



Volume 4, Numbers 1 & 2, 2009

Geo-Studies Forum

An International Journal of Environmental & Policy Issues



*A Publication of the Department of Geography
University of Ilorin*

Exploratory Study of Hunters' Perception on Forest Bush Burning in Kwara State, Nigeria

Adefalu, I. L., Oladipo F. O., Ogunlade, I. and Aderinoye Abdulwahab, S.A.

Department of Agricultural Extension and Rural Development

University of Ilorin, Ilorin, Nigeria.

Abstract

The study explored into the perception of hunters on the bush burning of forests in Kwara State, Nigeria. A random sampling technique was used to select 150 hunters from 3 communities covering 3 local government areas of Kwara State. Frequency tables, percentages, mean rating, ranking technique and t-test were used to analyze the data. The findings showed that all (100%) the hunters were male whose average age was 38.3 years. Majority (67.4%) of the hunters were married, a significant percentages (62.1%) had formal education while 37.9% did not receive formal education at all. The t-test analysis showed that the perceived effect of bush burning is negatively significant ($t = -0.32$, $P < 0.05$) but has no impact on the mode of hunting. Exposing bush animals for killing and destroying their habitats was ranked to be the most important reason why the hunters set the bush ablaze. The study therefore recommended effective extension strategy that will sensitize hunters on the effect of bush burning on the ecological environment.

Introduction

Hunting in Nigeria is an age-long practice in the rural communities. Participants in this trade cut across the rural dwellers, the urban dwellers, the rich, the poor, the youth and the aged ones. According to Bushmeat Crisis Task Force (BCTF), 2002, Wildlifes have been hunted for food ever since human race evolved and wildlife is still viewed as a resource "free-for-the-taking" in many areas of the world, particularly sub-Saharan Africa.

Bush burning is a major feature in the game of hunting and this is often done in order to expose species of wildlife from their habitats for killing. Wildfire is defined as any fire occurring on wildland except a fire order prescription. In Nigeria, most at times wildfires are occasioned by the local hunters who use bush burning as a means of driving out bushmeat from their natural habitat to a predetermined destination for killing. To this, Peres (2002) affirmed that recent estimates indicate that approximately 2 million to 13 million hectare of forests and wooded lands are burnt annually by wildfires. Sometimes, the bush fire can become a calamity for forests in view of the fact that, the damage they cause to the forest economy is considerably greater than all damage caused by harmful insects and diseases of the wood (Hill and Padive, 2000)

Bush fires have been a part of the Nigeria land use problems for years. Indiscriminate and malicious bush burning has resulted in colossal economic losses to the nation. Huge losses are recorded annually of forest plantations and food crops (Eves, Stein, Wilkie and BCTF 2002). Besides, there are huge losses of capital

investments of staggering values in terms of cash (Alarape, 2002).

One of the most important ecological effects of bush burning is the increased probability of further burning in subsequent years as dead trees topple to the ground, opening up the forest to drying by sunlight and building up the fuel load with an increase in fire-prone. According to Clarke (2000), Forest fires retard the vital activity of the forest crops and can destroy the raw material resource of the timber industries causing untimely closure. The idea of setting fire on the bush by the local hunters has never come to a hurt. As a result, numerous changes, ranging from less useful secondary forest to barren wasteland have taken place. The World's population is projected to expand to about nine billion over the next forty years and demand for food and fuel will rise tremendously, thus, meeting the demand will require more intensive use of many natural resources especially agricultural land forest wildlives and fisheries (Lewis, 1993). In order to sustain the ecosystem particularly in the sub-Sahara Africa, the campaign for tree planting need to be reinforced while the local bush meat hunters need to be encouraged to tame and domesticate certain species of wild animal as well as discouraging indiscriminate bush burning. The study therefore sought to examine the hunters' perception on bush burning of forest in Kwara State.

Aim and Objectives of the study

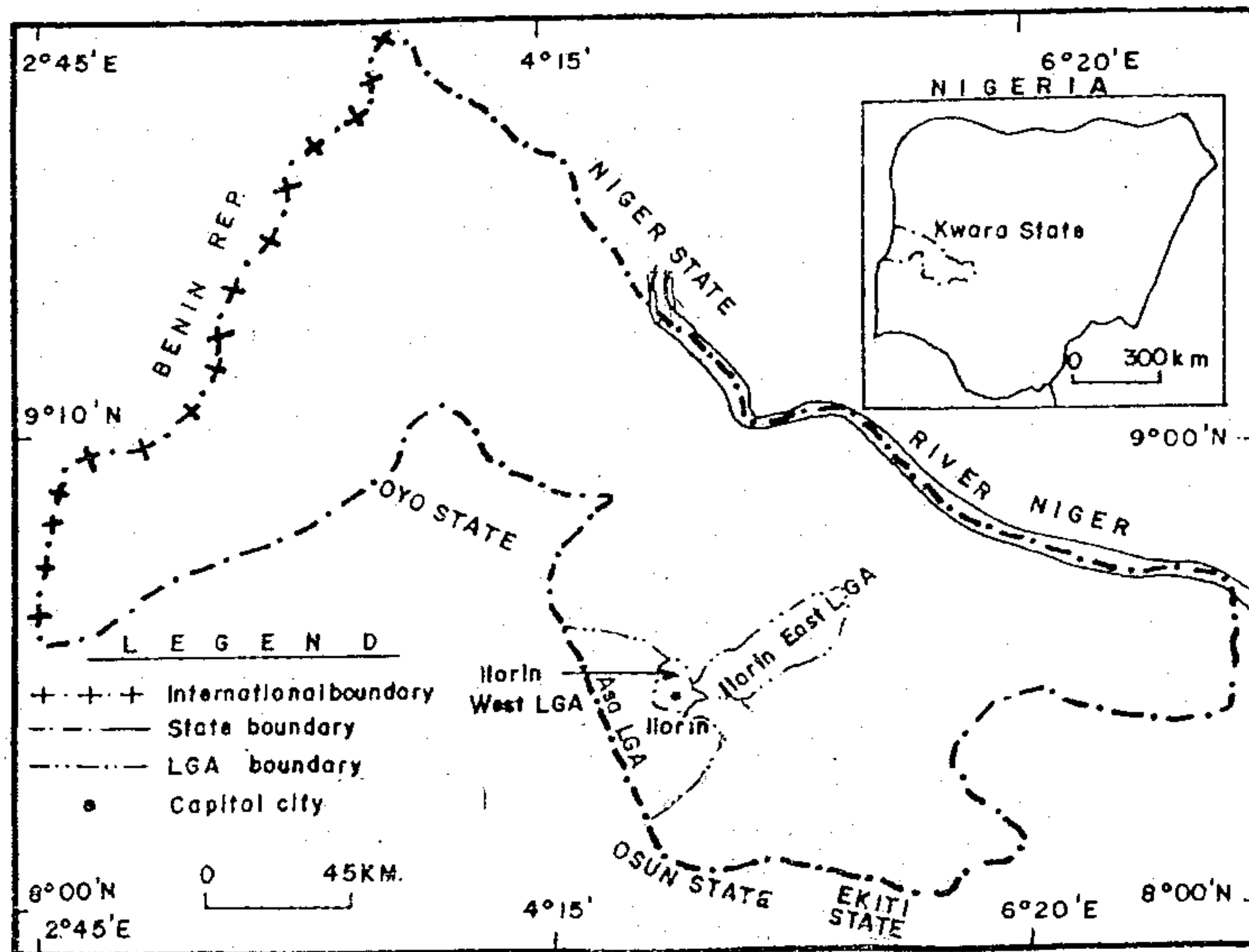
This study explored into the hunters' perception on bush burning in Kwara State, Nigeria.

The specific objectives are to:

- (i) study the socio-economic characteristics of the hunters in Kwara state; and
- (ii) examine the perceived effects of bush burning of forests from the hunters view.

The Study Area

The study was carried out in Oloje (Ilorin West Local Government Area), Alapa (Asa Local Government Area) and Oke-Oyi (Ilorin East Local Government Area) of Kwara State. The population of these three Local Government Areas (according to 1991 census figure) was 500,561 made up of different tribes, which include Yoruba, Nupe, Fulani and Hausa. Kwara State, which was created on 29th May, 1967 shares common boundaries with Oyo State, Osun State, Kogi State, Niger State and Benin Republic (Kwara Diary, 2009 and Fig.1).



MAP OF KWARA STATE SHOWING THE STUDY LGAs
SOURCE: MINISTRY OF LAND AND HOUSING, ILORIN, 2009.

Fig.1: Locational map of the study area

The rainfall ranges between 50.8mm during the driest months and 2,143mm in the wettest months. The minimum average temperature throughout the state ranges from 20.1°C and 25.02 while the maximum average temperature ranges from approximately 30% and 35% (Oguntola, 1986). The people of this state were known to engage in hunting of bushmeat (wild animals) particularly during the dry season of the year (December to April).

Materials and Methods

The study was carried out in Ilorin West, Asa and Ilorin East Local Government Areas of Kwara State. The population for the study was all wildlife hunters in Kwara State. Random sampling technique was used to select 50 respondents in each of the 3 local government areas given the total sample size of 150 respondents. Data was collected using an interview schedule constructed and validated by extension research experts. Items on the instrument were interpreted in local languages to ensure effective communication while corresponding responses of the hunters were ticked on the interview schedule.

Techniques of Analysis

Data collected was subjected to both descriptive and inferential statistics such as frequency counts, percentages, mean rating ranking and t-test. Specifically, ranking was obtained from 5 points Likert-type scale. The items on the Likert-type scale: Strongly Agree (SA), Agree (A), Undecided (U) and Strongly Disagree (SD) were scored 5, 4, 3, 2 and 1 respectively with U (3) as the mid score

Data Analysis and Discussion of Results

Table 1: Socio-economic Characteristics of Respondents (Hunters)

Variable	Frequency (n=150)	Percentage
Sex		
Male	150	100.0
Female	0	0.0
Total	150	100.00
Age		
11-20	7	4.7
21-30	48	32.0
31-40	42	28.0
41-50	29	19.3
57-60	16	10.7
61 above	8	5.3
Total	150	100.0
Marital Status		
Single	41	27.3
Divorce	6	4.0
Separate	2	1.3
Married	101	67.4
Total	150	100.0
Year of Hunting Experience		
11-10	57	38.0
11-20	40	26.7
21.30	30	20.0
31-40	15	10.0
41.50	8	5.3
Total	150	100.0
Education Status		
No education	29	19.2
Quranic education	28	18.7
FSLC	25	16.7
WASC/SSCE	46	30.7

	Degree/Diploma/NCE	22	14.7
	Total	150	100.0
Primary Occupation			
	Farming	61	40.7
	Trading	19	12.7
	Civil Service	35	23.3
	Blacksmithing	4	2.7
	Hunting	31	20.6
	Total	150	100.0

Source: Field Survey, 2009.

The data on table 1 above shows that hunting was exclusively carried out by men, that is, all the respondents (100%) were male, meaning that the women do not engage in hunting activity rather they engage in the processing (smoking or drying) and marketing of bush-meat and bush-meat products. However, 32.0% of the hunters fell within the age bracket of 21-30 years, 28.0% of the hunters were of between 31-40 years of age while 5.3% were within the range of 61 years and above. This shows that hunting as a trade in Kwara State is predominantly dominated by youth and this may be due to their strength or ability to trek long distance and run after animals. Majority (67.4%) of the hunters was married, 27.3% were single, 4.0% were divorced and 1.3% separated from their wives. Of the 150 hunters, 38.0% had hunted for 1-10 years, 26.7% hunted for 11-22 years, 20.0% had hunted for a period of 21-30 years while 5.3% of the hunters had hunted for a period of 41-50 years. This implies that, people intend to withdraw from active hunting, as they grow older leaving the game of hunting to the hand of relatively young people. Majority (62.1%) of the respondents had formal education while 37.9% did not receive formal education at all. 14.7% attended tertiary institutions, 30.7% had WASCE/SSCE and 16.7% were graduates in primary schools. The high literacy level recorded among the respondents may place them at advantage in terms of adoption of wildlife domestication. The table also reveals that majority (79.4%) of the hunters were operating on part-time basis while the remaining 20.6.0% were full-time hunters. This implies that, majority of the hunters still have other primary occupations aside from hunting activity.

Table 2: Cross Tabulation of Hunters Based on the Mode of Hunting and Selected Socioeconomic Characteristics (Age, Hunting Experience and Income Level)

	Socioeconomic characteristics		
Mode of hunting	Mean Age (years)	Mean Experience (years)	Income (₦)
Full-time	48.5	32.1	4,688.9
Part-time	37.0	17.1	7,073.9

Source: Field Survey, 2009.

Table 2 shows that, hunters who practiced full-time hunting were much more older in age (with mean age of 48.5 years) than hunters who practiced part-time hunting (with mean age of 37.0 years). The table also shows that full-time hunters had participated in the hunting of bushmeat for a longer period of time (32.1 years) than the part-time hunter (17.1 years) on the average. Further analysis also shows that, full-time hunters had lower income (N4,688.9) than their counterparts in part-time hunting whose average monthly income was N7,073.9. It therefore follows that, people tend to operate full-time hunting as they grow older in age because they are less productive in other sectors with higher income level. They therefore, engage in hunting of bushmeat to meet the household requirement and finance.

Table 3: Perception of Hunters on the Effects of Bush Burning

S/N	Perceived effect of bush burning	SA	A	U	D	SD	MR	Ranking
1.	We use it to destroy animals habitants to expose it for killing	92	38	1	10	9	4.3	1 st
2.	We use it to assist farmer to clear his farmland	30	8	22	15	75	2.4	8 th
3.	It has the danger of destroying farmers farm	9	39	28	14	62	2.4	8 th
4.	It has the danger of destroying farmers hut	181	42	13	19	58	2.6	5 th
5.	It can expose fertile land to serious soil erosion	14	61	58	15	2	3.5	2 nd
6.	It can lead to arson, if it rounds up a person without notice	40	38	12	19	41	3.1	3 rd
7.	It can destroy many species of animals and edible birds	17	30	22	38	43	2.6	5 th
8.	It can destroy fodder grown for domestic animals	41	32	16	29	32	3.1	3 rd
9.	It can cause delay in crop maturation	8	20	52	6	64	2.3	10 th
10	It can destroy the raw materials base for timber industry	18	14	60	10	48	2.6	10 th

Key:

Strongly Agree (SA) = 5
 Agree (A) = 4
 Undecided (U) = 3
 Disagree (D) = 2
 Strongly Disagree (SD) = 1
 Mean Rating = MR

Source: Field Survey, 2009.

The ranking on the table 3 reveals that, exposing animal for killing was ranked 1st, as the most important reason for bush burning among the volunteer

hunters. Exposing fertile land to soil erosion ranked 2nd, leading to arson and destroying animal fodder were both ranked 3rd. Destruction of farmer's hut, many species of animals and edible birds were also ranked 5th. Assisting farmer to clear his farmland and destroying farmer's farmland were together ranked 8th while causing the delay in crops maturation and destruction of raw materials base for timber industry were also ranked 10th respectively.

Table 3: T-test table showing the relationship between perceived effect of bush burning and mode of hunting

Table 4: *T-test Table Showing the Relationship between Perceived Effect of Bush burning and Mode of hunting*

Variables	t-value	Significance
Perceived effect of bush burning	-0.32	0.753
Mode of hunting	3.80	0.000

Source: Field Survey, 2009.

Degrees of freedom = 148

Alpha level () = 0.05.

From table 4, the t-value for the perceived effect of bush burning and mode of hunting was -0.32 and negatively significant at 0.753 level of significance. This reveals that the two variables are inversely related and there was no significant difference between the perceived effect of bush burning and mode of hunting. That is, the mode of hunting has no impact in the hunters perceived effect of bush burning.

Implications of the Study

The findings of this study indicated that men exclusively carried out hunting of wildlife. These hunters were predominantly farmers of average age of 38.3 years, married and with average monthly income of N6,503.01. They were essentially low-income earners, and the mode of hunting practiced by a particular hunter is a function of age, hunting experience, educational status and level of income. Bush burning, among the hunters, was mostly carried out to destroy animals' habitat in order to expose them for killing. The negative significance of the perceived effects of bush burning (-0.32) implied that mode of hunting does not have significant impact on bush burning by hunters.

Conclusion

Hunters in the study area take bush burning with levity hand, as they perceived it to be the most effective way for them to kill the animals. However, the negative effects on the environment such as soil erosion, leaching and ecosystem cannot be overemphasised. The study therefore recommends that an awareness campaign programme on bush burning should be organized on annual basis at state and local government level across the country to sensitize hunters on the effect of bush burning and the benefits derivable from hunting activity. Also, a full-fledge wildlife unit should be introduced under the state Agricultural Development Projects (ADPs) throughout the country so as to enhance effective surveillance between ADPs and National Wildlife Research Institute for effective monitoring of hunters' activities to avoid double crisis of ecosystem and deforestation through bush burning.

References

- Alarape, A.A. (2002): Culture and wildlife conservation in Nigeria: A case study of old Oyo National Park. *Ph.D. Thesis, University of Ibadan, Nigeria*.
- Bushmeat Crisis Task Force (BCTF), (2000): The Role of the logging Industry *Bush meat Crisis*. <http://www.BCTF.org>
- Clark, P (2002): The Bushmeat crisis is emptying Africa's forest. *The Environmental Magazine*.
- Eves, H. Stein, J., Wilkie, D and BCTF (2002): The bushmeat crisis in West and Central Africa. *Bushmeat Crisis Taskforce 2002*
- Hill, K and Padive, J. (2000): Sustainability of Ache hunting in the Mbará cayu Reserve Paraguay. In *hunting for Sustainable Tropical Forests* (eds. J. G. Robinson and E. L. Bennet) Columbia University Press, New York.
- Kwara Diary (2009)
- Lewis, A (1993): Habitat qualities versus long-term contriving as determinants of biodiversity in boreal old-growth Swamp forests. *Biological Conservation* Pg. 81.
- Oguntola, A.B. (1986): The challenge of deforestation in Nigeria. The process of deforestation in Nigeria and its ecological consequences. University of Ife Press Nigeria. Pp. 101-103
- Peres C. A. (2000): Evaluating the impact and Sustainability of subsistence hunting at Multiple Amazonia Forest site. In *hunting for sustainability in Tropical Forests* (eds. J. G. Robinson & E. I. Bennett) Columbia University Press, New York.