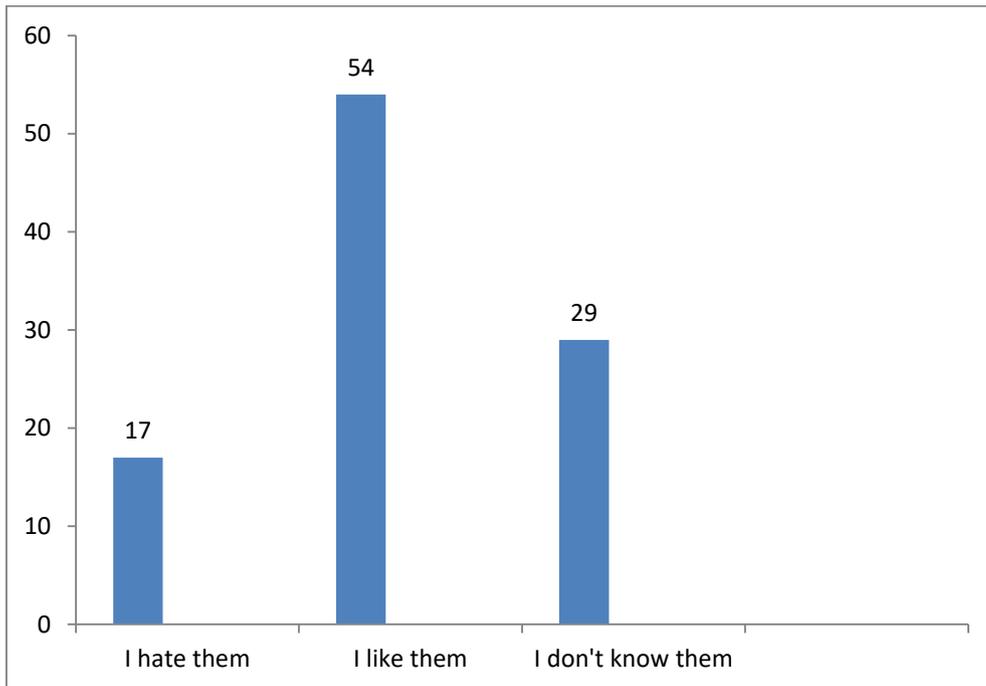
OPTION	FREQUENCY	PERCENTAGE (%)
Yes	72	72
No	28	28
Total	100	100.0

Source (Field survey, 2018)

**Table 6.** Willingness to Adopt the Idea of Conservation?

OPTION	FREQUENCY	PERCENTAGE (%)
Yes	63	63
No	37	37
Total	100	100.0

Source (Field survey, 2018).



**Fig. 4.** Relationship with the National Park Staff

**Table 7.** Cooperation with National Park Management

OPTION	FREQUENCY	PERCENTAGE (%)
Yes	55	55
No	45	45
Total	100	100.0

Source (Field survey, 2018).

**Table 8.** Willingness to support the park in any way

OPTION	FREQUENCY	PERCENTAGE (%)
Yes	80	80
No	20	20
Total	100	100.0

Source (Field survey, 2018).

## 5. DISCUSSION

The research work focus on the conservation awareness education among senior secondary school student around Kainji Lake National Park. The target group for this research is teenagers between the ages of fifteen to twenty-five. The questionnaire was designed to get their perspective about conservation of natural resources of which parents hold tightly as their birth right and would not mind even if it is not available for generation yet unborn as long as they get their immediate need form it. From the result collected in this research, it is an evident that the majority of the target audience is native of that communities. Majority (80%) of the respondent agreed that they are aware that National Park exists in their community. Many respondents also attested to the fact that national park has future use. Most parents are eager to send their wards to school; the reason was that they believe in education in education knowledge and that their children would attain a great height if well educated. This shows that their traditional knowledge is inferior to western education. As a result of these, the parents are easily cajoled by what their wards told them about conservation knowledge they are taught in their schools.

Though, this kind of message might be very difficult for parent to accept because some of them get their livelihood through these illegal activities in the park, such as gathering of firewood, hunting and so on. Many (65%) of the respondents are willing to support conservation initiatives. It is interesting to know that 50% of the respondents are willing to support conservation initiatives. This indicates that greater percentage of the respondent can be caught young to stop illegal activities within and around the reserve area and will not support such.

The studies also shows that 55% of the respondents are willing to cooperate with the national park management; this also indicated that their cooperation will create an effective management of the national resources. Few number of the respondent have visited the park before at one time or the other, and this indication is not really good for “catching them young”, their present or visitation will broad their knowledge about what and what conservation is all about.

This visitation is very important as it agrees with Killerman (1998) that ascertain that teaching about animals and biodiversity in general should give a preference to outdoor ecological settings. 80% of the respondents agreed to the fact that conservation are a good idea. Stevenson, (2007), attested to the fact that conservation is a good idea. For further research, the student knew that these resources can be exhausted and that conservations a good for our resources in the line with Tan and Pedretti (2010).

Most of the respondents acknowledged the fact that national park authority provide them basic infrastructure, such as renovation of classes, provision of respondents identified the good work of national park management in their communities. This is buttressed by the percentage of students who would go to the extent of telling their parent about conservation idea.

## **6. CONCLUSIONS**

This study examines KLNP has been playing a crucial role in bringing about positive changes in the attitude and behavior of secondary school students in support of conservation and sustainable development in KLNP. KLNP through such programs in conjunction with its multilateral partners such as GEF have been able to minimize the conflict between the park and the people by bettering understanding of the importance of conserving the natural and cultural environment. Furthermore, such efforts have been helpful in enhancing the capacities of community members to improve their livelihoods by conserving and sustainably managing Nigerian biological diversity. But awareness is still lacking in most schools as students have identified. Therefore more wildlife conservation awareness is needed in our various schools so as to get the interest of the students when they are still young so that generation coming will also be thought.

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