

Stakeholder attitudes towards wildlife policy and the Bénoué Wildlife Conservation Area, North Cameroon

ROBERT B. WELADJI^{1*}, STEIN R. MOE² AND PÅL VEDELD²

¹Department of Animal Science, PO Box 5025, N-1432, Agricultural University of Norway, Ås, Norway and ²Centre for International Environment and Development Studies, NORAGRIC, PO Box 5001, N-1432, Agricultural University of Norway, Ås, Norway

Date submitted: 30 October 2002 Date accepted: 2 June 2003

SUMMARY

In recent years, wildlife policies that consider the participation of stakeholders have been promoted. An understanding of the stakeholders' attitudes towards conservation and existing policies are critical in designing new policies or sustainable conservation strategies. This paper examines stakeholders' (local people, park staff and professional hunter guides) attitudes, towards the Bénoué Wildlife Conservation Area (BWCA) and towards Cameroonian wildlife policy. The BWCA encompasses the Bénoué National Park and its surrounding hunting concessions that also include some villages. Both the Park and the hunting concessions are two categories of protected areas. Data were collected using informal interviews and questionnaires administered to 114 households from three communities, 17 park staff and seven professional hunter guides. Local people's attitudes towards protected areas depended on the management category of the particular protected area. Local people were positive towards the existence of the Park, but negative towards the system of hunting concession areas. There was local variation between communities concerning these attitudes. Local people were generally positive to maintaining the present Park area, but preferred a reduction in the size of the hunting concessions. Both Park staff and professional hunter guides expressed concern about present management strategies and the extent of illegal resource exploitation. Despite having poor knowledge of the current Cameroonian wildlife policy, most of the local households expressed support for it, but called for increased local involvement in management, off-take and the harvesting of benefits from both Park and hunting concession activities. The Park staff were sceptical about local participation in this context and saw such endeavours as a threat to a sound biodiversity management scheme. The findings indicate the need to strengthen current wildlife policy, promote the involvement of local people and empower the Park staff, both in terms of resources and in terms of skills in interacting with local people. The revised policy

should be designed so as to vary according to the category of protected area and allow site-specific adaptations. Local people must experience reduced incurred costs and increased incomes from the Park. An environmental education programme is recommended to extensively disseminate the policy to user groups in the area.

Keywords: Cameroon, protected areas, stakeholder attitudes, wildlife conservation, wildlife policy

INTRODUCTION

Up to the end of the 1970s, a centralized regulatory control and the separation of local people and their subsistence forest-based activities from conservation areas were widely advocated in the name of biodiversity conservation (Marks 1984; Colchester 1996; Mehta & Kellert 1998). This exclusion policy protected some endangered species from extinction (Harmon 1987), but local people suffered economic hardships through wildlife depredation and resource access deprivation (Balakrishnan & Ndhlovu 1992; Parry & Campbell 1992; Newmark *et al.* 1994; Gurung 1995; Tchamba 1996; Hulme & Murphree 2001; Vedeld 2002; Weladji & Tchamba 2003). Biodiversity was often inadequately conserved through such an exclusion approach.

The policies up to the 1970s did not secure the biodiversity resource; local people were left deprived and hostile to government and local politicians, and increasing external pressures for change produced policy reform. During 1980–1985, more participatory approaches developed with shifts in focus from conservation to sustainable resource use (see for example Anderson & Grove 1987). There was an increased recognition that local communities must be actively involved in conservation, and that their needs and aspirations have to be considered in order for biodiversity conservation to be sustainable (Fletcher 1990; West 1991; Gadgil 1992; McNeely 1993; Lewis 1996). The recognition of local community involvement has in turn led to the initiation of several development programmes depending on the understanding of the relationship between protected areas (PAs) and various stakeholders (Newmark *et al.* 1993; Brown & Wyckoff-Baird 1995; Fiallo & Jacobson 1995; Ite 1996; Infield & Namara 2001; Sah & Heinen 2001; Obiri & Lawes 2002). Following these development programmes, new policies have emerged, seeking to promote public participation in

* Correspondence: Dr Robert B. Weladji Tel: +47 64 94 80 56 Fax: +47 64 94 79 60 e-mail: robert.weladji@ihf.nlh.no

planning, decision-making and management of PAs. The success of individual policies typically depends on whether various stakeholders are positively or negatively affected by conservation (see Walpole & Goodwin 2001). Thus, the attitudes and perceptions of the stakeholders towards a conservation area and the policy being implemented are an important element for sustainable conservation.

Cameroon has a diverse natural resources base, including dense equatorial forest in the South, and dry savannah and Sahel in the North (Depierre & Vivien 1994). In Cameroon, the Wildlife Act has been periodically modified in order to meet international legislation's requirements, and is currently in its third revision. An integrated legal framework encompasses both forestry and wildlife (Government of Cameroon Law 94/01, 20 January 1994). The legislation includes issues of community participation in natural resource management and local communities may elect to take ownership of community hunting areas. However, in northern Cameroon, where the problem of human-wildlife interactions has not been adequately addressed and where 35% of the land areas are protected in the form of national parks (three out of the eight national parks in Cameroon), hunting concession areas and forest reserves, there is at present no operational traditional community hunting or forest reserve. Moreover, unresolved conflicts between stakeholders constitute a threat to sustainable management of wildlife resources (Weladji & Tchamba 2003). This may reflect a certain disagreement among stakeholders and between stakeholders and both the conservation and current wildlife policies. However, this has not been investigated, despite increasing international conservation interest in the region. There is an ongoing GEF (Global Environment Facility) project in the area, aimed at sustainable biodiversity conservation. Furthermore, a recent plan to create a 'Rhinoceros Sanctuary' within the Bénoué Wildlife Conservation Area (BWCA) (Anon. 2000) implies greater restrictions on the resource use by local communities and may intensify the conflict (Parry & Campbell 1992; Newmark *et al.* 1993; De Boer & Baquete 1998).

Several studies have focused empirically on the relationships and attitudes of local communities towards wildlife conservation and management (Infield 1988; Moe & Kapela 1990; Parry & Campbell 1992; Heinen 1993; Durbin & Ralambo 1994; Fiallo & Jacobson 1995; Tchamba 1996; De Boer & Baquete 1998; Mehta & Kellert 1998; Infield & Namara 2001; Walpole & Goodwin 2001). Conclusions from these studies vary from country to country, and even between nearby sites, because the management status of PAs differs according to the political and socio-economic settings in the area (IUCN [World Conservation Union] 1994; De Boer & Baquete 1998). This study, conducted in 1997, included not only local people and Park authorities, as it is often the case, but also the professional hunter guides. Thus we involved three main groups of stakeholders (i.e. those who affect or are affected by policies, decisions and actions) in the area (Weladji 1998), namely: (1) local people, whose survival may

depend on natural resources provided by the PA; (2) Park staff (PS), the administrative authorities representing the government at the PA sites; and (3) private and mostly foreign operators running safari businesses in the hunting concession areas surrounding national parks, under state regulations and control. We used the stakeholder approach to identify the key actors in the systems and assess their respective interests (Grimble *et al.* 1995). The stakeholder approach has proved to be a powerful tool for policy analysis and formulation, and has considerable potential in natural resource policy and development programmes (Grimble & Wellard 1996).

Although attitudinal surveys could provide guidance for policy and management decisions, as well as baseline data to assess the efficacy of new policies (Gillingham & Lee 1999), they have been lacking in northern Cameroon. A change from a 'preservation-oriented' approach to a more 'integrative-oriented' approach requires not only a better understanding of the attitudes of the main users of the wildlife resource, but also a deeper understanding of the nature of the relationships among users (Infield & Namara 2001). The aim of this study was therefore to investigate the attitudes and perceptions of the main stakeholders towards the BWCA in particular, and current wildlife policy in general. We address the following questions: (1) What are the attitudes of local people, park staff and professional hunter guides, respectively, towards the BWCA? (2) What are the attitudes of local people, park staff and professional hunter guides, respectively, towards the wildlife policy? (3) Are there differences in attitudes among the main stakeholders towards the BWCA and the wildlife policy? Because different stakeholders have various needs and constraints, we predicted their attitudes towards conservation to differ, with local people, who incur greater personal costs, being generally more negative. Similarly, we predicted stakeholders' attitudes towards wildlife policy to vary with their interests. (4) Do attitudes towards conservation and wildlife policy vary among communities given the heterogeneous nature of local communities and the uneven distribution of wildlife benefits and costs? (5) What factors (for example perceived benefit, wildlife depredation, etc.) influence local people's attitudes toward the National Park or hunting concessions?

METHODS

Study area

The BWCA (8438 km²) encompasses the Bénoué National Park and its surrounding hunting concession areas, which are the transitional lands between the Park and the cultivated land (Fig. 1). The climate is humid Sudanian type with one long dry season (6–7 months long, starting in November) and a single rainy season (lasting 5–6 months). The annual rainfall ranges from 1000 mm–1200 mm and the average temperature is about 28°C, with a maximum of about 40°C (Anon. 1975).

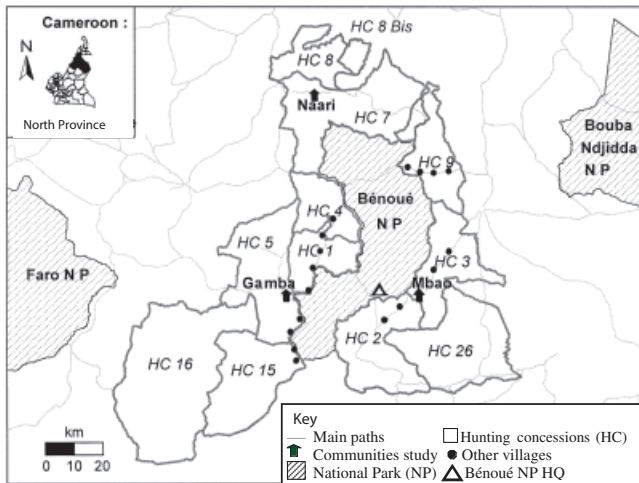


Figure 1 Map of the Bénoué Wildlife Conservation Area, showing the position of the communities surveyed and the Bénoué National Park Headquarters (HQ).

The area has been classified as a broad-leaved (Guinea) savannah ecoregion (Stark & Hudson 1985). Safari hunting and tourism are the main legislated land-use activities in the BWCA. The BWCA is famous in West Africa for its large mammal populations, particularly the relict population of the distinct West African black rhinoceros (*Diceros bicornis longipes*), the rare African wild dog (*Lycaon pictus*), elephant (*Loxodonta africana africana*), hippopotamus (*Hippopotamus amphibius*) and baboon (*Papio anubis*), among others (Anon. 1998).

The Bénoué Forest and Wildlife Reserve, formerly a hunting reserve belonging to local communities and controlled by village chiefs and/or sultans, was created in 1932 and became Bénoué National Park in 1968. Several villages are located around the Park (i.e. within the BWCA; Fig. 1). Local people's main activities include small-scale agriculture, fishing and gold mining. Major crops include cotton, yams, sweet potatoes, maize, millet, cassava, groundnuts and beans. Maize and millet are the main staple foods. Goat, sheep, pig, poultry and, to some extent, cattle (mainly in Na'ari) are the main types of animal husbandry (Weladji 1998).

According to Cameroon's Wildlife Act, National Parks and hunting concessions are two forms of protected areas with different management systems. The main activities in the Parks are protection, tourism and management, while hunting concessions are leased to private operators for hunting and game safaris (see Weladji & Tchamba 2003 for further details).

Sampling design

Three communities (Gamba, Na'ari and Mbao) were selected for household questionnaire surveys based on the following criteria: geographical location relative to the park, presence of game guards (i.e. Park staff) in the community, their prox-

imity to hunting concession areas and evidence of local heterogeneity among the communities (see Table 1). Gamba lies to the south-west side of the Park, Na'ari to the northern side and Mbao to the south-east side (Fig. 1). The dominant ethnic groups were *FulBés* in Na'ari, and *Dourou* in Gamba and Mbao. A number of key informants were interviewed prior to the formal survey, including village chiefs, old people and other resource persons within the communities. Formal questionnaires were addressed to 17 randomly selected park staff (71%) and seven professional hunter guides (78%), focusing on their attitudes and their perception of the Park, the hunting concession and towards the Wildlife Policy. The Park staff and professional hunter guides were also asked to comment on the constraints they were facing in carrying out their activities, and to provide the reasons for their viewpoints.

Within the selected communities, the *sa'are* was used as the household sample unit. The word *sa'are* means residential cluster in FulBé societies, where many households or sub-families cohabit. In each community, a *sa'are* inventory provided a basis for our samples (Gamba, Na'ari and Mbao had 270, 250 and 19 households, respectively). In Gamba and Na'ari, communities that contain several settlements, 20% of *sa'are* were randomly selected within each settlement. In Mbao (which had a smaller population), all the available households were interviewed. A total of 114 households, representing 46 households in Gamba, 50 in Na'ari and 18 in Mbao, were interviewed.

Household questionnaire

Two types of questions were administered: 'close ended' questions with a list of alternative answers to each question and 'open ended' questions. Generally, close-ended questions required answers of two types: dichotomous questions required a yes/no or agree/disagree answer, while other questions required the respondent to choose among alternative answers (for example agree/indifferent/disagree or seldom/not sure/often). Questions were addressed to the head of the household, either in French or, when necessary, in the main ethnic group language in the community with the

Table 1 Characterization of the study communities (++ = more; += some possibilities; 0 = lacking).

<i>Village characteristics</i>	<i>Gamba</i>	<i>Na'ari</i>	<i>Mbao</i>
Ethnicity variability	+	++	+
Dominant ethnic group	Dourou	FulBés	Dourou
Economic possibilities	++	+	0
Mean land holding (ha)	2.3 ± 2.2	3.4 ± 2.5	4.0 ± 2.8
Main cash crop	Yam	Cotton	Cotton
Vicinity to market	++	+	0
Average annual income (US\$)	50.4	35.3	7.6
Average education levels	++	+	+
Distance to Park's border (km)	0	> 70	0
Benefit from the PAs	Limited	Limited	Limited
Exposure to wildlife damage	High	High	High

help of interpreters. The head of the household was usually a man, as women are not officially involved in public debates in these Muslim-dominated communities (Weladji 1998). The respondents were first asked to provide some demographic and socio-economic information (age, gender, education and occupation of household members, number of children, religion, ethnic group, etc.). In addition to questions about their interactions with protected areas (such as impacts on protected areas, wildlife depredation, benefits from protected areas, resource use patterns, etc.) not addressed in detail here (see Weladji & Tchamba 2003), respondents were asked about: (1) their awareness and perceptions about the Park and the hunting concession system, (2) their attitudes to the current wildlife policy and the rationale behind their opinions, (3) their preference between the two conservation systems and again the rationale behind their opinions, and (4) their views regarding potential changes (such as possible abolition or reduction) in National Park or hunting concessions status.

Analysis

After the responses were summarized, frequency distribution data were cross-tabulated into contingency tables and subjected to χ^2 analysis. We pooled the answers from all respondents when investigating potential influences on the local people's attitudes towards the Park and the hunting concession, in order to obtain adequate sample sizes for χ^2 analysis. Pooled data was also used when testing for differences in attitudes between local people and other stakeholders. The data for each community were considered separately in order to test whether the attitudes towards the Park or the hunting concessions varied among communities, using a χ^2 -based test of homogeneity with a 95% significance level. The MINITAB statistical software (Minitab Inc. 1999) was used for the analyses.

RESULTS

Attitudes of the main stakeholders towards the BWCA

Local people's attitudes towards the BWCA

In Na'ari, 10% of the respondents did not know about the National Park. Among those who knew about the Park, 93% perceived it positively (i.e. 91% in Gamba, 92% in Na'ari and 100% in Mbao) with no significant difference in attitude amongst communities ($\chi^2 = 1.64$, $df = 2$, $p = 0.4$). Many respondents (50%) expressed negative opinions about the hunting concessions (78% in Gamba, 14% in Na'ari and 78% in Mbao) with a significant difference in attitude amongst communities ($\chi^2 = 46.17$, $df = 2$, $p < 0.001$). Among those who knew about the Park, only 8% wanted it to be abolished, while 88% wanted it to remain. When asked about the present size of the Park there was a high degree of variation among communities; most people from Gamba (93%) wanted a reduction in the size of the Park, while no respondents from Mbao supported this (Table 2).

Table 2 Local people's views (% respondents among those aware of the existence of the Park or the hunting concession) about possible changes that might occur in the Bénoué National Park and the hunting concessions, North Cameroon, 1997.

	<i>Gamba</i>	<i>Na'ari</i>	<i>Mbao</i>	<i>Total</i>
<i>About the Park</i>				
Abolition				
Good	13.0	5.1	0.0	7.8
Bad	80.4	94.9	94.4	88.4
Indifferent	6.5	0.0	5.6	3.9
Reduction				
Good	93.5	41.0	0.0	57.3
Bad	4.4	53.9	88.9	37.9
Indifferent	2.2	5.1	11.1	4.9
<i>About the hunting concession</i>				
Abolition				
Good	82.6	6.0	27.8	40.4
Bad	13.0	94.0	55.6	55.3
Indifferent	4.4	0.0	16.7	4.4
Reduction				
Good	95.6	58.0	88.9	78.1
Bad	2.2	40.0	5.6	19.3
Indifferent	2.2	2.0	5.6	2.6

When asked why they were against the abolition of the Park, 43% stated that wildlife would vanish, 29% recognized the importance of wildlife as source of income to the state, and 24% thought that wildlife should be kept for conservation purposes. Fourteen per cent indicated that they had gradually grown accustomed to the Park and that they now wanted it to remain. Only 7% mentioned gained benefits as a reason for maintaining the Park. When asked why they were against the reduction of the Park area, 51% of the respondents indicated that ongoing immigration would result in an invasion of the Park and 28% thought that a reduction would reduce the potential for conservation. Among those positive to a reduction in area of the Park, 64% responded that there would be more land for agriculture, 17% mentioned that the crop damage by animals would be reduced, and 17% indicated that a reduction in Park size would imply more access to basic resources.

A substantial number of respondents (41%) supported abolition of the hunting concession system, the people in Gamba (83%) being most positive. Generally, respondents were more favourable (78%) to a reduction of the areas set aside for hunting concessions than to its abolition. When asked why they were against this abolition, 70% mentioned that wildlife would be destroyed, 16% recognized the importance of wildlife as source of income to the state, and only 3% mentioned the benefit they gained from the hunting concessions. When asked why they wanted a reduction of the hunting concessions, 60% responded that there would be more land for agriculture, and 36% mentioned that they could have more resources accessible for their own needs. Significantly more people preferred the hunting concession

to be abolished compared to the Park ($\chi^2=31.5$, $df = 2$, $p < 0.001$). None of the selected factors significantly influenced respondents' opinions towards the Park (Table 3). However, distance to the Park headquarters, age of the respondent, residence length, ethnic group, perceived benefits from PAs, wildlife depredation, relationship with the Park staff and relationship with professional hunter guides were significantly ($p < 0.05$) related to whether a respondent gave a positive opinion of the hunting concessions or not (Table 3). Respondents who perceived personal benefits from PAs expressed more positive attitudes towards the hunting concession system than those who did not. The Dourou, the

dominant ethnic group in Gamba and Mbaou, was more negative towards the hunting concessions. Respondents less than 40 years old were more positive towards hunting concessions than older respondents.

Park staff attitudes towards the BWCA

All Park staff expressed positive opinions towards the BWCA, but views on factors limiting the development of the Park and the hunting concession system differed. When asked about the factors limiting the Park's development, 62% of the Park staff reported its poor infrastructure, affecting the ability of tourists to observe wildlife, while 24% stressed a

Table 3 Factors that influenced local people's attitudes to the BWCA, 1997. * Significant results. † FCFA = Franc Communauté Financière Africaine, which is the monetary unit used in Cameroon (US\$1 \approx 700 FCFA).

Factors	About the park (n = 103)			About hunting concessions (n = 114)		
	Positive attitude	Negative attitude	χ^2	Positive attitude	Negative attitude	χ^2
<i>Distance to Park headquarters</i>						
Far (>70km)	36	3	0.40	43	7	46.17*
Close (<70km)	61	3		14	50	
<i>Age of respondent</i>						
<40 years	32	2		29	14	
40–60 years	44	3	0.09	21	28	9.14*
>60 years	21	1		7	15	
<i>Education</i>						
No	53	3	0.05	33	25	2.25
Yes	44	3		24	32	
<i>Residency length</i>						
<10 years	22	2		24	11	
10–30 years	55	3	0.36	21	37	9.67*
>30 years	20	1		12	9	
<i>Benefit from PAs</i>						
Yes	38	2	0.08	36	9	26.77*
No	59	4		21	48	
<i>Land holding</i>						
< average (3.05ha)	61	5	1.03	33	39	1.36
> average	36	1		24	18	
<i>Wildlife depredation</i>						
Yes	87	6	0.69	46	55	7.03*
No	10	0		11	2	
<i>Annual income (FCFA†)</i>						
Low (<142000)	56	5		11	12	
Medium (142000–675000)	21	0	1.97	35	33	0.15
High (>675000)	20	1		11	12	
<i>Ethnic group</i>						
Dourou	58	3		13	48	
FulBé	22	2	0.83	23	1	46.07*
Other	17	1		21	8	
<i>Relations with Park staff</i>						
Good	77	6	1.54	55	39	15.52*
Bad	20	0		2	18	
<i>Relations with hunter guides</i>						
Good	50	2	0.75	38	21	10.15*
Bad	47	4		19	36	
<i>Perception of wildlife policy</i>						
Agree	88	5	0.35	54	49	2.52
Disagree	9	1		3	8	

poor management strategy with related lack of personnel (in 1997 it was one game guard per 6667 ha) and poaching problems. When asked about their views on the hunting concessions, 72% of the Park staff pointed at problems of mismanagement and overexploitation. However, 21% indicated that the hunting concessions contributed to wildlife conservation and 4% said that it also provided bush meat to local communities.

Professional hunter guides' attitudes towards the BWCA

All professional hunter guides supported the BWCA, but their views differed on factors limiting the development of the Park and the hunting concessions. Most (57%) felt that the Park was subjected to high pressures from illegal activities, 29% reported that it was important for wildlife conservation, 29% stated that it was important in serving as a reservoir for the hunting concessions, and 14% held the opinion that the Park was not well managed.

Attitudes of the main stakeholders towards the Wildlife Policy

Local people's views on the Wildlife Policy

Only 5% of the respondents knew about the usufruct right allowing local residents limited harvest of wild resources in their surroundings, outside National Park. Seventeen per cent of those who knew about the usufruct right would still not use it, fearing arrest. Park staff hardly visited the villagers to inform them of their rights; 75% of respondents reported that staff came only during patrols or to arrest suspects. Despite all the existing constraints, 82% of people were favourable to the current Wildlife Policy (Fig. 2), with a significant difference in views between communities ($\chi^2=10.66$, $df = 4$, $p = 0.03$). The fact that their present interests were not taken into account was the major reason for their reservations on the Wildlife Policy (53%). Seven per

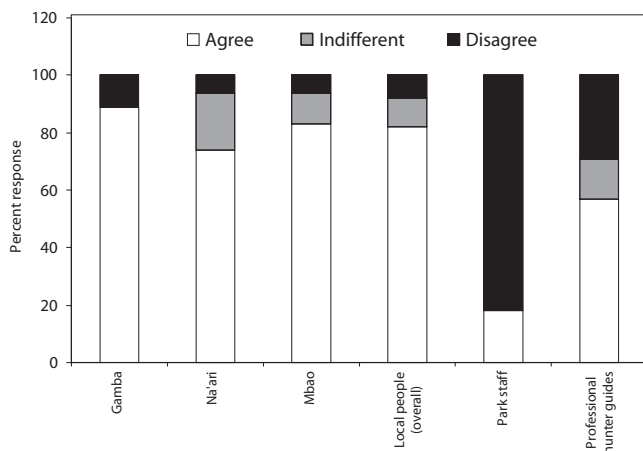


Figure 2 Distribution of local people's, Park staff's and professional hunter guides' (PHG) opinions about the current Cameroonian wildlife policy (percentages are from the survey responses).

cent mentioned the lack of benefit and 7% reported that the present policy benefited mostly foreigners, especially professional hunter guides. Consequently, their perception towards the Wildlife Policy did not significantly affect their attitudes towards PAs (χ^2 tests, $p > 0.10$).

Park staff's views towards the Wildlife Policy

Most of the Park staff (82%) knew about the local people usufruct rights and 53% recognized that local people were not enjoying them at present. The reasons given by Park staff for people not using their usufruct rights included the non-existence of buffer zones (50%), fear of being arrested (17%), the fact that all their surrounding areas were protected (17%) and the lack of wildlife resources in the areas outside PAs considered as buffer zones (17%). The Park staff had different views on the appropriateness of the Wildlife Policy, with a large majority (82%) being against it. When asked why they disagreed with the Wildlife Policy, 44% mentioned the lack of personnel and motivation as main reasons and 38% reported that professional hunter guides were not fully and objectively controlled. Thirteen per cent thought that the arrested poachers were not sufficiently punished, while 6% said that they did not believe that the annual hunting quota was established on an objective basis. Ninety-seven per cent of Park staff held the opinion that the professional hunter guides were responsible for illegal activities.

Professional hunter guides' views towards the Wildlife Policy

Most of the professional hunter guides (71%) were aware of the usufruct rights of local people surrounding their hunting concessions. Up to 80% claimed that local people enjoyed these rights. Fifty-seven per cent of the professional hunter guides supported the Wildlife Policy, 14% had no opinion while 29% were against the present Wildlife Policy. The main objections to the Wildlife Policy were that they had to pay high taxes, not being allowed to shoot as much as they wanted, and that there was a lack of coordination among various groups using the wildlife resources.

Difference in attitudes among stakeholders

As predicted, local people were more negative towards protected areas than both Park staff (National Park: $z = -4.62$, $p < 0.001$; hunting concessions: $z = -10.62$, $p < 0.001$) and professional hunter guides (National Park: $z = -4.62$, $p < 0.001$; hunting concessions: $z = -10.62$, $p < 0.001$). Surprisingly, local people were more positive toward the current wildlife policy than the Park staff ($z = 6.44$, $p < 0.001$; Fig. 2), and there was no evidence that local people and professional hunter guides perceived the wildlife policy differently ($z = 1.28$, $p = 0.2$; Fig. 2).

DISCUSSION

The findings that local people were generally positive to the BWCA, but there were significant differences between

communities, is similar to the findings of Fiallo and Jacobson (1995) in Ecuador and De Boer and Baquete (1998) in Mozambique. Local people were generally more positive to the National Park than to the hunting concessions. Moreover, several factors were correlated with local people's attitudes to the hunting concessions, but not the National Park (Table 3), most likely because of the difference in the status of the two protected areas (see below).

Local people living closer to the Park headquarters were more negative about the BWCA, probably because there was increased pressure and control from Park staff in the near vicinity of the central Park administration. Despite economic hardships experienced by local people through wildlife depredation (Weladji & Tchamba 2003), the extent of crop damage did not influence people's attitudes towards the Park here, although this has been identified as a factor elsewhere (Table 4). This is in agreement with the studies of Heinen (1993) and Mbaruka (1996). The extent of crop damage did, however, affect attitudes towards the hunting concessions. Parry and Campbell (1992) also found in the Chobe Enclave and Mababe Depression that people experiencing crop losses were, on average, more negative toward wildlife conservation. That the Dourou ethnic group were more negative towards conservation than the other group, is probably due to their high relative numbers in Gamba and Mbaou, the two communities experiencing greater losses due to wildlife (Weladji & Tchamba 2003). Although the main reason given for a reduction of the PAs was the need for more land, present land holding did not significantly affect people's stated attitudes, which is consistent with other studies (Table 4). Infield and Namara (2001) found that attitudes were influenced by land ownership in Uganda. In our study most respondents were against the abolition of the Park. Infield (1988) reported that only 6% of 182 local people surveyed living adjacent to a conservation area in Natal, South Africa, felt it was unimportant to retain the adjacent conservation area (see also Newmark *et al.* 1993).

Contrary to our findings, wealth and education level have been found in other studies to be important in improving people's attitudes to wildlife (Mordi 1987; Parry & Campbell 1992; Sah & Heinen 2001). Surprisingly, perceived benefit influenced people attitudes only towards the hunting concessions and not the National Park, contradicting the general hypothesis that those who benefit most from protected areas have better attitudes to wildlife conservation (see Lewis *et al.* 1990). Along the same lines, Sah and Heinen (2001) found a negative correlation between resource use and conservation attitudes in Ghodaghodi Lake area, Nepal. Walpole and Goodwin (2001) found that local people adjacent to Komodo National Park in Indonesia recognized that benefits from tourism were dependent on the Park. The positive attitudes to the BWCA could possibly be caused by such tourist-generated benefits and not by conservation *per se*.

Respondents' views of PAs depended on the management category of the PA, as defined by the IUCN System of Protected Area Management Categories (IUCN 1994). Indeed, National Parks and hunting concessions have different management objectives and strategies according to Cameroonian legislation, the restrictions being fewer in the latter. Most village settlements are within hunting concessions, which are not allowed in National Parks, and this could explain the homogeneity in attitudes towards the National Park. Local people may perceive themselves to have greater influence over the hunting concessions than the Park, as it is easier to modify the status of hunting concessions than that of National Parks. Indeed, the creation of most National Parks in developing countries often follows intense pressure from conservation agencies (such as the Worldwide Fund for Nature, IUCN and Wildlife Conservation Society) as well as from various donors (for example GEF), therefore, once they are created it is difficult to reverse their status. Local people may also perceive that the professional hunter guides' activities were not controlled, and thus did not see hunting concession areas as typical conservation areas. Local people

Table 4 Factors influencing people's attitude towards the PA in the BWCA and comparative results from other countries concerning national parks (¹ Heinen 1993; ² Parry & Campbell 1992; ³ Mbaruka 1996; ⁴ Newmark *et al.* 1993; ⁵ Fiallo & Jacobson 1995). * = statistically significant ($p < 0.05$); ns = no significant effect; – = not reported.

Factors	Cameroon (present study)		Nepal ¹	Botswana ²	Tanzania ³	Tanzania ⁴	Ecuador ⁵
	Park	Hunting concessions					
Distance to Park / hunting concession	ns	*	ns	–	ns	*	–
Ethnic group	ns	*	*	–	–	–	–
Age respondent	ns	*	–	–	–	–	*
Education level	ns	ns	*	ns	–	ns	*
Residency length	ns	*	–	–	ns	*	ns
Benefits	ns	*	ns	*	–	*	ns
Land holding	ns	ns	ns	–	ns	*	ns
Extent of wildlife damage	ns	*	ns	*	ns	*	ns
Income per household	ns	ns	ns	ns	ns	–	–
Relations with Park staff	ns	*	–	–	–	*	*
Relations with hunter guide	ns	*	–	–	–	–	–
Perception of wildlife policy	ns	ns	–	–	–	–	–

generally believe that the Park is more beneficial (tangible and intangible) to them compared to the hunting concessions. Although both the Park and the hunting concessions may contribute to conservation and to the national income, professional hunter guides were perceived to exploit what local people saw as their 'own' traditional resources. Local people also saw as problematic and provocative that foreigners were given priority over access to local resources. Nevertheless, a substantial number of respondents still said they wanted the hunting concession system to be maintained. It might be expected that those recently settled in the communities had more negative attitudes towards PAs because of their immediate need for more agricultural land. A relationship between residential length and attitude to the PA was found only for hunting concessions in this study, but recently settled people were positive towards both the park and the hunting concessions, possibly because most of them were immigrants and did not perceive it as their right to claim the abolition of PAs.

Even though Park staff and professional hunters guides were favourable to PAs, many claimed that they were not properly managed. A number of armed robberies took place in the area during the years preceding the study. This could have been the reason for the low level of tourist activity in the Park. Since then the security has improved with subsequent increase in tourism (R.B. Weladji, personal observation 1997). The Park staff recognized that hunting concessions contributed to wildlife conservation, but they considered professional hunter guides as traders of wild animals without any long-term objectives. In order to solve this conflict, the professional hunter guides' activities need to be controlled, especially during the hunting season when rules may not always be followed. Government funds also need to be released to enable the Park staff to enforce current legislation.

Attitudes towards the current Wildlife Policy

Only a few respondents, all from Gamba, were aware of their usufruct rights. This suggests that environmental education programmes and sensitization by the local wildlife authorities were lacking. Gamba is close to the main road, and thus people there may have had access to more information. Also, a generally higher education level among people from this village probably contributed to their knowledge of usufruct rights. In theory, people are allowed to access areas outside the Park, so-called buffer zones, for medicinal plants, firewood, poles, water, grazing or fodder collection, and for some types of non-timber forest products. But because such areas do not exist in reality (apart from the hunting concessions), they rarely use those rights because professional hunter guides claim that people's presence in hunting concessions is incompatible with their activity. Indeed, not only may accidents occur, but also tourist hunters are uncomfortable shooting in areas with frequent human movement.

An environmental education programme could be one way of changing people's attitudes towards PAs since they could

see such a programme as a benefit. Surprisingly, only 8% of the local people were against the Wildlife Policy. This suggests that their response may not only be a direct consequence of what they actually experience. However, complaints were made over the restrictions linked to the use of the wildlife resource. Thus increasing local people's access to resources and/or more involvement in wildlife management may enhance their support and promote the sustainability of the BWCA (Cartwright 1991; Brown & Wyckoff-Baird 1995; Ite 1996). Furthermore, the development of adequate compensation strategies may improve people's attitudes, as the losses due to wildlife have been reported to be economically important and so far nothing has been done to reduce this problem (Weladji & Tchamba 2003).

We predicted that local people might be more negative toward the Wildlife Policy than the Park staff, but that was not the case. The Park staff was negative about the Wildlife Policy, despite the fact that they were in charge of its implementation. The Park staff faced many problems, such as low salary levels (about US\$ 80 per month) and poor equipment, which might affect their working morale. Park staff were unable to reach the hunting concessions because of a shortage of vehicles. Thus, it was difficult for them to control the professional hunter guides during safari hunting operations.

CONCLUSIONS AND RECOMMENDATIONS

Local people had quite positive perceptions of PAs, despite experiencing serious economic losses and deprivations. This can partly be explained by people's recognition of the intrinsic value of wildlife resources, and also by some received benefits from living close to the Park. Local people expressed more positive attitudes to the Park than to the system of hunting concession areas and professional hunters, mainly because of rivalry concerning use of resources, which created regular incidences of tension and conflicts between the hunters and local people. That people's attitudes towards both the BWCA and the Wildlife Policy varies among communities reflects their heterogeneity (Table 1).

Despite having poor knowledge of the current Wildlife Policy and usufruct rights, most of the local households expressed support for the policy, but they called for increased local involvement in management, off-take and the harvesting of benefits from both Park and concession hunting activities. The Park staff were sceptical about local participation in this context, and saw such endeavours as a threat to a sound biodiversity management scheme. Most of the professional hunter guides agreed with the current wildlife Policy, but wanted it to be strengthened and enforced, while the majority of Park staff found the present policies inappropriate. Thus, the findings of this study clearly show that attitudes towards the Wildlife Policy vary with the interests of different stakeholders.

The findings of this study indicate the need to strengthen the current Wildlife Policy, promote the involvement of local

people and empower the Park staff, both in terms of resources, but also in terms of skills in interacting with local people. The revised Policy should be designed flexibly so as to vary according to the category of protected area and to site-specific adaptations. It should be possible to cater for local heterogeneity concerning ecological, agro-ecological, socio-economic and cultural variations. The Policy must ensure that real power and authority are devolved to local people and to existing and appropriate local institutions. Local people must incur reduced costs and increased incomes from Park-related resources. Such measures will increase both legitimacy and efficiency of conservation efforts. An environmental education programme is recommended to extensively disseminate the policy and its practical implications to user groups in the area. Park staff must be explicitly trained in working with local people and must be made to realize through experience that local participation is a slow and long-term process of social change.

ACKNOWLEDGEMENTS

The Norwegian Agency for Development Cooperation (NORAD) supported this study. We are grateful to Dr Hubert Planton for help with the map and to Dr Gufu Oba for useful comments. We extend our gratitude to the people of the surveyed communities, the Park authority and the professional hunter guides for their help throughout. The Ministry of Scientific Research and the Ministry of Environment and Forestry of Cameroon provided the research permit.

References

- Anderson, D. & Grove, R. (1987). *Conservation in Africa: People, Policies and Practice*. Cambridge, UK: Cambridge University Press.
- Anon. (1975) République du Cameroun: Atlas Régional Bénoué. Yaoundé, Cameroon: ORSTOM, Centre de Yaoundé.
- Anon. (1998) Rapport d'inventaire faunique dans le Parc National de la Bénoué. Unpublished report, WWF -Projet Savane du Nord, Garoua, Cameroon.
- Anon. (2000) Cameroon Black Rhino Conservation Strategy Technical Mission. Unpublished meeting report, WWF Cameroon Programme Office, Yaoundé, Cameroon.
- Balakrishnan, M. & Ndhlovu, D.E. (1992) Wildlife utilization and local people: a case study in Upper Lupande Game Management Area, Zambia. *Environmental Conservation* 19: 135–144.
- Brown, M. & Wyckoff-Baird, B. (1995) *Designing Integrated Conservation and Development Projects, Revised Edition*. Landover, USA: Corporate Press.
- Cartwright, J. (1991) Is there hope for conservation in Africa? *The Journal of Modern African Studies* 29: 355–371.
- Colchester, M. (1996) Beyond 'participation': indigenous peoples, biological diversity conservation and protected area management. *Unasylva* 186: 33–39.
- De Boer, W.F. & Baquete, D.S. (1998) Natural resource use, crop damage and attitudes of rural people in the vicinity of the Maputo Elephant Reserve, Mozambique. *Environmental Conservation* 25: 208–218.
- Depierre, D. & Vivien, J. (1992) *Mammifères Sauvages du Cameroun*. Paris, France: CIRAD, Ministère de la Coopération.
- Durbin, J.C. & Ralambo, J.A. (1994) The role of local people in the successful maintenance of protected areas in Madagascar. *Environmental Conservation* 21: 115–120.
- Fiallo, E.A. & Jacobson, S.K. (1995) Local communities and protected areas: attitudes of rural residents towards conservation and Machalilla National Park, Ecuador. *Environmental Conservation* 22: 241–249
- Fletcher, S.A. (1990) Parks, protected areas and local populations: new international issues and imperatives. *Landscape and Urban Planning* 19: 197–201.
- Gadgil, M. (1992) Conserving biodiversity as if people matter: a case study from India. *Ambio* 2: 266–270.
- Gillingham, S. & Lee, P.C. (1999) The impact of wildlife-related benefits on the conservation attitudes of local people around the Selous Game Reserve, Tanzania. *Environmental Conservation* 26: 218–228.
- Grimble, R. & Wellard, K. (1996) Stakeholder methodologies in natural resource management; a review of principles, contexts, experiences and opportunities. *Agricultural Systems* 55: 173–193.
- Grimble, R., Chan, M., Aglionby, J. & Quan, J. (1995) *Trees and Trade-offs: a Stakeholder Approach to Natural Resource Management*. Gatekeeper Series, Volume 52. London, UK: IIED.
- Gurung, C.P. (1995) People and their participation: new approaches to resolving conflicts and promoting cooperation. In: *Expanding Partnerships in Conservation*, ed. J. A. McNeely, pp. 223–233. Washington DC, USA: Island Press.
- Harmon, D. (1987) Cultural diversity, human subsistence, and the national park ideal. *Environmental Ethics* 9: 147–158.
- Heinen, T.J. (1993) Park people relations in Kosi Tappu Wildlife Reserve, Nepal: a socio-economic analysis. *Environmental Conservation* 20: 25–34.
- Hulme, D. & Murphree, M.W. (2001) *African Wildlife and Livelihoods. The Promise and Performance of Community Conservation*. London, UK: James Curry.
- Infield, M. (1988) Attitudes of rural community towards conservation and a local conservation area in Natal, South Africa. *Biological Conservation* 45: 21–46.
- Infield, M. & Namara, A. (2001) Community attitudes and behavior towards conservation: an assessment of a community conservation programme around Lake Mburo National Park, Uganda. *Oryx* 35: 48–60.
- Ite, U.E. (1996) Community perceptions of the Cross River National Park, Nigeria. *Environmental Conservation* 23: 351–357.
- IUCN (1994) Guidelines for protected areas management categories. Unpublished document, CNPPA with the assistance of WCMC, IUCN, Gland, Switzerland and Cambridge, UK.
- Koulagna, K.D. & Weladji, R.B. (1996) Gestion participative des aires protégées de la province du Nord Cameroun. Unpublished report, Editions SNV Cameroon 12/96.
- Lewis, C. (1996) *Managing Conflicts in Protected Areas*. Gland, Switzerland and Cambridge, UK: IUCN.
- Lewis, D., Kaweche, G.B. & Mwenya, A.A. (1990) Wildlife conservation outside protected areas – lessons from an experiment in Zambia. *Conservation Biology* 4: 171–180.
- Marks, S.A. (1984) *The Imperial Lion: Human Dimension of Wildlife Management in Central Africa*. Boulder, USA: Westview Press.
- Mbaruka, J.Y. (1996) Park people border interactions: the case of Mikumi National Park and the surrounding communities,

- Tanzania. M.Sc. thesis, Agricultural University of Norway, Ås, Norway.
- McNeely, J.A., ed. (1993) *Parks for Life: Report of the IVth World Congress on National Parks and Protected Areas*. Gland, Switzerland: IUCN.
- Mehta, J.N. & Kellert, S.R. (1998) Local attitudes toward community-based conservation policy and programmes in Nepal: a case study in the Makalu-Barun Conservation Area. *Environmental Conservation* 25: 320–333.
- Minitab Inc. (1999) Minitab for Windows, release 13. Minitab Inc., Quality Plaza, USA.
- Moe, S.R. & Kapela, E.B. (1990) Conservation attitude of agro-pastoralists adjacent to Tarangire National Park in Northern Tanzania. *Oryx* 24: 186–188.
- Mordi, R. (1987) Public attitudes towards wildlife in Botswana. Ph.D. thesis, Yale University, New Haven, Connecticut, USA.
- Newmark, W.D., Leonard, N.L., Sariko, H.I. & Gamassa, D.M. (1993) Conservation attitudes of local people living adjacent to five protected areas in Tanzania. *Biological Conservation* 63: 177–183.
- Newmark, W.D., Manyaza, D.N., Gamassa, D.M. & Sariko, H.I. (1994) The conflict between wildlife and local people living adjacent to protected areas in Tanzania: human density as a predictor. *Conservation Biology* 8: 249–255.
- Obiri, J.A.F & Lawes, M.J. (2002) Attitudes of coastal-forest users in Eastern Cape Province to management options arising from new South African forest policies. *Environmental Conservation* 29: 519–529.
- Parry, D. & Campbell, B. (1992) Attitudes of rural communities to animal wildlife and utilization in Chobe Enclave and Mababe Depression, Botswana. *Environmental Conservation* 19: 245–252.
- Sah, J.P. & Heinen, J.T. (2001) Wetland resource use and conservation attitudes among indigenous and migrant peoples in Ghodaghodi Lake area, Nepal. *Environmental Conservation* 28: 345–356.
- Stark, M.A. & Hudson, R.J. (1985) Plant communities structure in the Bénoué National Park, Cameroon: a cluster association analysis. *African Journal of Ecology* 23: 21–28.
- Tchamba, N.M. (1996) Elephants and their interactions with people and vegetation in the Waza-Logone region, Cameroon. Ph.D. thesis, University of Utrecht, The Netherlands.
- Vedeld, P. (2002) The process of institution-building to facilitate local biodiversity management. NORAGRIC Working Paper 26, Agricultural University of Norway, Ås, Norway.
- Walpole, M.J. & Goodwin, H.J. (2001) Local attitudes towards conservation and tourism around Komodo National Park, Indonesia. *Environmental Conservation* 28: 160–166.
- Weladji, R.B. & Tchamba, N.M. (2003) Conflict between people and protected areas within the Bénoué Wildlife Conservation Area, North Cameroon. *Oryx* 37: 72–79.
- Weladji, R.B. (1998) Interactions between people and protected areas: The case of the Bénoué Wildlife Conservation Area, North Cameroon. M.Sc. thesis, NORAGRIC, Agricultural University of Norway, Ås, Norway.
- West, P.C. (1991) Introduction. In: *Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation*, ed. P. C. West & S. R. Brechin, pp. XV–XXIV. Tuscon, USA: The University of Arizona Press.