

In a rapidly changing world, the future development of community wildlife management in the Okavango Delta will depend to a large extent on how these three factors are incorporated into planning and management. For example, increasingly the geographical definition of communities as spatial entities, bounded in concession areas, is likely to be challenged by the real politics of resource competition between interest groups. Such competition over water, wildlife and the Okavango Delta itself will be determined by a process involving global, national, district and local interests. Local communities will increasingly have to address these interests.

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## The Nata Sanctuary as a community-based natural resource management project

Robert K Hitchcock<sup>1</sup>

An important area of concern involving conservation and development in Africa is the establishment of community-based natural resource management projects (CBNRMPs). An analysis of these projects reveals that some of them have been relatively successful; others have failed, in part because they do not provide the communities they are supposed to serve with sufficient benefits to offset the loss of resource access at the local level.

In the 1980s the Kalahari Conservation Society, a Botswana-based non-government organization, provided assistance to a local group that wanted to establish a conservation area in the Nata region of northeastern Botswana. Located on the northern tip of Sua Pan in the Makgadikgadi Pans region, what was to become the Nata Sanctuary is a picturesque area that consists of undulating plains, pans consisting of clays and salts (45 % of its surface area), strip gallery forest along the Nata River, which flows seasonally off the Zimbabwe Plateau. The area is known for its large numbers of migratory birds, especially flamingos and pelicans which use the area as a feeding ground and breeding area. The area also supports a variety of antelopes, including springbok, impala and kudu.

From the time the Sanctuary idea was conceived in the mid-1980s, it was visualized as a biological reserve area where people other than tourists and staff members would be excluded. The planning of the Sanctuary included discussions with people in the immediate area, including Nata Village, which is six kilometers to the northwest. Discussions about the founding and management of the Nata Sanctuary did not include people from villages along the lower and middle stretches of the Nata River where some 2,000 people reside.

Foraging continued to play a role in the diet and economies of local people, hence the importance of the Sanctuary area to local communities. A wide range of faunal and floral species were exploited, including 83 different plants, 52 mammals, 18 birds, 7 reptiles, 8 types of insects, and 3 types of fish (Hitchcock 1982, 1988). Some of these resources were important sources of income for local people, one example being palm leaves (*Hyphaena ventricosa*) which women used in the manufacture of baskets which they sold.

The construction of a veterinary cordon fence from the Botswana-Zimbabwe border to Dukwe and south along the side of Sua Pan in 1954 in order to prevent the spread of hoof-and-mouth disease had several significant impacts, and these impacts were repeated with the construction of a veterinary cordon fence through part of the Sanctuary in the 1980s. The cordon fences restricted the movements of wildebeest, zebras and other mobile species in addition to livestock and were reportedly the cause of deaths of ostriches among other species in the early 1990s. When hoof-and-mouth disease broke out among livestock herds in northern Botswana, as it did in 1958 and again in 1977-78, people were stopped from taking meat and other goods such as baskets made from palm leaves to the Kalanga area to the east of Nata. This resulted in hardship for people, since they were not able to earn income through trade. It also meant that people could not move their cattle from cattle posts to the villages, thus restricting access to milk and draft power.

In the late 1970s the government of Botswana allocated eight ranches in the Nata region to individuals and small groups (or syndicates) of cattle owners. A dozen ranches were also set aside for individuals and small groups in the Lepasha River region southeast of Nata Village. Adjudication hearings were held, and local people were told to leave these areas. Some of them moved to what came to be known as communal service centres (e.g. at Lepasha), while others moved to nearby villages and towns. The ranches have increased in number in the past decade.

<sup>1</sup>University of Nebraska-Lincoln

Extensive biological information was collected by Tim Liversedge, Karen Ross-Greer, and Bathusi Letiebare for the Nata Conservation Coordinating Committee (see Nata Conservation Coordinating Committee 1988, 1989), as well as land use planning information done for the Makgadikgadi Pans region and for the Sua Project located south of the Sanctuary (Central District Land Use Planning Unit and Kalahari Conservation Society 1989). On-site investigations have been done of vegetation, fauna, and avifauna.

A useful aspect of this project, according to the various organizations that supported it, was that it involved local and non-local people in land use and resource management decisions. However, questions were raised by people living in communities along the Nata River about access to the salt deposits in the Nata Delta that are now contained within the boundaries of the Nata Sanctuary. There have also been on-going conflicts about the collection of thatching grass and firewood and the grazing of livestock inside the Sanctuary's boundaries.

There is a lodge nearby (the Nata Lodge) which benefits from the presence of the Sanctuary and, in turn, makes services such as a restaurant and petrol station available to those visiting the Sanctuary. Some local people work at the lodge. But few other benefits and no compensation have been provided to those people who lost access to resources within the Nata Sanctuary.

Tarred roads were completed in the northern Kalahari in the 1970s-1990s that linked Nata Village with Maun, Kasane and Francistown. As a result the numbers of tourists in what had been a fairly remote part of Botswana increased significantly. These tourists are establishing camping places, utilizing scarce firewood, and purchasing crafts, and thus are having impacts on the environment and economies of local people.

An expansion in the number of CBNRM projects, including the one in the Gweta area to the west of Nata, have resulted in an expansion in the exploitation and sale of various wild plant products, including morula (*Sclerocarya caffra*). Local groups have argued that the commercialization of these items has led to a reduction in the availability of these resources for use by the poor. Like many other community-based natural resource management projects in Africa, the Nata Sanctuary and the Gweta morula exploitation programmes have served to undermine the degree to which local people have access to resources.

The Nata Sanctuary, which is 230 square kilometres in size, is located in an area formerly used by Tyua Basarwa, Bamangwato and Kalanga agropastoralists. Besides Nata Village, which is close to the Sanctuary, there are small villages and dispersed extended family compounds ranging in size from 10 to 120 people. The area was largely cattle post (*meraka*) grazing land in the past, but some people also fished in the lower reaches of the Nata River in addition to hunting and collecting salt there. They also collected wild plants and hunted in the State Lands (formerly the Crown Lands) north of the Nata River.

From the time the sanctuary idea was conceived, it took three years to form a management unit. Today the Nata Sanctuary is managed by a Board of Trustees made up of local people from four different communities along the Nata River (Nata, Modala, Manxotae and Sepako). The communities are involved in overseeing the Nata Sanctuary through their representatives, who are elected at the community level. There are a total of eight people in the Trust committee, five of them from Nata Village.

Researchers and development project personnel have yet to work out in detail strategies whereby the effectiveness of participatory approaches or the strength and capacity of local institutions for bringing about change can be assessed. If community empowerment and local participation are seen to be significant objectives, then greater attention will have to be paid to developing criteria for determining progress in these areas. Fortunately, in the case of the Botswana Natural Resource Management Project (NRMP), baseline studies have been conducted, and data have been compiled on the responses of local people to training inputs and other assistance. This information supplements that drawn from work on the Nata Sanctuary, done in part for the Kalahari Conservation Society (KCS) and for various research and development projects. The Nata Sanctuary is considered by a number of observers to be one of the most innovative and successful of the projects of its type, and it holds promise for those interested in community-based conservation.

The problem, however, is that the degree to which local people have benefited from the project in terms of household benefits or even community benefits is low. Efforts clearly need to be made to promote greater participation of the various communities in the Nata Sanctuary project and also there needs to be new thought given to the ways in which the benefits from the Sanctuary are distributed.

Table 1: Communities involved in the Nata Sanctuary, Botswana

Community Name	Population Size	% of Basarwa	Tirelo Sechaba Participants	Distance to Nata Sanctuary (km)
Nata	3,000	50%	12	18
Maposa	400	80%	4	38
Manxotae	600	80%	4	58
Sepako	800	80%	6	78
Total	4,800	61%	27	-----

Note: Data obtained from Tor Venn (personal communication, 1996)

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## A chronology of major events relating to the Central Kalahari Game Reserve

Robert K Hitchcock<sup>1</sup>

- Pre 1800s: Foragers and agropastoralists occupy the Central Kalahari region.
- 1849: Livingstone, Oswell, and Murray cross the eastern Kalahari Desert to the Botletle River.
- 1877: The Dorstland Trekkers cross the Kalahari (pass NE corner of the Reserve).
- 1898: Founding of the Ghanzi Farms by Cecil Rhodes and company.
- 1905: Some Bakwena cattle herded out of the Central Reserve to the Botletle River.
- 1910: First effort on the part of Ghanzi farmers to request a special piece of land for the Basarwa.
- 1919: Flu epidemic affects the Central Kalahari.
- 1928: Vemay Lang Expedition traverses territory.
- 1928: Data from Ediriwe Seretse on the Khwee area.
- 1928: The Imperial Secretary Bede Clifford crosses the Central Kalahari. Tribute collection by Bakwena from area reported.
- 1933: Major drought in the Central Reserve.
- 1930s: Abortive attempt to drill for water.
- 1938-40: Letlhakane agricultural scheme in the eastern Kalahari (see Silberbauer 1981a: 15-16).
- 1947: Major drought in the Central Kalahari.
- 1950-51: Smallpox epidemic wipes out whole areas.
- 1952: (March 17) Dibeete cordon fence work begins.
- 1953: Recruitment of San from western Kalahari (especially Kgalagadi and Kweneng Districts, some groups may have been reached as far as Tsetseng and Duthwe).
- 1954: Central Ngwato Cordon Fence built (Makoba Fence).
- 1955: Marshall expedition (see Marshall, Thomas 1958; Marshall 1976:11).
- 1958: Kuke fence constructed.
- 1958: (September) Silberbauer starts the Bushman Survey (Silberbauer 1981a:17) (also in this

<sup>1</sup> University of Nebraska, Lincoln