Rural people's perceptions of wildlife conservation – the case of the Masebe Nature Reserve in Limpopo Province, South Africa

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The First World rationale for nature conservation is usually the aesthetic and recreational experiences and opportunities that nature provides and its scientific importance, but rural populations in Africa tend to focus on the utilisation of natural resources. This paper argues that management decisions regarding the conservation and utilisation of natural resources are inseparable from a people's world view and value system, because values inform people's ideas about useful or valuable resources, appropriate behaviour and their priorities regarding issues such as grazing, hunting versus poaching, job creation, tourism, and access to sacred sites and natural resources.

The objective of this study was to gain insight into the perceptions of wildlife conservation among the North Ndebele in Limpopo Province to create a climate in which the community can become involved in issues regarding policy matters and the management of the Masebe Nature Reserve.

Key words: Langa Ndebele, Masebe Nature Reserve, nature conservation, perceptions, management, environmental education, poaching, financial benefits.

Introduction

Rapid growth in human populations and the resulting misuse and degradation of the land are among the most important reasons given for the decline in Africa's wildlife heritage and the persistent poverty of its rural people. In Limpopo Province, 88% of the province's population of more than 6 million live on 33% of the Province's surface area of 4 million hectares. Unemployment is estimated at about 60% of the population, with the result that the majority of the population rely directly on environmental resources, such as the topsoil, plants, trees, animals, grazing and water, for their livelihood (De Beer 1999:20).

In Africa, nature reserves have been established – largely by means of a top-down approach – in order to protect the environment from over-exploitation and to encourage ecotourism in particular areas. Because of disappointing results regarding conservation in many places elsewhere in the world, a bottom-up approach has been recommended by conservationists and development specialists since the late 1970s. They argue that the inclusion of local communities in conservation, and particularly in wildlife management, is an indispensable element of successful conservation (Kiss 1990:vi, 9-12; Wells & Brandon 1992:42-47; De Beer 1999; Gibson 1999:119; Wels 2003).

The principle underlying involvement of local communities in wildlife conservation implies that local people should participate actively in project planning and implementation, which in turn would encourage them to take ownership of wildlife conservation in their own areas. The success of any community-based wildlife conservation initiative would "depend on ensuring that individuals derive benefits from conservation and sustainable management of the resource"

(Kiss 1990:iii; cf IIED 1994:21; Furze, De Lacy & Birckhead 1996:11-12; Sibanda & Omwega 1996:180; Kloppers 2001:9,13; De Villiers 2008).

However, very few of the expectations raised by this principle have been met. With a few exceptions, such as the Amboseli and Maasai-Mara National Park in Kenya, the Queen Elizabeth Park in Uganda, the Sangha Rain Forest Reserve in the Democratic Republic of the Congo, the Luangwa Integrated Rural Development Project (LIRDP), the Administrative Design for Game Management (ADMADE) in Zambia, and previously also the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe (Bell 1987:95-96; Child 1991:7-10; Els 1996:27-34), wildlife conservation in protected areas that are surrounded by or adjacent to local communities *de facto* remains the responsibility of provincial governments and official conservation agencies (Els 1996:35; Harrison 2001:209-219; Kloppers 2001:14-30).

Moreover, experience has proved that it is not easy to involve local people in the planning and implementation of wildlife conservation programmes. One of the main reasons for this is the struggle to find the correct balance between the economic development of people and the conservation of wildlife. In most cases, the focus has been on wildlife conservation rather than on the socio-economic development of people (Kloppers 2001:12; cf Twyman 2000; Wells & Brandon 1992:3).

It is telling that, despite the theoretical emphasis on the involvement of local communities, most literature sources fail to identify the people concerned. They also usually fail to describe the people's particular relationship with the local natural environment. Hence, one has to agree with Kloppers

(2001:29), one of the few exceptions to this tendency, who, referring to transfrontier conservation areas, comments that this failure to identify the people concerned "illustrates a lack of insight or comprehension of the importance of the cultural systems of the indigenous peoples in areas designated for ...(c)onservation and the effect their cultural systems will have on the eventual successful establishment of ...(c)onservation (a)reas".

To encourage local people to protect rather than hunt animals, they have been offered an array of benefits, for example, employment as rangers and as general labourers. Some traditional leaders have been given control over the revenue generated by ecotourism which they could then apportion to their communities. However, Gibson (1999:119) reports that, although the agencies that offered jobs in conservation have often also provided essential infrastructural development (schools, health clinics, roads), and engaged in other community level projects, local people have continued to kill, consume and illegally trade wild animals.

This paper argues that nature conservation is inseparable from a people's world view and their concomitant values, because values inform people what they should consider 'useful' or 'valuable' resources, and their values affect their norms and the priorities that they set. The key to a people's world view is their local knowledge, which is largely the result of structured experiences and of underlying values that are often unarticulated, but which guide people's behaviour to a considerable extent (cf Semali & Kincheloe 1999:49; Eckert, De Beer & Vorster 2001:92).

This paper reports on a study of the perceptions of the Masebe Nature Reserve in Limpopo Province of South Africa among the local population, with particular reference to their attitudes to nature conservation and their involvement in decision making, policy-making and the management of the Reserve. Their perceptions of poaching and the introduction of (sports) hunting as a possible solution to the problem are also considered.

The rest of the paper is structured as follows: wildlife conservation is briefly contextualised in terms of its relation to local communities, and background information on the Masebe Nature Reserve is given. Next, the method of investigation is outlined. Findings regarding the management setting of the Masebe Nature Reserve are then presented, followed by comments on the cultural impact of the establishment of the Masebe Nature Reserve. Finally, the findings are discussed, and conclusions are presented.

Contextualisation

The principle of wildlife conservation, as an action that is primarily focused on a particular demarcated natural environment at a given time in order to preserve the unspoilt nature it contains in toto, has been implemented internationally since the beginning of the twentieth century. For at least the first six decades of the twentieth century, this approach, which ensured that protected areas were established for the purposes of the preservation of unspoilt nature, was followed internationally (Webb 1991:824).

However, little or no consideration was originally given to the local communities that lived adjacent to these protected areas and who could potentially have benefited from such initiatives. In fact, local communities were rigorously excluded – not only in terms of their physical location, but also as regards their participation in decision making and the planning of wildlife conservation. Protected areas were managed on the basis of laws and regulations. Any offences linked to wildlife conservation were therefore severely punished. Africans were commonly denied access to protected areas and were even prohibited from killing animals from the reserves that damaged their crops or killed their livestock. This approach towards nature conservation caused great discontent among local people, especially as their exclusion from protected areas meant that they were simultaneously deprived of economic opportunities from hunting, farming and tourism that could accrue to them (Wells & Brandon 1992:1; Els 1996:18; Harrison 2001:206).

This approach also involved the demarcation and reservation of relatively large areas for the purposes of wildlife conservation and the preservation of ecological and other aesthetic features, and this was enforced by legislation. This was also the principle according to which game and nature reserves were demarcated and managed in Africa, and in South Africa in particular (Anderson & Grove 1987:8; Bell 1987:80-81).

Only since the 1980s, and specifically after the 1980 World Conservation Strategy conference and the 1982 World Congress on National Parks in Bali, has it been more widely recognised, by social scientists, conservationists and managers of protected areas alike, that effective wildlife conservation is only possible with the direct support and involvement of local people in the management and planning of protected areas. Such effective involvement could be achieved by means of education, revenue sharing, participation by local people in decisions, appropriate development schemes near protected areas and, where compatible with the objectives of a protected area, access to the resources (Wells & Brandon 1992; cf Harrison 2001:206).

In South Africa, these principles and objectives have been adopted by wildlife conservation institutions. Primary among them is the principle that wildlife conservation and rural development should not be regarded as opposites in conflict with each other, but as mutually supportive and interdependent. This principle became embodied in management in most of the former Bantustan areas of South Africa, and since the 1994 elections, has been continued by the current democratic government. For a more complete exposition of the development of wildlife management in South Africa see Grove (1987:21-39) and Els (1996:34-41).

There is therefore growing recognition that the effective long-term management of protected areas depends largely on the support and direct involvement and cooperation of local people and that "it is neither politically feasible nor ethically justifiable to exclude the local people, who are poor and have limited access to reserves, from protected areas without providing them [with an] alternative means of livelihood" (Wells & Brandon 1992:2; cf Furze et al. 1996:22; Kloppers 2001:9).

In practice, this recognition implies that a very fine balance must be maintained between wildlife conservation in protected areas and its contribution to the economic development of local people adjacent to such areas. The involvement of local people in issues of nature conservation in protected areas also implies that at least two scientific fields, the social and natural sciences, have been drawn together to supplement each other. In the field of the social sciences, the question concerning the contribution anthropologists can make to the planning and management of protected areas arises.

From an anthropological perspective, this paper argues that, as already indicated, the planning and management of wildlife conservation in protected areas cannot be separated from a people's world view and concomitant values, since values inform people about what they should consider 'useful' or 'valuable' resources, and influence their norms and the priorities that they set. The key to people's world view is their local knowledge, which is largely the result of structured experiences and underlying values that are often unarticulated, but which effectively guide people's behaviour (cf Semali & Kincheloe 1999:49; Eckert, De Beer & Vorster 2001:92).

Within the field of anthropology, valuable work on world views and value systems has been done *inter alia* by Forde (1954), Foster (1973), Coertze (1980), Kearney (1984), Hoff (1990) and Kriel (1992). These contributions are particularly significant as far as this study is concerned.

The anthropologist Oscar Lewis (1960) describes values in terms of what he calls the culture of poverty, while Foster (1965) describes values as "a culture's characteristic way of perceiving, interpreting and explaining the world. However, these definitions are only helpful in so far as they introduce the reader to the concept of values. The description of values postulated by Coertze (1980:45) is preferred for the purposes of this study - in his view the existence of value systems among people should be ascribed to the cohabitation of people and their cooperation and mutual responsibility in the life process. In this process, members of the group develop consensus about the value of phenomena, behaviour, the aesthetics and utility of things. These values are based on a culturally subjective judgement about the truth of reality and are interpreted against a background of indigenous knowledge which has been accumulated over generations. People determine what reality is within group context.

According to Hoff (1990:9), Kearney (1984) was the first anthropologist after Redfield (1952, 1953) to succeed in indicating the existence of a universal structure or world view in human societies. This structure consists of people's views of the Self, the Other, the relation between the Self and the Other, nature, the supernatural, causality, space and time (Kearney 1984:71-106). As with value systems, an understanding of the concept of a world view is important to understand people's perceptions of wildlife conservation and is therefore, implicit in the description and explanation of the collected data.

It is striking that relatively few studies have been done, particularly in South Africa, on people's perceptions of wild-life conservation in the context of their world view and value systems. It should be noted however, that here it is possible to distinguish broadly between a general African world view and a general western world view. The research of De Beer (1995, 1996, 1999), Eckert, De Beer and Vorster (2001), Els (1996) and Kloppers (2001) represent valuable contributions

in this regard. Els (1996) and De Beer (1995) focus on the sustainable utilisation of renewable resources, while De Beer (1996, 1999) focuses on the perceptions of mountains among a group of people residing in Limpopo Province. A study by Brasher (2000) investigates the perceptions of nature conservation among female Tsonga employees in the Kruger National Park (in the latter study, the topic was approached from the perspective of psychology, not anthropology – as a result, the perceptions of the women as manifestations of their world view and value system were not really explored).

The objective of this study is to build on the research that has already been done by shifting the emphasis slightly, specifically by focusing on a particular community's perceptions (that of the Langa Ndebele) of wildlife conservation in a protected area (the Masebe Nature Reserve) as a manifestation of their world view and value system.

The Masebe Nature Reserve

The Masebe Nature Reserve is situated 90 kilometres to the north-west of Mokopane in Limpopo Province. It comprises an area of 4 500 hectares and forms part of the Langa Ndebele chiefdom of Chief Phillip Bakenberg.

The Nature Reserve is characterised by impressive mountains with sandstone formations that form part of the Waterberg mountain range, a wide variety of indigenous trees, as well as a considerable variety of antelope including kudu, eland, klipspringer, bushbuck and impala. There are also giraffes in the Reserve. With the exception of leopards (which are rarely seen), there are no predators in the Reserve, and other members of the so-called 'Big Five' (elephant, buffalo, rhinoceros and lion), as well as hippopotami are also not found there either.

Rock paintings have been found on the sandstone under overhanging cliffs in the mountains. A number of historical sites, including an archaeological and a historical site, Magagamatala (one of the mountains in the range in the Reserve), contribute to the Masebe Nature Reserve's attractiveness as a tourist destination. Magagamatala's historical significance lies in the fact that it is the site where the Langa Ndebele were attacked and defeated by a Boer punitive expedition under the command of Commandant-General Stephanus Schoeman and his commandant, Paul Kruger, later the President of the Zuid-Afrikaansche Republiek, to avenge the massacre of a group of Voortrekkers and their leader, Hermanus Potgieter (Jackson 1981:13-18).

The Masebe Nature Reserve was established around 1984, when the former homeland government of Lebowa approached the Langa Ndebele chief and his councillors to develop 4 500 hectares of trust land as a nature reserve. It was not necessary to resettle anyone, but the fencing of the area meant that at least two of the seven villages surrounding the Masebe Nature Reserve are situated just outside the fence. As is discussed later in this paper, this has a number of implications regarding residents' perceptions of nature conservation. The other five villages are all close to the Masebe Nature Reserve (none is further than five kilometres away). Moreover, the grazing camps of these villages border on the Masebe Nature Reserve.

Method of investigation

Each of the seven villages surrounding the Masebe Nature Reserve is subject to the authority of a village headman (ntona). As a first step in this study, interviews were conducted with the seven village headmen (mantona) collectively during March 2009.

Thereafter, from March until the end of May 2009, group discussions were held with all the residents of the seven villages surrounding Masebe who were prepared to attend the meetings on a voluntary basis. These groups consisted of approximately 35 people each, but, in the case of one particular village, more than 64 residents attended the group discussion. These village groups included men and women, old as well as young people. A considerable effort was made to encourage them to participate freely. Because of time limitations, school pupils' perceptions of nature and nature conservation could not be investigated. Hence, this study should be regarded as exploratory in nature and forms part of an ongoing project in the area. In the first instance, people were encouraged to express their views - both negative and positive - about the Masebe Nature Reserve in general terms. In each of the focus group discussions, the group participants' initial response was to raise their grievances rather than to point out any positive issues, but they were then requested to comment on any positive aspects, if they could think of

Following these group discussions, in-depth interviews were held with individuals who had stood out in the group interviews because of their ability to express themselves clearly on issues regarding nature conservation and the Masebe Nature Reserve. These in-depth interviews were conducted using a fairly open interview format. A deliberate effort was also made to interview particularly women and young people who did not attend school, since not all women and young people in rural areas feel free to express themselves spontaneously in the presence of men, especially older men. Although the interviews were essentially unstructured, questions focused on access to, control over and the utilisation of the natural resources in the Masebe Nature Reserve.

Management setting

Like other rural communities in Limpopo Province, the Langa Ndebele, in whose area the Masebe Nature Reserve is situated, are organised into a chiefdom. The chief and his traditional council (which consists of members of the royal family and most village headmen) form the local administration. Since 1994, the area has also become part of the Bakenberg Local Authority. The chieftainship is hereditary and the chief has to perform a number of duties, among which land management and justice (judicature) are particularly important. He is supported by his village headmen (mantona) in the performance of these duties.

Although this traditional management system is in place, the Masebe Nature Reserve is actually managed by the Masebe Nature Reserve Management Committee. This Committee consists of the *mantona* of the seven villages, two elected members from each village, the Reserve Manager, the Manager of the Camp which was established by the government during the apartheid era, members of the provincial Department of Environmental Affairs and Tourism, as well as

members of the local authority. This implies that the seven surrounding villages are strongly represented on the Management Committee, since the majority of this Committee's members (21 in total) are residents of the seven surrounding villages.

When people were asked during the group discussions to whom the Masebe Nature Reserve belongs, the majority replied that they thought that it belongs to the seven villages and communities, or at least that it should belong to them. This answer was clearly inspired by the fact that all the people interviewed were of the opinion that the chief and his councillors withheld money that rightfully belongs to the people. Further interviews brought to light that all the income received from the Masebe Nature Reserve is first paid to the Department of Environmental Affairs and Tourism, after which 50% is paid into a 'community account'. A trust account for the Masebe Nature Reserve was opened during the 1990s into which this money could be transferred. According to the participants, to date no money has been paid into this account, which annoys the residents, and is the reason they claim they do not benefit from the Masebe Nature Reserve.

According to the seven mantona, 10% of the 50% allocated to the community by the government should go to the chief. Although his councillors are not entitled to any part of the 10%, the councillors apparently insist on being remunerated. The chief and at least one councillor should sign for any withdrawals from the bank account, but the designated councillor is not prepared to sign, with the result that this money lies dormant in the community council's bank account. For the same reason, it can also not be transferred to the trust account of the Masebe Nature Reserve. Interestingly, the Masebe Nature Reserve Management Committee is only represented at the traditional council of the chief by one ntona. Apparently he has not been able to resolve the money matter with the traditional council. As a result, the members of the Management Committee question his capabilities.

The seven village headmen were also quite explicit in stating that there was no proper communication between government and the seven villages surrounding the Reserve. They ascribed this situation to the alleged irregularity of meetings held by the Masebe Nature Reserve Management Committee. They also claimed that decisions taken by government were only conveyed to the Camp Manager and the Reserve Manager and that they had never been informed or consulted. As a result, they described the link between the mantona of the seven villages on the one hand, and the Camp and Reserve Managers on the other hand, as poor.

An investigation of the minutes of the meetings of the Masebe Nature Reserve Management Committee, however, revealed that the meetings were well scheduled and had been held regularly in the past. They also showed that concern was repeatedly expressed at meetings about the poor attendance by some *mantona*. Further inquiry showed that only three of the seven village headmen attended the meetings regularly. According to the chairperson, this absence from the meetings should be ascribed to the absentees' seeing no sense in attending because they believe that the Masebe Nature Reserve is of no benefit to them.

It is clear that the way the money is managed has caused

discontent and tension, not only between the chief-in-council and the Masebe Nature Reserve Management Committee, but apparently also between the chief and his councillors, as well as among the members of the Masebe Nature Reserve Management Committee.

Furthermore, the reluctance of some mantona as members of the Management Committee to attend meetings should be regarded as a point of great concern, since this could be an indication of the degree of interest (or lack thereof) by local people to become involved at grassroots level. If the village leaders are not involved, it would be unrealistic to expect the ordinary villagers to become involved. In addition, village members expressed their dissatisfaction with the top-down approach adopted by the government because they felt that their needs have not been recognised and that they have not been involved in any of the decisions that have been taken. A first step to ensure village participation would be to ensure that the village headmen and the elected representatives attend the meetings of the Masebe Nature Reserve Management Committee regularly. They have a responsibility in this regard, since as an indigenous expression states: ntona ke ntona ka batho - a village headman is a village headman by (his) people.

Meetings between the Masebe Nature Reserve Management Committee and the traditional council are also not held regularly. According to the mantona of the seven villages, the communication between them and the Camp Manager and Reserve Manager is also poor, and requests are not always heeded.

The cultural impact of the establishment of the Masebe Nature Reserve

Lack of financial benefits

Those who were interviewed complained that they did not receive or experience any financial benefits from the Masebe Nature Reserve. When the Masebe Nature Reserve was established, the understanding was that hunters from outside the community would receive concessions for culling purposes. At first, the meat was supplied to the chief, and community members could buy the meat at the community offices. In the mid-1990s, this practice was extended to the mantona of the villages surrounding the Reserve. According to the chairperson of the Masebe Nature Reserve Management Committee, the community members had to buy the meat at the Reserve during culling time. From the Minutes, it appears that the different villages were supplied with venison, such as kudu.

According to the Minutes of May 17, 1997, the income from hunting in 1996 that was earmarked for the bank account of the Masebe Nature Reserve Management Committee was R13 650-00. If one takes into account that 50% of the money earned by the Masebe Nature Reserve goes to the Department of Environmental Affairs and Tourism, the income from hunting on the Reserve during 1996 must therefore have been at least R27 300-00. However, according to the mantona, nothing was paid into the trust account that was opened for Masebe Nature Reserve. An enquiry about why the money was not paid into this account elicited the response from the chairperson of the Masebe Nature Reserve Management Committee that each village had to have a tourism-related development project before any money would be paid into the trust account. No documentation was available to support this explanation.

Grazing

The most important effect of the establishment of the Masebe Nature Reserve has been the fact that people in each of the seven villages have been deprived of part of their grazing. According to the cattle owners who were interviewed, some of them have lost considerable numbers of cattle during times of drought since the establishment of the Reserve in the mid-1980s. Closer investigation revealed that cattle owners did not reduce the numbers of their livestock after the fencing of Masebe, which means that grazing per head has been considerably reduced.

At the time the research was done, many individual cattle owners had more than 35 head of cattle. The value of cattle is not primarily economic - according to the village headmen, many residents still prefer cattle as a means of paying marriage goods. The number of cattle delivered as marriage goods (bogadi) is usually six head of cattle, the equivalent of anything between R 10 000 and R 15 000 (ca. €800 and €1 280). Hence, it is clear that, in this community, cattle have not lost their social and even religious value, as they are still used for sacrifices to the ancestral spirits, and slaughtered for funerals.

Firewood

Participants said that the fencing of the Masebe Nature Reserve has had a particularly negative effect on women, since it prevents them from collecting firewood. Women of the seven surrounding villages are only allowed to collect firewood in the Reserve for funeral purposes and on condition that they first obtain permission from the Reserve Manager.

Poaching

The incidence of poaching in the Masebe Nature Reserve is high. The poachers are usually residents from the surrounding villages. The poached meat is either used for personal consumption or sold from the poachers' homes to other villagers. The village headmen (mantona) are not actively involved in the prevention of poaching. Prevention is left to game rangers who have been appointed specifically for this purpose. During the course of the field research, two poachers were caught in the act by the game rangers employed at the Masebe Nature Reserve and handed over to the police. Both poachers came from one of the surrounding villages.

From the Minutes of the Masebe Nature Reserve Management Committee, it was clear that poaching is indeed a matter of great concern. The main reason that participants gave for poaching was the perception among the residents that they do not benefit from the Reserve in any way. When they were asked how poaching could be prevented, participants' first response was that game rangers should be employed. When it was pointed out to them that game rangers are in fact employed at the Masebe Nature Reserve and that poaching still continues, the majority said that poaching could only be combated successfully if people benefitted from the Reserve in some way.

Job creation

When the participants were asked for suggestions on how villagers could benefit from the Reserve, many proposed the creation of job opportunities as a solution. When they were asked how many people could be employed, they suggested twenty people from each village. When it was pointed out that this would imply that 140 people would have to be employed at the Reserve and that it was doubtful whether there were sufficient job opportunities, it became clear that the participants had no real idea of what was happening at the Reserve and the nature of the developments. This conclusion was confirmed by the participants.

Another proposal was that people could sell arts and crafts to visitors. Despite the fact that there is a Tourism Association for the Langa Ndebele, nobody had previously thought of or mentioned the potential of village tourism as a means of benefitting indirectly from the Reserve. Furthermore, despite the poaching and the fact that hunting concessions were previously issued to outsiders, nobody has proposed hunting as a source of benefit from the Reserve. Only when they were asked about this did they respond favourably.

Permit hunting

When hunting was suggested as a means of benefitting from the Reserve, the participants expressed divergent opinions. Some participants condemned hunting as too dangerous because they thought it could endanger the lives of visitors and people living next to the fence. They were also of the opinion that the Reserve was not big enough for hunting, with the result that tourism was the option about which there was most agreement. Most of the participants made it clear that they were opposed to the introduction of predators and other wild animals that they deemed dangerous (elephant, rhinoceros and buffalo) to the Reserve, since it is located too close to the surrounding villages. When it was explained to the participants that fencing the Reserve implies that game would have to be culled, as has been done in the past, to keep numbers within the carrying capacity of the Reserve, they replied that they understood this argument, but that such culling or hunting should be done by hunters from outside, who could then pay for the privilege of doing so. The participants also maintained that it would encourage poaching if local people were allowed to hunt. They did not believe that issuing hunting permits to local people would really control or prevent poaching.

Some participants argued that money should be generated by means of both tourism and hunting. The meat should then be sold to village residents. They suggested that hunting permits be issued to hunters by the Masebe Nature Reserve, because of the belief that the Reserve belongs to the residents of the surrounding villages. Those who were not sure or who said that the Reserve belongs to the chief did say, however, that the Reserve should belong to the seven surrounding villages. These participants were also in favour of local hunters, provided that they were issued with permits which not only prescribe the animal species to be hunted, but also the hunting method.

All the participants strongly opposed poaching and also vociferously condemned hunting with snares and dogs. When

they were asked to explain this idea, they responded that it is impossible to control the numbers of game killed with such methods. When they were asked whether animals did not suffer greatly when they were killed in this way, they acknowledged that this was perhaps another good reason for not allowing the use of snares and dogs.

When the participants were asked what type of weapon should be used (rifles, spears, cross-bows, bows and arrows, etc), the majority indicated that they preferred rifles. Weapons such as spears and bows and arrows are not effective they said, because the kill is not instantaneous which gives the animal the chance to escape. One old man, who had been a game ranger, stated that bows and arrows should be allowed because of their effectiveness and the fact that they do not make a noise that scares game away.

The participants were aware of the concept of sports hunting, where hunters are more interested in trophies than in the meat. However, from a local perspective, hunting should rather be motivated by the need to satisfy basic needs – either through consumption of meat or by generation of income by selling the meat to others.

Game species

Some participants felt that other species of game, including predators, should be introduced into the Masebe Nature Reserve, but that additional provision should then be made to ensure that no dangerous animals can escape from the Reserve and harm or kill people in the adjacent villages. When the participants were asked why many different species should be kept in the Reserve, they replied that visitors should be given the opportunity to see animals in the wild that they normally only see in photographs. When they were asked whether the presence of such wild animals would ensure that visitors would return to the Masebe Nature Reserve after their first visit, the participants suggested that once people have seen an animal, there is no sense in returning only to see it again. If visitors did revisit the Reserve, they would do so to relax and to enjoy what the camp has to offer in terms of good accommodation, barbeques, swimming facilities, amongst others: "There is no sense driving around looking for animals after one has seen what there is to see." Hunting is different, since it provides the hunter with an opportunity to satisfy a continuous need or desire for meat.

Views of the Reserve are divergent – some people (old and young) were adamant that the fences around the Masebe Nature Reserve 'must go down' and that they be allowed to graze their cattle on the old pastures. Others, some (young and old) acknowledged that a great deal of money has been invested in the Masebe Nature Reserve, specifically to fence it and to establish the main camp with its modern facilities, including barbeques, a swimming pool, a cool room, a conference facility, well-equipped chalets and a safari camp (the safari camp is part of the African Ivory Route concept of the Directorate Tourism of Limpopo Province). Therefore they recognise that alternative ways of benefiting from the Masebe Nature Reserve should be investigated.

Religious practices

The fencing of Masebe has also separated residents in the seven villages from their ancestral graves. This implies that

they must obtain permission from the Reserve Management to visit the graves which are important places of worship and sacrifice. Even when villagers have permission to visit their forefathers' graves, accessing the graves is an arduous process for the inhabitants of at least three of the villages. The villages are situated at the far end of the Reserve relative to the position of its entrance gate.

The seriousness of the effect of the fencing of the Masebe Nature Reserve in this context can only be understood properly when the meaning of places of sacrifice and ancestral graves is explained. Not only is it of the utmost importance for people to visit the graves of their ancestors in times of crisis, but the soil and the land itself also have religious meaning and are therefore of highly emotional significance. This is where the ancestors (badimo) are buried and where sacrifices must be made to them (cf De Beer 1995:10; 1996:4; Furze et al. 1996:19-20).

In addition, a number of natural features in the Reserve have specific religious importance. Residents of the surrounding villages mentioned one particular water source and a mountain in the Reserve as places of religious significance. This mountain was referred to as *thaba ya badimo* [mountain of the ancestors], and no ordinary villagers are allowed to climb it. Rainmaking rituals used to be performed at these places prior to the fencing of the Reserve.

According to the villagers, their requests to the Reserve Management for permission to visit this mountain for rainmaking purposes were refused. When there is a drought, as there was during the early 1990s and in 2004, the villagers are unable to make the necessary sacrifices because of the prohibition against entering the Reserve. In the villagers' opinion, if such rainmaking rituals had been performed, they could have brought great relief to the community. According to the villagers, rainmaking ceremonies are usually only performed in times of drought to obtain the assistance of the ancestors. If rain falls regularly, no sacrifices are made. This claim is in line with the findings of Mönnig (1967:60) regarding the Pedi chiefdom; he wrote: "Although the Pedi definitely claim that the ancestors give them rain, the attitude more accurately is that rain normally should fall, and if it does not it is the ancestors who withhold it ... If however, after a long period of regular rain a drought should occur then it will nevertheless be said that it is because the living forgot to thank the ancestors". Stayt's (1968:310) findings regarding Venda chiefdoms are similar: "More often than not the failure of rain is divined to be due to angry ancestors." This information also corresponds with De Beer's (1999) findings in the neighbouring Mapela chiefdom.

The understanding that people may regard rivers, water pools, forests and mountains as sacred places where sacrifices can be made to the ancestral spirits is common, not only in Limpopo Province, but across South Africa (Mönnig 1967:62; Stayt 1968:237 et seq). As has already been explained, if sacrifices are not made to the ancestors, their wrath may befall their living descendants.

In addition, people also believe in a colossal water snake known as *mamogašwa*, which is associated with rivers and pools close to mountains, its dwelling places. *Mamogašwa* is both respected and feared by humans. It is particularly feared because of the destruction it sometimes causes when it relo-

cates from one pool to another when strong winds demolish houses, uproot trees and cause havoc along its path. The mysterious character of mamogašwa is compounded by its close association with ancestral spirits and rainmakers, as mamogašwa often acts as a messenger of the ancestors if they are displeased with the behaviour of their living descendants. With the assistance of a traditional practitioner as facilitator, a sacrifice can be performed to pacify the dissatisfied ancestors and to ask for their protection against the destructive activities of mamogašwa. It is also believed that the water in the pools where mamogašwa resides has powerful healing qualities when drunk by sick people because mamogašwa occasionally vomits into the water. Lastly, if rainmakers approach mamogašwa in the correct way, they are allowed to cut out a small piece of its hide, which is then used to make the strongest rain medicine imaginable (De Beer 1999). This belief occurs among the members of the communities located along the fence of the Reserve. Young people pointed out a mountain in the Reserve where mamogašwa resides, relating how people have disappeared because they apparently unknowingly entered mamogašwa's dwelling place (cf De Beer 1996:3).

Many people, from the most traditionally oriented to apparently completely westernised individuals, believe in the existence of *mamogašwa* and speak in great detail about its enigmatic nature and its influence on people. From the perspective of nature conservation, these sentiments and beliefs should be taken into consideration in decisions regarding policy and management strategies. This also implies the need to involve local people in such processes, since they will be required to express their views regarding particular environmental issues.

It should be noted that the taboos regulating access to sacred places such as those in the Masebe Nature Reserve, almost completely preclude the use of such places in any ecotourism programme. Moreover, such taboos could contribute to the conservation of such sacred places because they may not be disturbed for fear of invoking the wrath of the ancestors. However, if people with a direct interest in these places, as is the case with the seven villages surrounding the Masebe Nature Reserve, do not have ready access to them, their views about the desirability of the designated area as a nature reserve will in all likelihood be negatively affected.

Medicinal practices

The fencing of the Masebe Nature Reserve also affects traditional practitioners. The Waterberg and the Masebe Nature Reserve are renowned for the variety of plant species found there. Medicinal plants found in the Reserve are used for almost all conceivable illnesses and for magical purposes – to ensure safe journeys, success in sport, in love affairs, and to avert any misfortune that might befall a person (cf De Beer 1999:22).

The lack of access to natural resources that are traditionally used is an issue discussed in the report commissioned from the International Institute for Environment and Development (IIED) by the Overseas Development Administration of the British Government. The report by the IIED (1994:13) remarks that "as wildlife resources are no longer owned by any particular group or community, no one feels any respon-

sibility to protect them from uncontrolled exploitation ...At the same time, not only are wildlife resources being over-exploited, but the traditional means by which they might be protected by communities are also being lost". The generally careless and negative attitude among residents of the surrounding villages regarding conservation of the Masebe Nature Reserve, despite its significance as a rich source of biodiversity as far as animal and particularly plant species are concerned, supports this statement.

Perceptions

The research confirms that people's perceptions of nature and nature conservation are based on pragmatic values. This finding contradicts the view of Bell (1987:94), who claims that aesthetic benefits are the primary motivation for conservation at all levels and that the "indirect, utilitarian benefits attributed to conservation are for the most part rationalizations used to make up for the perceived inadequacy of the aesthetic motivation". The perceptions of the Langa Ndebele in the villages surrounding the Reserve about nature conservation and its value as such is rooted in their value system, and clearly differs from western perceptions. In this regard, it should be noted that despite the exploratory nature of this research, the study shows that young and old share the same perceptions of nature and nature conservation. This finding supports the research by Eckert et al. (2001) among the neighbouring Mapela. They found that "[d]espite different levels of qualification at Mapela, attitudes about sustainable land use and nature conservation were not affected by formal knowledge acquisition". Whereas the aesthetic value of nature is emphasised by westerners as a reason for nature conservation, the utility value prevails among the inhabitants of the seven villages surrounding the Masebe Nature Reserve.

Some young men said that nature and more specifically the Masebe Nature Reserve is good because it will attract tourists and that the income received in this way could benefit the seven surrounding villages. These views also emphasise the utility value of the Reserve. Only if an animal or a tree has utility value is there any value in conserving it. Only when a tree or animal has utility value is it described as beautiful; and what is thought to be beautiful does not necessarily coincide with a western aesthetic perception. Something is beautiful because it can be used.

Environmental education

The implication of such attitudes is that plant and animal species could be over-utilised because of their pragmatic value. This means that a survey of all the plants and animals in the Reserve should be undertaken and that the people's perceptions of each type of plant and animal should be determined, taking into account differences that might exist because of a respondent's age, gender, and level of education. Time limitations did not permit the study to do justice to this matter, which leaves room for graduate research at the Masebe Nature Reserve.

In the light of such findings environmental education programmes could be launched and that the necessary adjustment to school curricula can be made to focus on practical ways of approaching wildlife conservation. Environmental education has in fact been repeatedly stated to be a priority in

the Minutes of the meetings of the Masebe Nature Reserve Management Committee. In fact, the Minutes of a meeting held as far back as September 13, 1995, state that people do not understand the importance of the Masebe Nature Reserve that this could be a reason for poaching and that the people of the villages should be educated about its significance. However, enquiry into the matter among members of the Masebe Nature Reserve Management Committee, as well as residents of the seven villages, revealed that so far no environmental education has been done in any of the villages, nor have the Masebe Nature Reserve Management Committee members received any environmental education.

As an aside to the central topic of conservation, it should be noted that the Reserve staff are responsible for the selling of culled meat. According to the chairperson, no receipts have been received by the Management Committee as proof of such sales. When staff were confronted about this matter by the Management Committee, they claimed that the money received for the meat had been sent to the responsible government department. This implies that there is an urgent need to train the Reserve staff as well as the Management Committee with regard to business ethics, basic bookkeeping and general management principles.

Findings and conclusions

Once again, the practical implications of involving local communities in the management and conservation of wildlife resources confirm a number of points, namely the importance of a proper understanding of the needs and perspectives of rural communities, strengthening local institutional capacity, communication and education, favourable economic and political policies, and of a long-term commitment by governments and organisations offering particular services (IIED 1994:18).

As far as the Masebe Nature Reserve is concerned, nature conservation has become the responsibility of the provincial government which has been responsible for all related policy-making and the implementation of all tourist ventures. Despite the representation of local people on the Masebe Nature Reserve Management Committee, benefits from tourism and hunting received by the residents of the seven surrounding villages can be regarded as largely insignificant. This finding is in line with those of the Report that was commissioned by the International Institute for Environment and Development by the Overseas Development Administration of the British Government (IIED 1994:12). In the minds of the residents of the seven surrounding villages, the Masebe Nature Reserve has not benefited them at all.

Despite the existence of a Masebe Nature Reserve Management Committee composed of representatives from each of the seven surrounding villages, top-down approach followed in practice is central to the problem. Elsewhere in the world, there has been a growing realisation of the importance of understanding the needs and perspectives of local people, of interactive communication, and of strengthening local institutional capacity. Although cognisance has been taken of such trends in the case of the Reserve, much must still be done to achieve the desired results in practice, since the participation approach in this case can be described as passive. Passive participation approaches "are characterised by central decision

The perception among local people that the Masebe Nature Reserve does not benefit them in any way is undoubtedly the single most important factor in why they express negative attitudes about the Reserve. Residents do not see any benefits such as community-based development projects generated by the income received by the Masebe Nature Reserve. In addition, access to the Reserve is generally prohibited to local people, depending on the reason for applying to enter - the authority to give permission is apparently in the hands of the Reserve staff. The Masebe Nature Reserve Management Committee, the majority of whose members represent the seven surrounding villages, has no authority to grant such permission. This is a function that has been delegated from the provincial government to the Reserve Management. Clearly, this situation has to be revisited. In this regard, Kiss (1990:18) says: "If local communities are to have any interest in incorporating wildlife into their economic activities, they must either own or control access to the land or the animals ... Mechanisms should then be developed to distribute accrued benefits not only within the community but among communities which share a wildlife resource".

It seems that the present government structures - the socalled democratic and modern institutions - are not aware of people's perceptions and world views regarding the utilisation of natural resources. It appears that in this community, the aesthetic aspect of nature is determined by its pragmatic value. Bell (1987:79-81) claims an aesthetic motivation among Africans that would lead them to protect the natural environment not only because of its utilitarian value but mainly because of its aesthetic value, but this claim is clearly not supported by the perceptions and values of the residents interviewed in the seven villages surrounding the Masebe Nature Reserve. If the outbursts of a few local people (young and old) in this regard are taken into account, it is obvious that the situation is highly volatile, and that there is potential conflict between the people at grassroots level in the seven villages on the one hand, and the local and provincial authorities on the other hand. Hence, the words of Kiss (1990:20) should not be taken lightly - she warns that "[c]onflicts may be worst in the areas surrounding gazetted parks and reserves, as there people also see land and water which they need, and which they may feel is theirs by right, being alienated and set aside for wild animals and foreign tourists".

In the world view of the people who participated in the study, natural resources and with taboos associated with them do form part of culture, as almost everything in nature normally has utility value – be it as building material, medicine or the dwelling places of ancestors endowed with a sacred character (mountains, forests). The words of Semali and Kincheloe (1999:42-43) provide some insight into the world view of indigenous people in general when they say that many indigenous peoples have traditionally seen all life on the planet as so multi-dimensionally entwined that they have not been quick to distinguish the living from the non-living. The

modernist use of the term 'environment', for example, implies a separation between humans and their environment. At what point, it may be asked, do oxygen, water, and food become part of the human organism and at what point are they separate? In this context, the indigenous peasants' belief that the rivers, mountains, land, soil, lakes, rocks and animals are all sentient may not be as preposterous as many westerners think.

From the indigenous perspective, all entities that are claimed to be sentient (rivers, mountains, land, soil, lakes, rocks and animals) nurture human beings. Furthermore, indigenous people's connection with the world around them is not so much an expression of knowing as it is one of relating. Such relating is undoubtedly a spiritual process, as not only human beings, but also animals, elements and creatures of nature, and the deities of their 'place', form part of a person's kinship system. Among indigenous people, such life forms relate to one another and work together to regenerate life. Thus, in many indigenous world views and value systems, all aspects of the universe are interrelated, making indigenous world views and perceptions in this context holistic, relational, and spiritual. In the words of Eckert et al. (2001:94): "People believe that human beings share the cosmos with other invisible forces who have great influence on the natural environment and crop yields". In such a context, the point of a conversation is not to gain knowledge, but to nurture and regenerate the world of which the individual is a part (Semali & Kincheloe 1999:43).

Hence, when the residents of the surrounding villages complain that nature conservation in the Masebe Nature Reserve denies them access to the natural resources they need (wild fruit, thatching materials, firewood, grazing, medicinal plants), as well as to certain sacred places which they deem very important to their well being, their complaint should be understood against the background of the discussion above. Furthermore, the fact that these sacred places are regulated by taboos (which almost certainly preclude their use in any eco-tourism programme, as well as their general usage) does not alter the fact that a lack of access to them influences locals people's attitudes towards nature conservation negatively if nature conservation practices are the reason why they are prevented from visiting these places.

As far as environmental education is concerned, the fact that nothing has been done in this respect, despite the fact that it was identified as a priority by the Masebe Nature Reserve Management Committee more than a decade ago, must be blamed not only on this Committee, but also on the government representatives who were responsible for the launching of such programmes. Maurial (1999:85) remarks that some indigenous communities view nature with respect, contending that it will provide for their physical well-being once they manage their interaction with it appropriately. This interaction may involve co-operating with the environment, controlling the environment, or exploiting the environment for benefit. He concludes that communities generally regard their interaction with the environment as a symbiotic process.

On the basis of the interviews, it can be concluded that the inhabitants of the seven villages who participated in this study would prefer to exploit the Reserve rather than just control it or co-operate with the environment in the sense of responsible sustainable utilisation. This unfortunate situation cannot be laid at the door of the residents only. Their involvement in policy-making, decision making and management has in practice, been nominal rather than actual.

To be successful, environmental education programmes should take the indigenous epistemological and cultural dynamics regarding nature into account if they hope to make progress in terms of nature conservation. The universalisation tendency of modernist science whereby local world views and perceptions are ignored should be rejected as a suitable approach in this regard (cf Semali & Kincheloe 1999:47-48).

To conclude, residents' dissatisfaction with the fencing of the Masebe Nature Reserve as a means to conserve nature apparently has a deeper meaning than mere economic or political ones. In the African mindset, life is not only part of an economic or political agenda, but rather includes the concept of the ultimate meaning of phenomena (cf Okafor 1982:91-92).

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