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Research Article

The pattern of local utilization and trade in wildlife /trophies in Saki West Local government area, Oyo State, Nigeria

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Abstract

Wildlife species and trophies are of valuable use to humanity. These values include aesthetic, education, medicinal purpose, recreation, and as foreign exchange earner. Legitimate hunters and poachers alike are the main source of supply of wildlife species and trophies whilst vendors market them. This study is purposed to indicate the pattern of utilization of wildlife species in the study area. Fifteen sampled communities were surveyed in the study area. A hundred respondents were served with a copy of each of the questionnaires. The questionnaire sought information on the following variables namely, socio-economic characteristics of the respondents, source, and types of the species, and commercial dynamics of the trade. The Data collected were analyzed applying statistical tests including the t-test to determine the frequency distribution on the benefit-cost ratio and profitability index. The result revealed that the economic returns on both the wildlife species and trophies trade are profitable with a BCR (Benefit-cost ratio) of 5.00% ($P = \leq 0.05$) and 2.92% respectively. This fact shows that wildlife species and trophies contribute significantly to the economics of the area. Conservation education and awareness should be encouraged against poaching and wild-scale domestication practices should be engaged in to reduce or even eliminate poaching activities on the wildlife species concerned. These measures should adequately supplement the animal protein level of traditional livestock and enhance sustainable food security globally.

Keywords: Conservation, Poaching, Sustainable food security, Wildlife biota

Introduction

Wildlife is a sensitive renewable natural resource that needs to be used for reasons beneficial for humanity. Despite the establishment of national parks and upgrading of major forest and game reserves in the country, people are still not fully aware of wildlife resources and their value (Adeola, 1987 cited by Lawal, 2021). This practice, however, should be in a sustainable manner which is the judicious consumptive and non-consumptive use and preservation of wildlife in Game ranching is concerned with the utilization of a wide spectrum of wild species and conducted on extensive purposes (Alves et al., 2010). The potency of most of the medicinal recipes from wild animal trophies has not received adequate research attention (Jones, 1994). Conversely, it is important that traditional drug therapies can be subjected to an appropriate benefit-risk analysis (De Smet, 1992). Wildlife has been of great benefit to humanity spanning different parts of the world. It has attained the status of importance as a revenue source in many African countries (Alves, 2012).

Human population expansion and their exploitation of the resources around them for economic benefits lead to wildlife displacement which eventually puts the species under threat (Adeola, 1987). A Survey of wildlife meat consumption patterns and selling of the by-products in the country shows that bush meat and its by-products are readily available within people's reach. Nigerian farmers in rural areas rely mostly on wild animals for their daily animal protein supply (Ajayi, 2019; Tella, 2016). In developed countries like the United States, hunting is primarily for recreation whilst in Nigeria as in most of the African countries, wildlife hunting is basically for food making bush meat highly expensive (Lawal, 2021). Wildlife species serve as protein supplements contributing about 20% to animal protein consumed in the rural communities in the southern states of Nigeria (Odebode, 2011; Ibitoye et al., 2019). Wild animal by-products (trophies) are used in the production of various items (ladies' handbags, purses, belts, etc). Some of which are exported regularly for many years (Adeola, 1987; House-Soremekun et al. 2011). Animal skins, ivory, feathers, hooves, and horns were used as decorations by traditional chiefs, rulers, local herbalists, and hunters (Alves et al., 2010; Lindsey et. al., 2007). Another important use of wildlife trophies is the area of traditional curative and preventive medicine, in addition to the invocation and appeasement of traditional gods and witches (Adeola, 1987; FAO, 1997). Sport hunting (trophy hunting/game hunting/safari hunting) involves the hunting of wildlife for recreation (Yasuda, 2012). This recreation method are still relevant today and the significance of wildlife tourism (sport fishing) has gained enhanced prominence (Lovelock, 2008)

Material and methods

Study Area

The study was conducted in the Saki West Local Government area. The area is located at latitude $8^0$40E and longitude $3^0$24N with its administrative headquarters at Saki. The landmass of the study area is about 2,014km^{2,} with a density of 1906/km^2. The dominant vegetation is derived from Guinea savanna. The dry season lasts from January to April with an average daily high temperature of above 91^0F whilst; the wet season lasts from July to September with a daily high temperature below 83^0F. The rainy season period lasts from February to November and the dry season period lasts from November to February. The area is well drained and surrounded by many tributaries of streams and rivers such as Taba, Basori, Oge-dam, Okpara-river, Odo-Ogun, and a few others. The research was conducted in fifteen (15) communities that are randomly selected from the study area. The sampled

communities are namely, Saki, Ataye, Wasangari, Ekokan, Mua, Owode, Sanni Sala, Aba Iseyin, Aba Ogbomoso, Aba Ajila, Igbo-irawo, Onigbogbo, Abatade, Koomi, Oge.

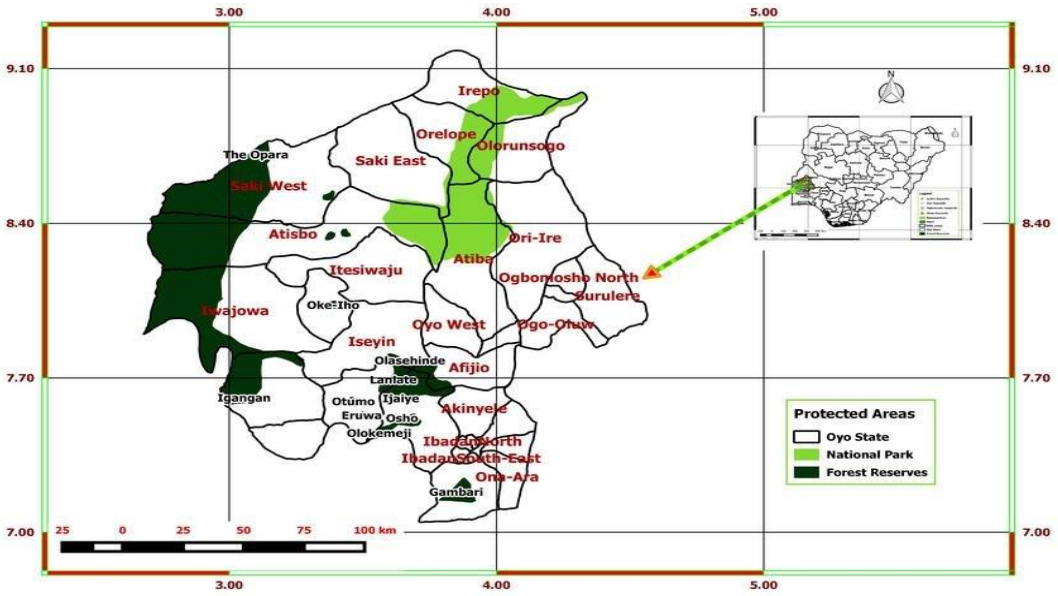

Figure 1. Map of Nigeria indicating the Study Area

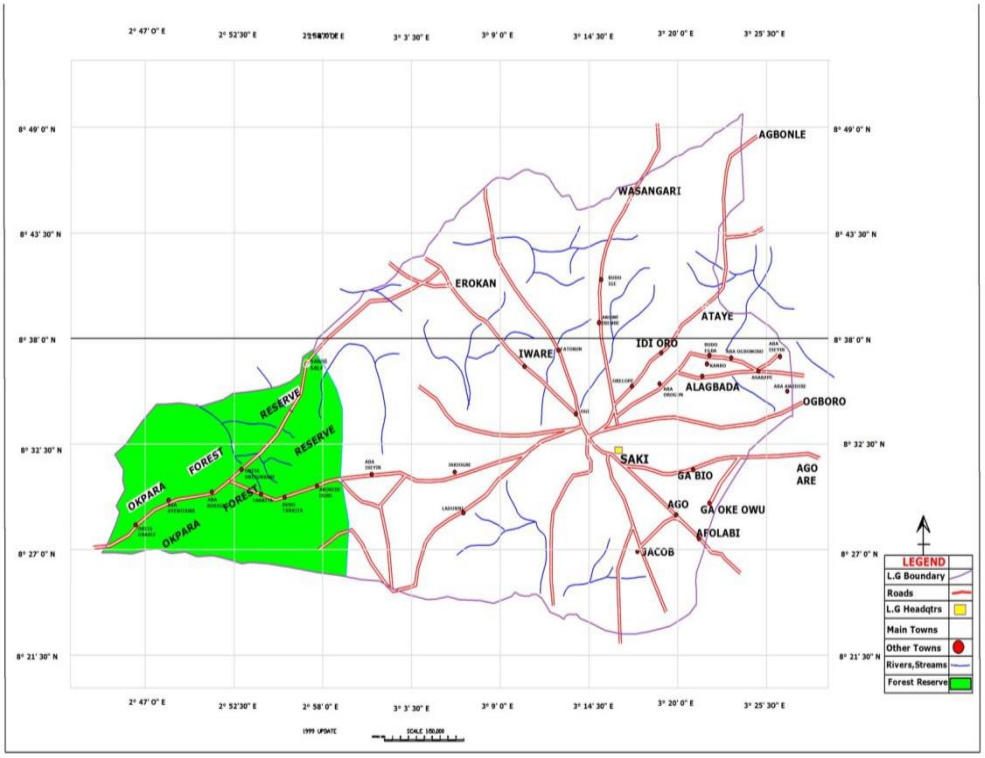

Figure 2. Saki-West Local Government and its neighboring towns (Source: Oyo State Ministry of Physical Planning and Urban Development)

Data collection

Field data were collected through the administration of copies of questionnaires of hundred respondents in the study area. Relevant information was obtained from the respondents on their

socio-economic characteristics, sources of wildlife species/trophies, economic dynamics of trade, and different patterns of utilization.

Sampling technique

The selected random sampling technique was employed in fifteen (15) communities out of thirty-seven (37) communities that make up the local government. Based on the relative size of each study area, the largest communities namely Saki, Ataye, Wasangari, Ekokan, Mua, Owode, Sanni Sala, Aba Iseyin, Aba Ogbomoso, Aba Ajila, were served with seven (7) copies each whilst the remaining five (5) smaller communities namely Igbo-irawo, Onigbogbo, Abatade, Koomi, Oge was served with six (6) copies each. A hundred questionnaires were retrieved from the respondents during the period of study.

Data analysis

The Statistical test (viz. means, frequencies, and percentages) was employed for data analysis.

Results

The majority (64%) of the respondents were male. Most of the respondents (88%) were in their active age range (21- 50years) with a mean age of 44.5 years. Sixty-seven (67%) percent were married while only (33%) of them were unmarried. The majority of the respondents (64%), had the highest level of tertiary education while (12%) of them had no formal education as presented (Table 1).

Table 1. Frequency distribution of demographic characteristics of the respondents and/ or end-users.

Variables	Categories	Frequency	Percentage %
Age	21-30	20	20
	31-40	30	30
	41- 50	38	38
	Above 50	12	12
	Mean age = 44.5		
Gender	Male	64	64
	Female	36	36
Educational Status	Tertiary education	60	60
	Primary/Secondary	28	28
	No formal education	12	12
Occupation	Farming	47	47
	Hunting	36	36
	Artisan	5	5
	Logging	6	6
	Fuelwood harvesting	6	6
Marital status	Married	67	67
	Single	33	33
Religion	African Traditionalist	13	13
	Christianity	40	40
	Islamic	47	47
Household size	<_ 5	35	35
	5-7	53	53
	8-10	12	12

Source: Field survey, (2019).

The study examined the sources of wild animal species depicting utilization in the study area. It was observed that the majority of the respondents (68%), source out the wild species through hunters while (32%) of them were from the farmers as presented in Table 2. Observation on the wildlife species being utilized for utilization revealed the highest percentage. The percentage (62%) is for Guinea fowl, (56%) is for Cane rat, (46%) is for Duiker, while other species in their percentage fall in between the highest and the least 16% is for Hippopotamus Table 3.

Table 2. Frequency distribution on sources of species for utilization.

Source(s) of Species	Frequency	Percentage
Hunter	68	68.0
Farmer	32	32.0

Table 3. Frequency distribution of species types for utilization

Species of animal sold	Frequency	Percentage
Guinea fowl	31	62.0
Grasscutter	28	56.0
Duiker	23	46.0
Bushbuck	22	44.0
Deer	19	38.0
Kobs	19	38.0
Bush fowl	18	36.0
Buffalo	16	32.0
Maxwell duiker	16	32.0
Squirrel	16	32.0
Waterbuck	16	32.0
Antelope	14	28.0
Porcupine	14	28.0
Roan antelope	13	26.0
Warthog	11	22.0
Tree bear	10	20.0
Rhinoceros	10	20.0
Hippopotamus	8	16.0

The study investigated the economics analysis on those that trade on the species. The research revealed a significant effect on the benefit-cost ratio at $P = \leq 0.005$ as presented in Table 4.

Table 4. Economic dynamics/Returns in the year of study

Variable	Mean value (₦)	Percentage
Revenue	263,270	
Costs		
Purchase cost	36602.4	83.9
Rent	7,050	16.1
Total cost	43,652.04	
Profit (TR_TC)	219,618	
BCR (TR/TC)	5.0	

The local pattern of utilization of wildlife trophies was observed among the respondents; the findings show that the skin of *Tragelaphus scriptus* (Bushbuck) has the highest percentage (43%), followed by Python skin with (12%), the least percentage were the Crocodile as a pet (6%), while others were equally represented (Table 5).

Table 5. Frequency distribution of the local pattern of utilization of wildlife trophies

Variables	Frequency	Percentage
Python Skin	12	12
Kobus Kob Skin	08	08
Monkey as pet	10	10
Crocodile as pet	06	06
Tragelaphus scriptus Skin	43	43
Hooves and Horns of wild animals	10	10
Skin of Reptiles	11	11

Field findings show that wildlife species/wildlife trophies were used for various forms by the respondent's, the result shows that food sources had the highest (25%) percentage, followed by trade-medicine with 20%, the least percentage were appeasing traditional gods (5%), whilst others were equally represented (Fig. 3).

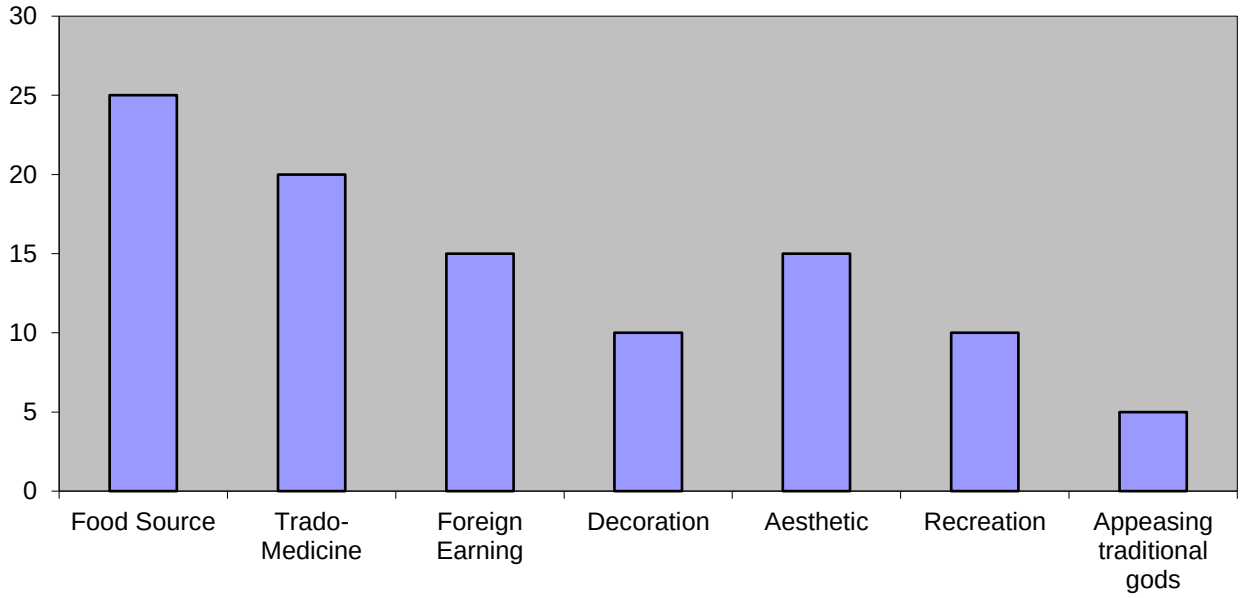

Figure 3. The pattern of wildlife species/trophies utilization

Discussion

The study shows that the majority of the respondents fall within the range of active age (20-50 years). Respondent's investigation in wildlife species and trade pattern of local utilization likewise engage in various family responsibilities. The majority of the respondents had formal education while the percentage of those that neither had formal or informal education is insignificant. Base on this, it can be deduced that the respondents should be able to understand any improvement being introduced and give support to the awareness campaign programs in the study area.

It was revealed that the pattern of utilization at communities around the study area comprised different ethnic groups which imply that the people are of different cultural beliefs and ways of life. The formal and informal interviews conducted revealed that the people in those communities of the study area do make use of the wildlife species and their trophies. All the wildlife resources (species) were confirmed useful in the area. These usages include the acceptance of wildlife species for meat production to sustain protein supplements. The uses can be encouraged further as it has been done in developed countries for sustainable conservation management of wildlife species (domestication) and another afore-mentioned benefit (Jones, 1994). The pattern of local utilization and trade in wildlife species and their trophies by the communities was based on traditional and cultural beliefs. The study established that small game species were the most abundant wild animals in the study area. The farmers and hunters in the study area preferred to utilize small game (rodents) and big games (ungulates) more than wildlife species trophies that were used more often during installation ceremonies (of a king or chief) than the cultural festivals (Adeola, 1987; Alves et al., 2010). The study revealed that a primary requirement should be to evaluate the traditional local utilization systems in biological and ecological terms with an approach that will make them sustainable and efficient (Child, 1984).

The study identified that traditional kings, local herbalists, and hunters are fond of decorating their homes with wild animal skins, ivory, feathers, hooves, and horns, and this supports the ornamental utilization approaches used (Adeola, 1987, Alves et al., 2010). International trade in wildlife species can contribute significantly, to the foreign exchange earns of a country as exemplified by Nigeria's

earning of $1.25M in 1966 (House-Soremekun et al., 2019). The trade-medicinal utilization of wildlife species was observed during the study. The use of wildlife species and their by-products are widely used for preparations in curative and preventive medicine and are chiefly used for invoking and appeasing traditional gods and witches (Adeola, 1992).

Conclusion

The result presents that the utilization of wildlife species /trophies on consumptive and non-consumptive bases is widely spread, profitable, and sustaining in the study area. Processing methods that emphasize the pressing practical research for better improvement of wildlife meat utilization that sustained economy should be encouraged.

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