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## EVALUATION OF WILDLIFE HUNTING AND SPECIES OF ANIMALS MARKETED AS BUSHMEAT IN DAKKA BALI LOCAL GOVERNMENT AREA, TARABA STATE, NIGERIA.

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### ABSTRACT

*The study evaluated wildlife hunting and species of animals marketed as bushmeat in Dakka Bali Local Government Area in Taraba State, Nigeria. Fifty (50) questionnaires were used to investigate gender distribution, age, household size, level of education, income generated per month, year round supply of bushmeat in the market. The study revealed that 60% of bushmeat marketers were male, and 30% of them were between 31 – 40 years. Study also revealed that 50% of the bushmeat marketers were married and majority of them have 1 – 5 household size which represent 42%. The study showed that 42% of the bushmeat marketers generated N10,000 – 14,000 monthly. Recommendations include Government should discourage licensed hunters from using gin and snare traps since they do not allow selectivity of sex, age of the animal to be killed. Preservatives/smoking methods should also be encouraged. Individuals should be trained and mobilized on game ranching and domestication instead of indiscriminate killing and relying only on wild animals as bushmeat.*

**Keyword:** Evaluation, wildlife hunting, species, marketed as bushmeat.

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### INTRODUCTION

Evaluation is a process that critically examines a programme. It involves collecting and analyzing information about a programme's activities, characteristics and outcome. Wildlife refers to living organisms which include plants, animals and micro-organisms other than the cultivated plant and domesticated animals (Gideon, 2014).

Adeyoju (1992) Defined wildlife as Animals which are outside the direct control of man and are predominantly found in their natural habitat, caring and fending for themselves. Hunting is a process of capturing animals

alive or dead mostly in its natural habitat. Hunting is deadly to conservation of wildlife, but yet it plays a paramount role in conservation such as reducing intra specific competition for food, shelter etc. Bushmeat is meat from the wild animals hunted in Africa and Asia. The term bush meat has particularly been used to refer to meat from animal in west and central Africa. Today the term is often used in many countries and in reference to the hunting of endangered species (Wright, 2007).

Bushmeat ensure food security to larger parts of African communities that have been

dehumanized and barely struggling to survive in the midst of abject poverty. It also ensures nutritional balance to poorer populace that feed more on carbohydrates (Food and Agriculture Organisation, FAO, 1997). For many rural people, bushmeat provides a nutritional “safety net” in times of household crisis (Anstey, 1991). Population increase in many parts of Africa has resulted in growing demand for meat from wildlife. Wild animals hunted in Dakka Game Reserve Taraba State, Nigeria are either consumed, sold locally or transported to urban market where they fetch higher price. Factors which determine killed animal species that are sold or consumed include the size of the animal, appeal and demand. Which is in line with report by Lamh (1993) that rodents and other small-sized mammals were more likely to be consumed locally while the more appealing and profitable game were sold as source of livelihood sustenance.

Trade in bushmeat and wildlife products as well as wildlife based industries contributes significantly, to both national and households food security through the income generation which can be used directly to purchase food or to develop and improve food production system (Scone *et al*, 1992). Food and Agriculture Organization - FAO (1997) reported that market for bushmeat and wild animals products help to fuel rural

economies and provide income for the rural communities. Some of the hunting methods/strategies adopted by hunters in Dakka, Bali local government area include: 1). **Handgun:** Handgun hunting is primarily done with specialised handgun that has long barrels and often set up with scope (optical animals device), enabling even the largest animals to be killed. Although hunters in the study area hunt medium-sized games like deer, antelopes, bush buck, wild dogs and warthog, Food and Agriculture Organisation, FAO (1981) reported that the types of handgun hunters use are either short pistol, double or single barrel. (2). **Coursing:** This method involves the pursuit of games by dogs by speed running. In this method, the dogs chase the games into the path of a waiting gun. Some hunters use a combination of running and tracking to pursue animals. (3). **Gin and snare traps:** This technique involves using traps to capture small and large animals by hunters in the study area. Ntiamoa (1997) observed that traps have serious limitation to conservation and have long been prohibited by law in many countries including Nigeria, because it does not allow selectivity as to kind, age and sex of animals to be killed. The objectives of the study were to identify different methods of hunting adopted by the respondents, ascertain species of wild animals marketed as bushmeat and income generated there by respondents.

## METHODOLOGY

The study was undertaken in Bali Local Government Area of Taraba State, Nigeria which lies within latitude  $10^{\circ}-02^{\prime} 00''$  to  $11^{\circ} 04^{\prime} 20''$  East and longitude  $7^{\circ}-02^{\prime} 14''$  to  $08^{\circ} 03^{\prime}$  North of the prime meridian. It is one local government with of the largest land areas in the state, (9,146, km<sup>2</sup>). It is bounded with Ardo-Kola Local Government by the north – east, Gashaka Local Government Area by the south, and east by Ganye Local Government Area of Adamawa State. It is also bounded by Gassol Local Government Area to the north-west and Donga Local Government Area by south east.

Data collection was by both questionnaire and oral interview of fifty sampled hunters/bushmeat sellers in Dakka, Bali Local Government Area. Fifty (50) questionnaire was designed and administered to bushmeat sellers; simple percentage was used to analyzed data obtained.

## RESULTS

Table 1 shows the age group of respondents: 31-40 years (30%), 41-50 years (28%), 51 years and above (26%), the 20-30 years (16%). Male respondents were 30 representing 60%, while the female respondents represent 40%. 56% of the respondents were Christians while 44% were Muslims. 50% of the bushmeat sellers were fulltime business men, 30% were farmers,

14% were business women, the least were civil servant which constitute 6%. Table 2 revealed 25 married respondents (50%), 15 singles (30%), divorced (14%) and Widowed (6%). The study also revealed that 42% of the respondents has house hold size within the range of 1-5 members, 32% has 6-10 members, 10% had 11-15 members, and 16% has household size ranging from 15 and above. The survey showed that the type of instruments used by hunters in the study area to kill wildlife animals were traps (20%), hand/Dane gun (58%), bow and arrow/pursuit of wild animals by dogs (22%). The dogs chased the wild animals into the path of a waiting hunter to be killed. This is in line with report by Ledger and Smith (1964), that some hunters use a combination of running and tracking to pursue the prey to exhaustion. 20% used traps to capture small and large mammals. Although trapping is prohibited by law it is still in use in the study area. Table 3 revealed alternative income source by respondents. 58% of the respondents had alternative income apart from hunting and bushmeat marketing. 42% of them lack other source of income apart from bushmeat trading. 64% of the respondents have year round supply of bushmeat, while 36% of the respondents who have complementary income does it only at the dry season. 38% of the respondents earned about ₦5,000-₦9,000 monthly, while 42% earned ₦10,000 – ₦14,000, and 20%

earned ₦15,000 and above.. 58% of the respondents ranked grasscutter as the most preferred species of bushmeat in high

demands. 22% respondents ranked antelopes, and 20% respondents preferred bush buck.

**Table 1: Demographic Characteristic of Respondents**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Age Group</b>		
20 – 30	8	16%
31 – 40	15	30%
41 – 50	14	28%
51 +	4	26%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Sex</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Male	30	60%
Female	20	40%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Religion</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Islamic	22	44%
Christianity	28	56%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Occupation</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Civil Servant	3	6%
Farmers	15	30%
Business Men	25	50%
Business Women	7	14%
<b>Total</b>	<b>50</b>	<b>100%</b>

**Table 2: Marital Status, Hunting Equipment and Income of the Respondents**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Marital Status</b>		
Single	15	30
Married	25	50
Divorcee	7	14
Widowed	3	6
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Household size</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
1-5	21	42
6-10	16	32
11-15	5	10
>15	8	16
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Instruments</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Dane Gun	29	58%
Traps	10	20%
Bow/Arrow	11	22%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Respondents</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	29	58%
No	21	42%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Income</b>		
	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	29	58%
No	21	42%
<b>Total</b>	<b>50</b>	<b>100%</b>

**Table 3: Year round supply of bushmeat**

<b>Year Round Supply</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	32	64
No	18	36
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Income per month</b>	<b>Frequency</b>	<b>Percentage (%)</b>
₦5000 – 9000	19	38
₦10,000-14,000	21	42
₦15,000 +	10	20
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Species</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Grass cutter	29	58%
Bush bucks	10	20%
Antelopes	11	22%
<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Total</b>	<b>50</b>	<b>100%</b>

**Checklist of some Wildlife Species Marketed as Bushmeat in Dakka Bali Local Government Area, Taraba State, Nigeria.**

<b>Common Names</b>	<b>Scientific Names</b>
Hare	<i>Lepus capensis</i>
Stripped ground squirrel	<i>Epixarus epii</i>
Giant rat	<i>Critecosmys gambianus</i>
Crested porcupine	<i>Hystrix cristata</i>
Olive baboon	<i>Papio anubis</i>
Petas monkey	<i>Erythrocebus patas</i>
Tantalus monkey	<i>Chlorocebus tantalus</i>
Warthog	<i>Phacochoerus aetheiopicus</i>
Bush buck	<i>Tragelphus scriptus</i>
Roam antelope	<i>Hippotragus equinus</i>
Red fronted gazelle	<i>Eudoreas rufifrons</i>
Short tail monitor lizard	<i>Varanidae examthematicus</i>
Tortoise	<i>Testudo marginata</i>
Guinea fowl	<i>Numida melliagres</i>
Grass Cutter	<i>Thryonomys swinderianus</i>

## DISCUSSION

The socio-economic contributions of wild animal species marketed as bushmeat in Bali L.G.A. play a vital role in the living standard of the bushmeat marketers. In Dakka, during the survey, gender variable showed that males were dominant in the bushmeat trade than females. This is in contrast with the report by alconer (1992) that women dominated bushmeat trade in Atwenmonom market, Ghana. Most of the marketers are within the age range of 31 – 40 years. This is similar to the report by Infield (1988) that

men from an early age were involved in hunting and selling of bushmeat. The result shows that most of the bushmeat sellers were married people only few of them are single and divorced or idowed, and most of the bushmeat sellers are the head of their families in which individual consist of 1-5 children, 6-10 children and 11-15 children. This is in line with report by Wilkie *et al* (2000) that bushmeat sale contributes 6-40% of all household daily income.

Bushmeat trade in the study area is lucrative and it is a significant source of income.

About 42% of the respondents in Dakka have no other source of income than bushmeat marketing from which they earn about ₦10,000 – ₦14,000 monthly. This is in line with the report by Gally and Jeanmart (1996) that hunters made 19% profit from the sale of monkeys and traders made 20% profit. Bushmeat is available in the study area for sale throughout the year and preferred bushmeat species were grasscutter, antelopes and bush bucks and are in high demand by buyers, but grasscutter is the most expensive depending on the size of the carcass. This is in agreement with the report by Asibey (1987) that in Ibadan, Nigeria in 1975 when price for mutton and beef were US \$2.80 and \$4.20 per kg respectively, grasscutter (cane rat) meat cost \$7.20 per kg.

However, the respondents' benefits from bushmeat trade include payment of children's school fees and catering for their families. Also the socio-economic contributions of wild animals as bushmeat to the people in Bali include serving as a source of animal protein for consumption, being used in traditional medicine for treating various ailments such as hypertension, protection against enemies and witches. They are important source of income to both the hunters and marketers. All the respondents said that they preserved bushmeat stock using the smoking, drying and salting which is in line with observation

by Hladik *et al* (1987) that there is little information on the nutritional value of preserved bushmeat (smoked, salted and biltong).

## CONCLUSION

The study revealed year round supply of bushmeat and income generated for the upkeep of their family. Sixty (60%) of the bushmeat marketers were males. Species marketed and preferred by buyers grasscutter ranked 58%, antelope 22%, and bush buck 20%. Instruments used by the hunters were dane gun, traps, bow and arrow. Forty two percent (42%) of the respondents opined positively that despite the fact that bushmeat marketing is their source of livelihood but were ready to support controlled hunting and wildlife conservation.

## Recommendations:

The following recommendations would address the major challenges emanating from the data obtained.

1. Government should issue license for control hunting. Hunters should be discouraged from using gin and snare trap since it is prohibited by conservation laws and would limit indiscriminate capturing of prohibited games: infants, nursing mothers and pregnant females.



2. Game farming/wildlife domestication should be encouraged among individuals by Government, since it has quick returns. This

would prevent people from relying solely on wild animals (bushmeat marketing) for income.

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