ATTITUDES AND PRACTICES OF ATHI-KAPITI AND LAIKIPIA PLATEAU COMMUNITIES IN KENYA TOWARDS THE CONSUMPTION OF GAME ANIMALS

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ABSTRACT

This study assessed the attitudes and practices of communities from the Athi-Kapiti plains and Laikipia plateaus towards wild animals, and the health effects emanating from culture. A cross sectional survey was done using a structured questionnaire administered to 400 respondents from the two ecosystems. Data was collected from each respondent on demography, game animal consumption, cultural preference towards listed animal species, methods of harvesting game animals and sources of game animal meat and analysed using non-parametric statistical tests of frequency, means, percentage, the Pearson chi-square test. Bows and arrows, hunting dogs and baiting were among the 19 methods used to hunt wild animals. Meat was mostly sold through door to door hawking on the Athi-Kapiti plains including sale of surplus meat or sharing out the hunt on the Laikipia plateau. The conservation status of the wild animals was compromised because of imbalance in population dynamics during hunting since there were no legal limitations on acceptable off takes per species. The study showed that the hunter gatherers Akamba community ate wild animal meat traditionally and that the Samburus of Laikipia plateau was becoming acculturated. The meat had potential human health side effects since it was poached, therefore handled unhygienically. The study concluded that the crude poaching methods affected the quality of game meat, wild animal welfare and conservation status in both ecosystems. There were logistic problems on wild animal disease control and surveillance. The study recommended a policy framework that took into account wild animal welfare and sustainable conservation.

Introduction

Eighty percent of Kenya is arid to semi arid savannah grassland with a rich diversity of wildlife populations (Ottichilo and Mwanda, 1986). Areas outside protected areas constitute 74% of Kenya’s wildlife resources which are at risk from communities living nearby and poachers.

A survey of the attitude of people living on communal ranches towards wildlife in the Athi-Kapiti plains in 1988 indicated that 82% if the respondents did not regard wild animals as a sustainable resource, 75% preferred agriculture while 21% were for livestock production while less than 10% felt that conservation of game animals was a viable land use option (Njoka et al, 1988).

The banning of any consumptive form of wild animals by the Kenya government in 1981, and finally 2003, led to an increase in poached game animal meat and this raised concern within the Kenya Wildlife Service (K.W.S., 1990), the body empowered to protect game animals. This implies that although the tourists come into Kenya to enjoy the aesthetic value of the diverse wild life resource, there was no direct benefit to the communities in this case, the pastoralists that reside next to and live with the animals.

In Kenya any game animal meat that is consumed is poached and there is likelihood that it is not inspected by an authorized officer. The hidden danger of consuming uninspected game meat whose quality is affected by crude, illegal hunting techniques pose a danger on the health of the consumers who rely on game meat as a source of protein. Inspection of wild animal meat is an essential
requirement if human health concerns, conservation and welfare of the game animals are to be guaranteed.

Sessional paper No. 3 of 1975 recognized that wildlife if properly managed was a potential land use form with maximum returns, but despite aiming at equitable distribution of benefits among communities cohabiting with game animals, it was not implemented (Kabukura, 2007). Community studies and implementations in Kenya based on wild animal species may partially appease the pastoralists, but there is need to understand the ways of life of the pastoralists if they are to benefit from the resource.

The 1990 K.W.S. Policy (K.W.S., 1990), instead of promoting sessional paper No.3 of 1975, recommended the non-utilization of the wildlife resources due to rampant poaching in the 1980 period which saw a sharp decline in wild animal populations. The non-consumptive utilization policy did not succeed, instead poaching escalated. In Kenya there are no clear cut policy guidelines on the utilization of the wild animal resources.

Kenya has therefore not benefited immensely from the legalized utilisation of wild animals resources like Namibia and South Africa (Wikipedia, 2007). South Africa has even moved further in educating consumers on the health benefits of eating game meat. The Kenyan communities have not been allowed to explore the wildlife resource legally, but are instead exposing themselves to health hazards by consuming poached uninspected game meat whenever the opportunity arises.

The objective of this study was to document the attitudes and practices of communities living in the Athi-Kapiti plains and Laikipia plateau towards game animals using a questionnaire administered to a total of 400 participants, 200 from each ecosystem. Qualitative data on game animal consumption, preference and sourcing was analyzed.

Materials and Methods

Study Areas

The Athi-Kapiti plains and Laikipia plateau ecosystem are arid, semi-arid with similar vegetation. The lower attitudes are covered by grassy vegetation with *A. xanthophloea* and *Balanites* species of trees dotting them. The higher elevations have tall broad leaved trees, although some trees are endemic in specific ecosystems. The vegetation in both ecosystems acts as forage for wild ruminants and goats inhabiting them. The long droughts are common in both areas and the communities there also plant more or less similar subsistence crops.


Methodology

Study Design

This was a cross sectional qualitative study.

Study Population

The data was collected from the communities residing with the wild animals in the two ecosystems. There were thirty two game ranches on the Athi-Kapiti plains and the people working in the vicinity of the game ranches formed the study population.

Sampling

The 200 respondents from each ecosystem were purposively selected from randomly and purposively identified from homes in the respective study sites. This is because some homes were clustered while others were scattered over large areas.

Respondents were household heads who were randomly selected in the study areas. There were 200 respondents selected each from the Athi-Kapiti plains and the Laikipia plateau respectively.
Concentrated homesteads were purposively selected by identifying every third house, while sparsely distributed homes were randomly picked in an area and interviews conducted. People who had lived in the two areas for more than six months were included in the study.

Data Collection
Data was collected through face to face interview using a structured questionnaire. Questions included demographic information, consumption of game animals as a cultural practice, proffered game animals, methods of harvesting and source of wild animals from the two areas.

Data analysis
Data was analysed using the SPSS computer software. Frequencies, means, Pearson’s chi square test were done.

Results and Discussion
Consumption of game meat as a cultural practice on the Athi-Kapiti plains and the Laikipia Plateau.
More hunter gatherer Akamba (Akong’a, 1986), people from Athi Kapiti plains (52%) consumed game meat than 49% for the Laikipia plateau. Earlier studies portrayed the the Maasai of whom the Samburu of Laikipia plateaus are a sub clan were conservationists. These findings show however that the Samburus (Korir, 1986) were becoming acculturated to the practice of consuming wild animal meat. This new development had negative implications on the conservation of game animals living on the Laikipia plateau since it has been long assumed that the Samburu protected wild animals from the human predators. The Laikipia plateau was a settlement and there was an ethnic mixture some of whom consumed different wild animal species as a traditional practice while others like the Samburus of the Maasai group did not. The study showed that an increasing number of pastoralists were consuming game animal meat and this was a threat to the survival of game animals in the two ecosystems.

Wild animals that traditionally eaten as a cultural practice by respondents on the Athi-Kapiti plains and Laikipia plateau ecosystems.
Although Athi-Kapiti plains ecosystem respondents ate the eland dik, giraffe, zebra, wildebeest, impala antelopes and cane rat among other game animals, the Laikipia ecosystem inhabitants ate eland, dik dik, giraffe, zebra, wildebeest, Oryx and elephant. The study showed that people in a certain habitat, consumed game animals they had been in contact with since these were available and were therefore familiar to them. It was also evident small animals like the squirrel, guinea fowl, and porcupine quails and moles were not traditionally eaten by Laikipia plateau respondents. The findings were similar to those (Korir,1986), which stated the disregard of small birds by the Samburu community of Laikipia ecosystem.

The consumption of wild animals as a cultural practice was not sustainable and posed a danger to their conservation. There were species of animals that were in greater demand and more were hunted than the less popular species. The ruminants whose meat was more preferred faced a greater risk with regard to conservation compared to the predators that were rarely consumed and whose meat not regarded as food culturally. The consumption of wild animals posed health problems to the hunters because besides lack of assured hygienic safety as is the case with inspected domestic animal meat, zoonoses including Antrax, Leptospirosis, Rabies and Tuberculosis caused by Mycobacterium bovis were a major threat (http://www.biosecurity.govt.nz/files/reqs/imports/risk/camel-meat-australia-ra.pdf.micros, 2008), Meat Control Act (1972).
Health problems arising from these zoonotic affections may be illness, death or even allergic reactions from parasites like *Trichinella spiralis* in wild pigs and warthogs. Trichinosis is a serious threat to Kenyans living in drought prone areas such as Pokot and Turkana districts. The current drought of 2008 forced these nomadic pastoralists to roast rats which they flushed out of bushes using long sticks and roasted (KTN News, March 2009). Rats are reservoirs for trichinosis and leptospirosis, conditions that if not handled immediately can be fatal and require large amounts of money and resources to control.

Current thinking is stressing of the risks posed by known and more pathogenic unknown microorganisms in specialty foods such as game meat than controlling contamination caused by sewage, dirty hands and other malpractices (Nganje and Kaitibie, 2003). People are also known to have allergies to certain types of proteins and this may be fatal. The management of allergies caused by wild animal meat is a serious problem since victims of such reactions may not be aware that the wild animal meat could be cause of their health problem.

**Game animals preferred by respondents on the Athi-Kapiti plains and Laikipia plateau ecosystems.**

Table 1 shows the responses with regard to preference of various wild animal species in the Athi-Kapiti and Laikipia ecosystems.

Although the dik dik was preferred, both the Athi Kapiti and Laikipia ecosystems, more (12.0%) of the Athi-Kapiti ecosystems respondents within the Athi-Kapiti ecosystem preferred it than the 3% within the Laikipia plateau. However, the Akamba people that were interviewed rated the impala (Kin’gala in Kikamba) very highly among the antelopes and felt that impala meat was superior to that of other wild antelopes. The inclination of Athi-Kapiti respondents towards small to medium sized game animals such as the dik dik, impala implied that the larger animal populations were on the decline and therefore less accessible to the hunters. Those respondents who preferred aquatic animals like the hippopotamus lived along the River Athi and could have eaten meat from the animals that strayed and were killed by nearby communities. The author is aware of the killing of three stray hippopotamuses by local people along the banks of Athi-River between 1977 and 1981. The animals had been swept downstream to the cultivated shallow edge of the river and got stuck in the mud.

Asibey (1974) reported the hunt for small and medium sized ruminants when larger animals had been over-hunted.

The preference of one species of animal to others implied an eventual negative impact on the conservation status and balance of the small and medium sized animals within the particular habitat. Elephant meat was preferred by all the Athi-Kapiti plains but no specific reason was given for this. However the Akamba community are historically known as great hunter gatherers. No explanation could be given for the preference for the leopard which is a carnivore that is generally repulsive to most people. Although it was impossible to access Laikipia plateau animal census figures from the people we approached, there were probably more impalas, buffaloes and antelopes in the vast Laikipia plateau which was sparsely populated, making them easily available to the poachers. The familiarity with the taste of the meat of the various wild animal species was possibly the driving force that made the poachers venture long distances in search of the specific animals whose population density was lower near human habitations. Poachers covered over 10 kms in search of wild animals in sparsely populated areas where animals had moved farther from homes probably because they preferred the taste of the particular species. Radder and le Roux (2005) studied consumer demands that resulted in the low consumption of game meat in South Africa and found that saturated animal fat in red meat was a major health concern beside the taste, socialization events, encounters, the location, psychological and demographic elements, the monetary value, distribution and marketing. A similar study in Kenya could aid in explaining the preference for specific species of wild animal meats.

The Laikipia plateau on the other hand still had larger animals thus the preference for eland, buffalo and ostriches which roamed the Laikipia plateau from as far as Marsabit up to Nanyuki. These large animals were conspicuous and also an easy hunt for the poacher.
There was however greater demand for the guinea fowl which is a small bird although traditionally, Samburu do not regard birds highly (Korir, 1986) implying a change in eating habits, attitudes and preferences. Guinea fowls too were found in large numbers in uninhabited plains, so the Laikipia plateau was most ideal. The increase in demand for this formerly neglected bird may eventually affect population dynamics of this wild bird species in the ecosystem and have a negative impact on its conservation status. Although the bongo was mentioned, their numbers were very low and the habit was also far away from the study site suggesting an earlier encounter with bongo meat in the Mt. Kenya area.

Table 1: Percent game animals preferred by respondents on the Athi-Kapiti and Laikipia plateau ecosystems.

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Note: 1=eland, 2=dik dik, 3=giraffe, 4=zebra, 5=wildebeest, 6=impala, 7=oryx, 8=gazelle, 9=canerat, 10=elephant, 11=leopard, 12= ostrich, 13=buffalo, 14=bongo, 15=small birds, 16=bush pig, 17=hares, 18=hippopotamus, 19=warthog, 20=antelope, 21=guinea fowl, 22=squirrel, 23=porcupine, 24=rhinoceros, and 25=quail
Methods used to harvest game animals from the wild

There were 19 methods (table 2) employed by poachers to harvest game animals illegally from the wilderness. The rifle which was used legally by experimental croppers. In order to flush out animals for capture, packs of trained hunting dogs accompanied the hunters into the wilderness. When the grass was tall or the animals were small or of medium size, a fire was lit to surround the animals. The fire frightened the animals which hurdled close together and could be hunted down fast.

Upon poisoning or killing the animals, the point of entry of the arrow and adjacent non-poisonous portions of meat were trimmed off and discarded. When black spider toxin and Carisa edulis were used as poison by Athi-Kapiti elephant tusks hunters, the tusks were removed, but the meat was left in the wilderness since such meat was considered poisonous for man. Such practices showed that the hunters were conscious of the side effects of some of the “toxins” they used during hunting the animals however suffered from the effects of the poison. The predators that preyed on such cadavers risked death and this could impact negatively on the specific game conservation status. This is an area that needs to be studied.

Laikipia plateau inhabitants on other hand baited animals like the elephant with poison or alcohol and they too did not consume poisoned meat. The animal killed after inebriation with alcohol did not contain poison so its meat was eaten. In both study areas, it was quietly understood that hunting was the preserve of young to middle aged men (Akonga, 1986).

The hunter gatherer Akamba used bows and arrows. The arrows could be dipped into a paste of boiled Aloe secundiflora or other locally available poisonous aloes (Munyao, Personal communication). To avoid poisoning human beings, the toxic part and some unaffected tissue were excised. Objects like the stones, double edged arrows and hunting dog teeth damaged the meat by tearing into the flesh of the animal. Deep poorly ventilated tissues are ideal for the growth of Clostridium botulinum toxins which cause botulism with a potential for causing harm in both the animal if it survived and man. Snares dug into the meat cutting off the blood circulation and this was a potential cause of gangrene which had the potential for amputating the limb and became lame.

Among all the hunting methods that were recorded during the study, death of the animal was not instantaneous and the animal suffered before death which was inhumane. For animals that escaped, they were either predated on by wild carnivores, lived to bear the scars of the hunt.

The methods used during the hunt did not consider the age, sex, weight, species or health status of the animals and this interfered with the population balance within the two ecosystems and had a direct effect on the conservation status of game animals in a particular habitat. The meat from taboo animals was left to waste and this impacted negatively on the populations of such animals. The methods used by the hunters to harvest the wild animals did not consider the welfare of the animals causing a lot of suffering. The animals could either die a painful death from the powerful snares or it be entrapped at a point for days until the hunter, another human or wild animal scavenger surfaced.

The harvesting produced meat with a poor keeping quality including blemishes like bruises, haemorrhages and lacerations which exposed it to bacterial spoilage, intoxication, and possibly gangrene and much of this was wasted through trimming of affected parts by the consumers.
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Sources of wild animal meat
There was a lucrative game meat trade on both the Athi-Kapiti plains and the Laikipia plateau. The

The handling of meat with dirty equipment and hands posed a health risk to consumers from
contamination from a wide range of bacteria, virus, parasites and unclean containers and water. The
danger of handling animals and meat whose source or medical history was not known posed a
logistical challenge to disease surveillance and control units both in the human and veterinary sectors.
The poachers were also not trained on animal diseases exposing themselves and their clients to
zoonoses.
The packaging of the meat did not conform to acceptable standards. The meat was wrapped in old newspapers or black plastic bags which were not specifically meant for packing the meat. The packaging material was therefore a potential source of contamination of the meat and food borne infections to human. The printing ink used for newspaper printing could also cancers in consumers. Since the meat was sold on the black market there was no protective clothing or adherence to personal hygiene requirements like short nails or scrubbing of hands with clean water before and after handling of the meat, or after fulfilling the calls of nature as stipulated for people involved in the meat trade.

Approximately 60% of the wild animal meat on the Athi-Kapiti plains was hawked from door to door. This was possible because homesteads were close to each other or it was sold secretly by word of mouth to trusted customers who on getting the word got their meat directly from the hunter secretly.

Conclusion

The study concluded that the consumption of wild animal meat was a cultural practice of the Akamba community of the Athi-Kapiti plains, but the Samburu of the Laikipia plateau too were becoming acculturated exposing the two communities to the potential dangers of consuming poached, uninspected game meat that was handled unhygienically.

The study demonstrated that preference of any animal species was guided by its availability and familiarity with the taste of the meat among the Akamba, and in the case of the Samburu, changing eating habits. It was further concluded that the over-harvesting of larger game on the Athi-Kapiti plains left only the small and medium sized animal. The study recommended that communities living with game animals incorporate the management of the wild stock alongside domestic stock.

Is for hunting, while larger animals were still available for hunting in the Laikipia plateau. Hygiene standards of handling meat were compromised by untrained poachers, use of unhygienic packaging material which had not been approved.

The uninspected meat, lack of proper wild animal medical history, lack of knowledge of animal diseases, poor packaging, and poor personal hygiene had an eventual negative impact on human health and were potential sources of pathogens, food intoxications or even chemical intoxication which could be fatal.

The methods used to hunt the wild animals did not consider their welfare but caused untold suffering to the animals.

Finally, the study concluded that the continued poaching using crude methods, sale and consumption of game meat posed a danger towards the population dynamics and conservation of game animals.

Recommendations

To ensure wild animals were conserved, a review of the wild animal policy was necessary. The reviewed policy should address wild animal welfare, land use rights and sustainable wild animal utilization and conservation.

It was further recommended that toxic effects of poisons used to harvest wild animals be studied.

The study recommended that awareness be created among communities living with wild animals on potential benefits of the resource.

It is important to develop logistics on wild animal disease control and surveillance if the health effects of poached game meat are to be controlled and prevented.

REFERENCES


