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Full Length Research Paper

Attitudes and perceptions as threats to wildlife conservation in the Bakossi area, South West Cameroon

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Knowing the attitudes and perception of people towards wildlife conservation is a primordial factor and strategy. The success of wildlife conservation depends on the attitudes of the local population, their perception of concepts and strategies put forth by conservation organizations. Although people in the area equate wildlife conservation as refusal to access rights to bush meat, they are conscious of the further declines in wildlife population in their area and fear the extinction of this natural heritage in the near future. Questionnaires and participatory rapid appraisal approaches were used to collect information from workers of some conservation organizations (WWF-Coastal forest programme and the mount Kupe ecotourism group), Ministry of Forestry and Wildlife and the local community above nineteen years of age. A total of 182 people in fifteen villages of the area were sampled and their relative frequencies calculated. Chi-square and ANOVA were used to examine the relationship between variables. Most respondents (83.2%) in the Bakossi Area of South west Cameroon were interested in wildlife conservation however contrastingly, 16.8% condemned conservation attributing it to lack of focus and refusal to access rights to their natural heritage, 74% said conservation is not beneficial to the local people while only 26% acknowledge its benefits. Following one year of questioning, interacting with people of the Bakossi Area has shown that conservation can be a success within and around protected areas. To change the perception and attitudes of indigenous people around protected areas, environmental education through sensitization should be encouraged. These negative attitudes and perceptions can be well designed with carefully implemented conservation programs.

Key words: Attitudes, perception, threats, conservation, wildlife, Bakossi area, environmental education.

INTRODUCTION

The assessment of peoples' attitudes and perceptions towards conservation has become an important aspect in many studies of wildlife conservation (Newmark et al., 1993). Wildlife conservation, success depends on the attitudes of people towards conservation (Osmond, 1994; Katrina, 2000). Equally, understanding factors which influence attitudes is important to enable wildlife managers to implement approaches that attract support of stakeholders and the general public. It is necessary to seek and obtain the active participation of potential stakeholders not only in the technical efficiency of a conservation technology, but also the extent of satisfying cultural, social and political considerations in the environment which can help change the attitudes of indigenous people towards wildlife existence and conservation (Newman et al, 1994; Nji, 2004). People also need to be informed through specific awareness campaigns or environmental education which can help change their attitudes towards conservation. Tsi et al. (2008) demonstrated that in Northern Cameroon, idle and less educated people who inhabit areas surrounding national parks territories are more prone to wildlife crimes. The attitude about the willingness to pay (WTP), an important concept in wildlife conservation, is influenced because environmental issues are a necessity and not a luxury (Hökby and Söderqvist, 2005).

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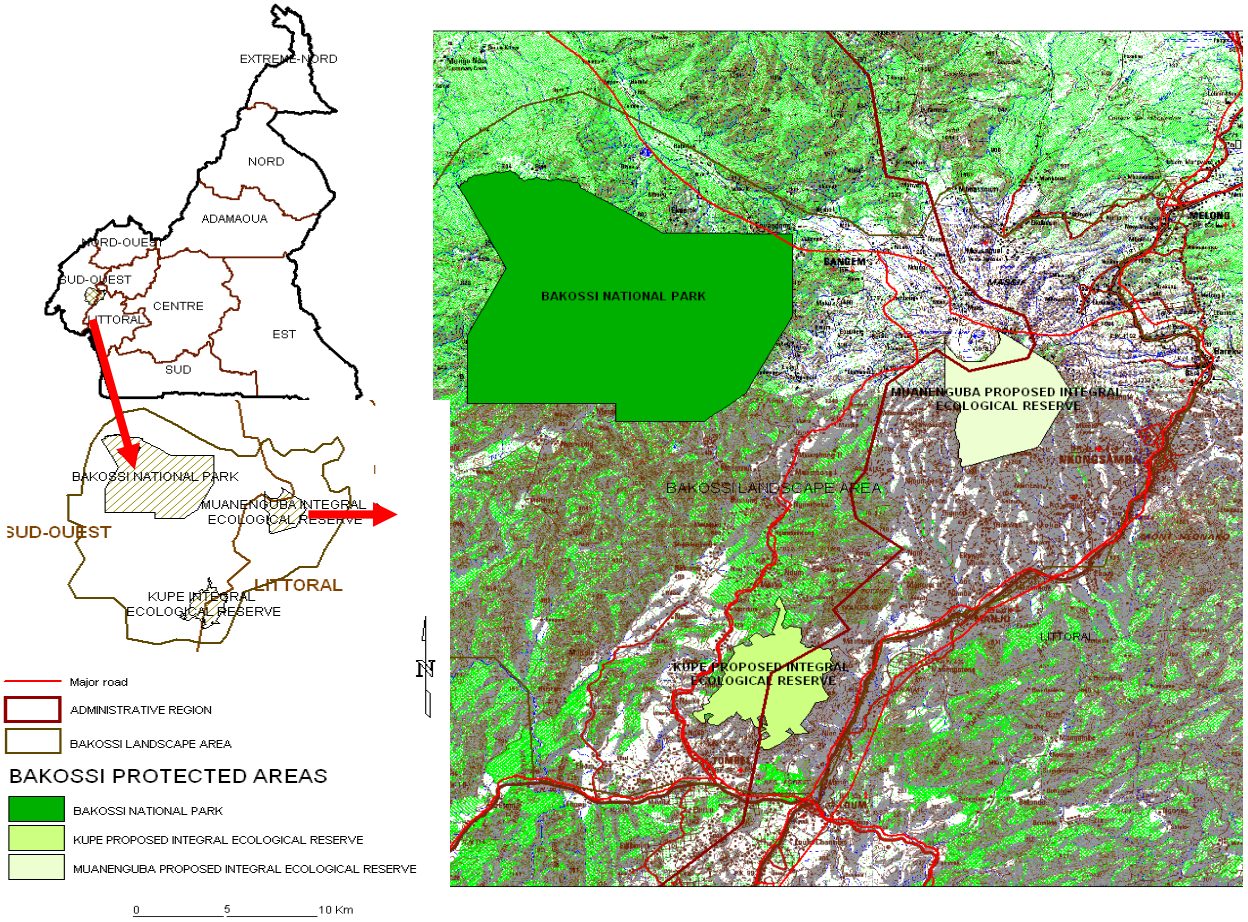

Figure 1. GIS map of the protected areas sorrounding the Bakossi region in Cameroon. Source: Okon, WWF-CFP, (2009).

(Hökby and Söderqvist, 2005).

The Bakossi area has not been well documented and more sympathetically most Bakossi people depend upon wildlife for a source of protein, as fish farming and rearing of domestic animals is not the main activity (Nguedem et al., 2010; Atanga et al, 2005). Recently, the Bakossi landscape has undergone considerable changes in socio-economic and political terms (World Wildlife Fund, WWF -CFP, 2008; Nguedem et al., 2010) that need to be understood in relation to wildlife conservation. The integrated ecological reserves of Mount Muanenguba, Kupe and Bakossi National park are important habitats for the resident wildlife population. However, the lack of pastoralism (7.6% practiced only in the Muanenguba and the rearing of domestic animals as well as the practice of cash crop farming, especially cocoa, has resulted in increasing wildlife losses. Previous studies have shown that the local community has developed negative attitudes (for example, killing wildlife by keeping dangerous chemicals mixed with food crops and an irresistible poaching notion) if their crops are destroyed by great apes (chimpanzees and gorillas), and secondly if no benefit is derived from wildlife resources (WWF-CFP annual report, 2008. This study aims to understand the attitudes of the Bakossi communities towards their activities as they related to, social, economic and technological perspectives in relation to wildlife conservation. We describe human activities (for example, farming and livestock rearing) in order to study peoples' attitudes and perceptions towards wildlife conservation and proximal and ultimate factors.

MATERIAL AND METHODS

Study area

The study area is located in the Kupe-Muanenguba and Mungo Divisions of the South West and littoral Regions of Cameroon between Latitudes 04°38' 20 – 05° 10' 55 N and Longitudes 09° 22' 30 – 09° 58' 16 E, comprising approximately about 189.900 ha. This region harbours amongst others, three key conservation sites (Figure 1): The Bakossi National Park (29,320 ha), Mount Muanenguba Integral Ecological Reserve (5,252 ha) and Mount Kupe integral ecological reserve (4,676 ha). The altitude of the Bakossi landscape ranges from about 200 to 2,400 m above sea level. The highest altitude of 2400 m is found at the peak of Mount Muanenguba. It has two outstanding Mountains (Kupe and

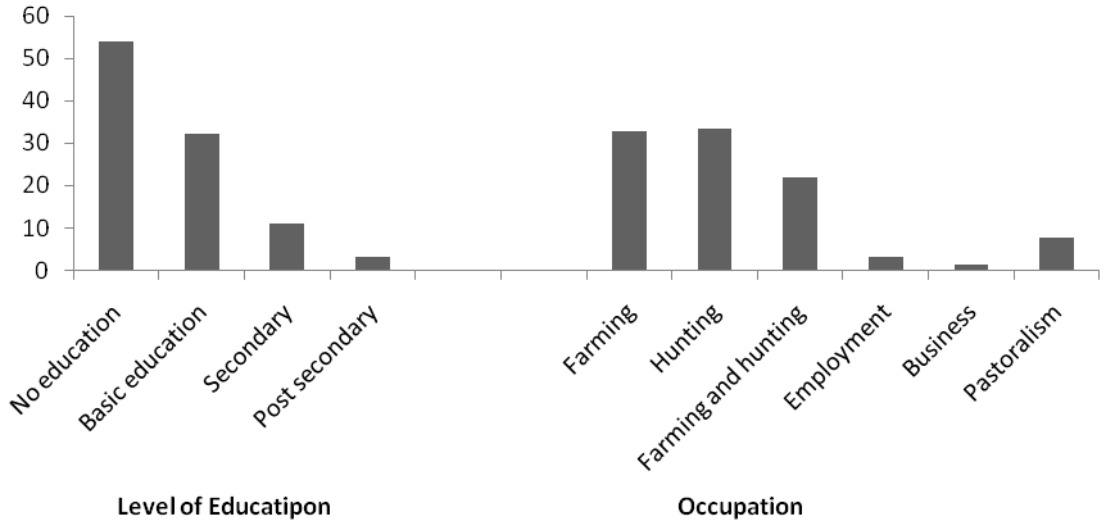

Figure 2. Educational level and occupation among respondents.

Muanenguba) with altitudes of 2,050 and 2,400 m respectively. The slopes of these mountains are made up of mainly fertile soils suitable for cultivation. The climate is dry from mid-November to mid-March with late December being the hottest month. Rains occur from mid-March till mid-November with August being the wettest month. Temperatures range from 25 to 30°C with humidity between 74 to 88 %.

The Bakossi landscape area is characterized by high-and-low lands that give a rise to a wide range of habitats (for example, grassland and montane forest) which support different types of animals (Inyang, 2009; Nguedem, 2010). As a result, the region is generally known for its high biodiversity and endemism for example the famous Mount Kupe bushstrike (*Malaconotou kupeensis*). It has unique avifauna with a total of 329 of 1100 sub-Central African birds species recorded on Mount Kupe alone (Faucher, 1998; Dowsett-Lemaire and Dowsett, 1999).

Over the years, due to population increase and growing ambition activities such as illegal hunting and farming have encroached into protected areas (of Mounts Kupe and Muaneneguba). Additionally, unsustainable harvest of non-timber-forest products and small scale logging has reached unsustainable levels that have put large mammals in jeopardy (WWF-CFP reports, 2008; Nguedem, 2010).

METHODS

Data collection

A multi-level collection sampling technique (de Vaus, 1996), using structured interviews based on a questionnaire (opened and closed), was used to collect information from the community areas experiencing wildlife losses. The landscape was divided into 23 smaller areas based on the administrative boundaries of sub-locations. To reduce sampling error, 15 sub-locations in peripheral areas were selected, based on the findings of the reconnaissance survey. Random samples of one person per 8 households per sub-location were done. This sample size was adequate since the population is relatively homogeneous and gave similar response. Preliminary analysis had shown that an increase in the sample size would not have increased the precision (de Vaus, 1996) to gain an understanding of the wide range of variation between families in areas with different wildlife losses. Pilot testing was performed on a sample of 15 respondents and some questions were rewritten before final administration (de Vaus, 1996). A pre-test was conducted with one village assistant to ensure that the questionnaire was fully understood.

Statistical analysis

Relative frequencies were calculated based upon the total number of responses. Chi-square and regression analysis were done.

RESULTS

Role of the indigenous people's education towards conservation

Most respondents had no formal education (54%), while 43% had basic and secondary education and only 3% had reached post secondary education in the ratio of 10:4:1. They were engaged in different economic activities such that 32.81% involved in farming, 7.6% livestock, 1.19% were in business, 3.10% in other forms of employment and 33.4% were involved in hunting. Most farmers also practiced hunting (22%) (Figure 2).

Most respondents (66.1%) had lived in the area for over 20 years. However, length of residence did not differ ($\chi^2 = 5.082$, df = 3, p = 0.166) between tribes. Family size ranged between 1 and 10 members. Most respondents were members of large families of 7-10 (33.9%) or less than 10 (39.4%) members, but the family size did not differ ($\chi^2 = 0.415$, df = 3, p = 0.937) between inhabitants.

Perception about wildlife availability

Most respondents felt that the wildlife population was

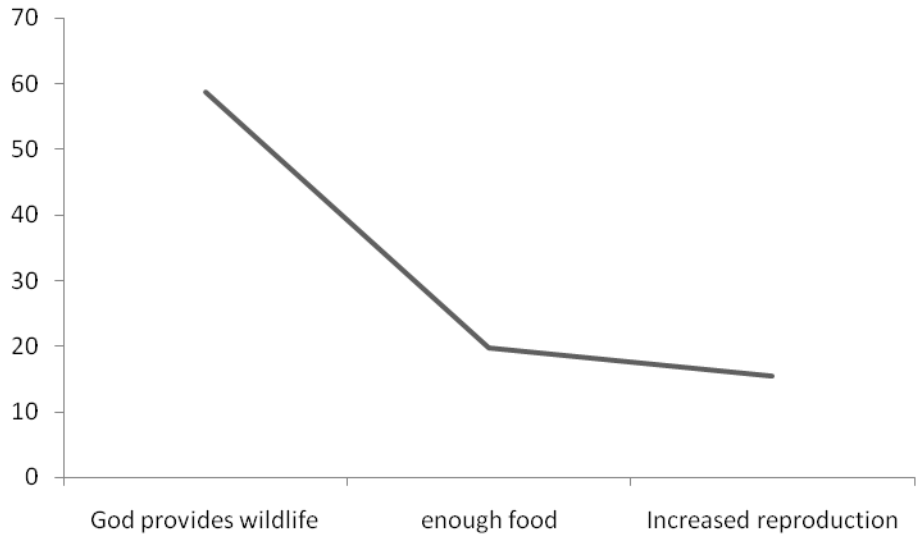

Figure 3. Reasons given for a continuous increase in wildlife.

increasing (82.1%), declining or had no idea 9.6 and 8.4% respectively. Various explanations for continuous increasing densities of wildlife populations (Figure 3) and the need to keep on hunting wildlife are as follows:1) wildlife is provided by the almighty and will never get finished (58.7%), 2) there is increased availability of food for these animals to feed in their homes (19.4%) 3) and improved reproduction (15.5%).

However, some respondents felt the population has declined in some areas because of increased human population (45.8%) resulting in an increased demand for bush meat as well as habitat loss (45.8%). While a few respondents state that the decline was due to farming encroachment into protected areas (4.2%). Lastly, others indicated that the local community has irresistible poaching attitudes (4.9%).

Attitudes towards conservation

Most respondents (90%) in Bakossi landscape did not consider conservation as beneficial. Only 10% agreed that conservation is beneficial, mainly through ecotourism. When asked more generally if wildlife is beneficial, 80.5% said it was not beneficial, and 19.5% said it was beneficial. However, the response did not differ among the ages (χ^2 = 0.997, df = 1, p = 0.318) (Figure 4).

A great number of respondents felt that the future of wildlife conservation is bleak (95%), and only 5% said it is hopeful. The logistic regression model for those who wish to see conservation was significant and produced a goodness of fit of 95.8% of observed to expected values. Males were more likely than females to agree that conservation is good. Some wild animal species were ranked as most problematic. A total of 11 wildlife species were listed as problematic, specifically: Wild pigs (*Potamochoerus porcus)* (37.5%), porcupine (33.2%) are viewed as causing most problems Other species like monkey *(Cercopithecus)* (1.0%) and bushbuck*(Tragelatus scriptus)* (1.0%) were regarded as posing few problems (Figure 5).

DISCUSSION

Many communities in wildlife areas do not receive benefits and yet they bear the costs of living with wildlife (Kiss, 1990). As a result, the communities develop a negative attitude towards conservation (Omondi, 1994; Hill 1998). However, despite the costs of living with wildlife, some communities have retained a positive attitude towards conservation (Newmark et al., 1993; DeBoer and Banguetem, 1998). A rapid decline of wildlife has been noted in areas where benefits are not accrued to the local community (Norton-Griffiths, 1998). This is because the community tries to engage in other land-use practices that are not only detrimental to wildlife population, but also result in increased conflicts. (Wolman and Fournier, 1987) The Bakossi landscape is a typical example of such an area. This study has shown that by denying people benefits and access from natural resources, they develop negative attitudes and engage in activities that are detrimental to conservation. Therefore, the future of the wildlife becomes uncertain especially large mammals.

In order to promote peaceful co-existence of residents and wildlife, respondents must make efforts to reverse attitudes concerning incompatible activities and should realize the benefits from wildlife. Their attitudes and perceptions can be changed through constant

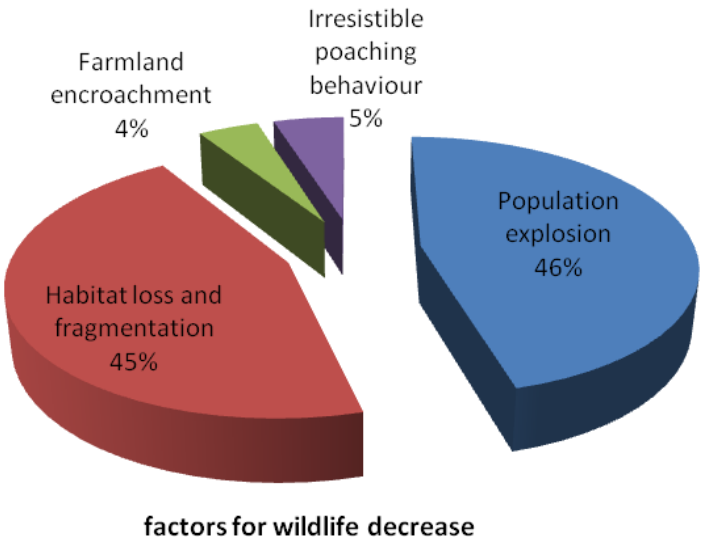

Figure 4. Reasons for the decline of wildlife.

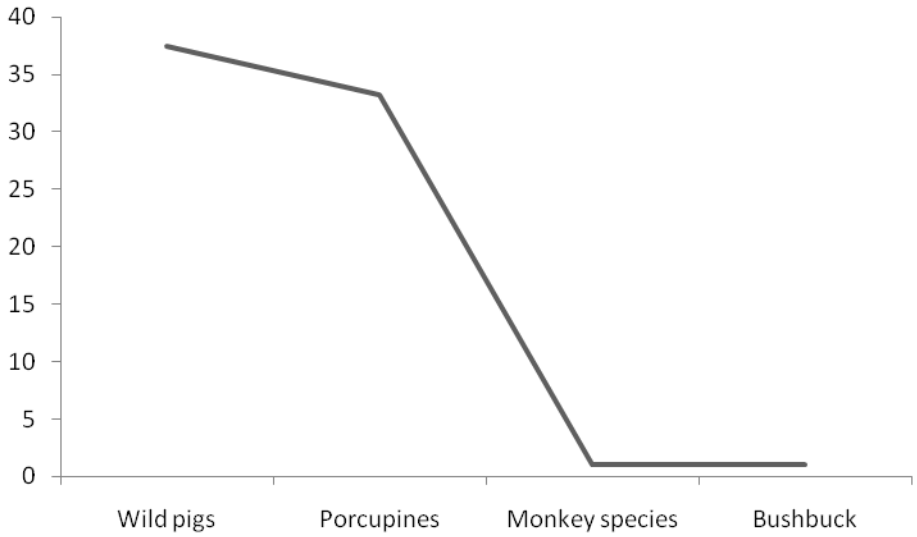

Figure 5. Wildlife species that forage most on crops.

environmental education by targeting hunters and the youth who will foster this mindset in future especially, sensitizing them on the ecological role of wildlife species in seed dispersal, energy transfer in the food chain etc.

The Cameroon government in collaboration with Non governmental organisations (NGOs) should develop strategies aimed at solving this problem through co-management and active participation of the indigenous people in the conservation process. Failures up to this point result because NGOs arrive with their strategies they plan to implement and do not share with those within and around these resources so as to consolidate efforts for a long lasting process. So far WWF, through the Coastal Forest programme, has been very active and has adopted new strategies of integrating and educating the local people through the creation of a hunter's union to check the illegal poaching of endangered species and limit over hunting of other species as well as by sensitizing the youth through environmental clubs in both primary and secondary schools to raise awareness.

Conclusion

Above all, the greatest enemy to wildlife conservation is ignorance as to conservation and management of natural

resources. Therefore, the cooperation of all stakeholders (for example, community, government, conservationists and foreign donor' agencies) is crucial for lasting success in environmental protection programs. This initiative will require the adoption of conservation strategies that are proactive, mutually beneficial and environmentally friendly and sustainable. Secondly, negative attitudes and perceptions can be shifted with carefully implemented conservation programs which serve to alleviation poverty by initiating entrepreneurial activities that can generate income to the local residents to offset the costs incurred. At the same these initiatives serve to discourage land-use strategies that are incompatible with wildlife conservation.

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REFERENCES

Atanga E, Okon D, Messape D (2005). Report of Biomonitoring in the Bakossi landscape. Report to WWF International.

De B, Banguete DS (1998). Natural resource use, crop damage and attitudes of rural people in the vicinity of the Meguto Elephant Reserve, Mozambique. Environ. Conserv., 25: 208-218.

De Vaus DA (1996). Surveys in social research. 4th Edition. Allen & Unwin. Pp. 76.

Hill CM (1998). Conflicting attitudes towards elephants around the Budongo Forest reserve, Uganda. Environ. Conserv., 25: 244-250.

Hökby S, Söderqvist T (2005). Elasticity of demand and willingness to pay for environmental services in Sweden. http://www.beijer.kva.se/publications/pdf-archieve/art-disc137.pdf

Katrina B (2000). People, parks, forests or fields: A realistic view of tropical forest conservation. Published by Elsevier Science Ltd Available online 24 July 2000.

Kiss A (eds.) (1990). Living with wildlife, Draft report of World Bank Environment Division, The World Bank, and Washington, DC.

Newmark WD, Leonard NL, Sariko HI, Gamassa Deo-gratias M (1993). Conservation attitudes of local people living adjacent to five protected areas in Tanzania: Biol. Conserv., 63: 177-183.

Newmark WD, Manyanza DN, Gamassa Deo-gratias M (1994). The conflict wildlife and local people living adjacent to protected areas in Tanzania: human density as a predictor: Conserv. Biol., 8: 249-255.

Nguedem S, Fonkwo Tsi EA, Mpoame M (2010) Abundance and distribution of large mammals in the Bakossi Landscape.

Nji A (2004). Why poor people remain poor. Key elements for poverty reduction and sustainable development. Yaoundé, Cameroon Buma Kor Publishers. Pp. 240.

Osmond P (1994). Wildlife-Human conflicts in Kenya: Integrating wildlife conservation with human needs in Masai Mara region; PhD Thesis, McGill University, Montreal.

Tsi EA, Ajaga Nji, Wiegleb G (2008). The willingness to pay for the conservation of wildlife animals: case of the Derby Eland (Taurotragus derbianus gigas) and the African wild dog (Lycan pictus) in North Cameroon

Wolman MG, Fournier FGA (eds.) (1987). Land transformation in Agriculture. John Wiley and Sons, Chichester.

WWF- CFP. 2003-2008. Annual Reports.