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Decentralization, Development, and Natural Resource Management in the Northwestern Kalahari Desert, Botswana

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A Case Study for Shifting the Power:
Decentralization and Biodiversity Conservation

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Introduction

Numerous communities and individuals in Africa have called for a new approach to development—one that is not socially and environmentally destructive. They argue that they have a right to sustainable development, development that has been defined as that which "meets the needs and aspirations of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987:13). Many individuals and groups in Africa see this approach as the only way to overcome the difficulties people are experiencing, including widespread poverty, social conflict, and environmental degradation.

A strategy for promoting sustainable economic development and enhanced biodiversity conservation that is being implemented in various parts of the world is common property resource management done at the level of the

community or region (Brown and Wyckoff-Baird 1992; Western and Wright 1994; Borini-Feyerabend 1996; Lutz and Caldecott 1996). Common property resource systems combine local control of resources with measures to promote sustainable use. The basic assumption behind these programs is that local people will conserve natural resources over the long term if they have a stake in how they are used and if they can participate in decision-making about what happens to them.

One of the difficulties faced by those people attempting to implement community-based natural resource management projects in the field is that all too often, the central government or agency overseeing natural resources has not put in place the kind of enabling legislation to allow for effective local-level decision-making. In other cases, there are restrictions placed by central government agencies on the kinds of uses to which resources can be put or how many or what types of resources can be exploited. This is especially true for wildlife resources in Africa, over which colonial and post-colonial governments have sought to exert control. In the process, local people in Africa have come to have much less of a stake in how wildlife resources are utilized.

It remains unclear whether, and through what means, it will be possible in Africa to ensure greater participation of local people in decision-making about the management and use of natural resources. Some African countries, notably Zimbabwe and Namibia, have established what many consider to be groundbreaking programs of community-based natural resource management. Some of these community-based projects have been relatively successful, while others have faced constraints. Problems affecting these projects include the following:

- insufficient technical assistance and training provided to members of the community;
- insufficient information provided to the community about the options that they have;
- insufficient emphasis on community participation in decision-making;
- unwillingness of higher-level institutions to devolve authority to communities to manage their own resources;
- economic benefits captured by higher-level and middle-level institutions while local people receive relatively few direct benefits;
- frequent inequity in the distribution of benefits at the community level along the lines of age, gender, class, and ethnicity;

- the few jobs that have been created, such as Community Escort Guides (CEGs), tend to be given to adult males, not to females or children; and
- local people tend to bear greater costs from increased biodiversity conservation efforts--for example, they tend to be arrested at higher rates than the general public for allegedly engaging in illegal activities such as hunting or harvesting wild plants protected under conservation laws, and they also tend to lose access to land and natural resources as a result of establishment of protected areas.

In addition to these problems, it should be noted that many of the goods produced by these kinds of projects are general public goods, characterized by nonexcludability--the benefits are available to a group whether or not its members contribute to the provision of the good. Clinics, schools, community centers, roads, and water facilities tend to mimic public goods since their users are not regulated; that is, all members of the community benefit from them whether or not they engage actively in community-based conservation and development activities. Given these constraints, it is not surprising that local people often are reluctant to accept the structure of incentives offered by these new programs.

This study is concerned with the devolution of authority, responsibility, and funding, and its relationship to biodiversity conservation in the Republic of Botswana in southern Africa. It seeks to determine whether or not there is a relationship between local involvement in decision-making and benefit-sharing on the one hand and a reduction in threats to biodiversity on the other. Data was drawn from a community-based natural resource management program at /Xai/Xai in the northwestern Kalahari Desert region of Botswana and used to detail conditions during 1995-1997 and compare them with past conditions. This case study explores issues relating to devolution of power and authority in relation to wildlife and other natural resource conservation, utilization, and participation in management decisions and rule-making.

This study explores these and other issues, here expressed as assumptions:

ASSUMPTION ONE

The devolution of authority, responsibility and funding capability (i.e. power) by central government to regional and local institutions and organizations will give greater power over natural resource management to those people in most direct contact with the resources.

ASSUMPTION TWO

When those people in most direct contact with natural resources have the power to decide how to manage them and have viable economic alternatives to overuse, they will promote the conservation of those resources and thus reduce threats to biodiversity.

Special attention will be paid in this study to governance issues, institutions, and the ways in which natural resources have been dealt with over time at the local, regional, and national levels in Botswana.

/Xai/Xai, Botswana: A Case Study of Decentralization

Since the late 1980s, the government of the Republic of Botswana has been engaged in efforts to establish community-based natural resource management projects. These activities are related to regional initiatives on the part of international donors, development agencies, and non-governmental organizations (NGOs) to promote biodiversity conservation through devolving authority over resource management and use to the local level. The government of Botswana has passed enabling legislation to allow communities the right to obtain wildlife quotas and to establish community trusts or other representative bodies that can enter into business agreements with private sector operators such as safari companies. As of mid-1997, there were nine different community-based natural resource management projects on-going in Botswana. In some of these projects, the communities involved had formed trusts that were registered with the government of Botswana. These trusts have constitutions and management boards, and all adult members of the communities involved in the trusts have voting rights. The trusts are, in effect, community-based organizations (CBOs) which can raise, manage, and expend funds and oversee local activities ranging from tourism to safari hunting and from wild resource collection to craft marketing (Painter 1997).

The community of /Xai/Xai in northwestern Botswana (see Figure 1) was selected for study for five major reasons. First, /Xai/Xai is the site of a community-based natural resource management project for which planning and implementation have been ongoing since 1994 (SNV Botswana 1994; Ruigrok 1995a, b, 1996a, b, 1997; Hitchcock *et al.* 1996; Ruigrok and Alons 1995). In association with this project, government agencies, including the Ministry of Local Government, Lands, and Housing (MLGLH), the Ministry of Agriculture, and the Ministry of Commerce and Industry, have worked in the

/Xai/Xai region.

Second, /Xai/Xai is in a locality where resident human populations depend to a significant degree on natural resources (e.g., wild plants and animals, grazing and browse for wild and domestic fauna, and natural products used to generate cash such as thatching grass). Third, the /Xai/Xai region contains places and resources of great biological, cultural, and historical importance, including highly significant caves containing paleontological and archaeological materials. Fourth, /Xai/Xai provides an example of an effort by a state, Botswana, to devolve to a community-level authority over decision-making concerning natural resources, especially wildlife, wild plants, and landscapes.

Finally, this site was chosen because it represents a situation in which local people have long exerted localized control over land and natural resources. The northwestern Kalahari Desert region has been occupied by human populations for tens of thousands of years (Yellen 1977b; Yellen *et al.* 1987; Robbins *et al.* 1996). There has been ongoing argument as to the timing of incursions of pastoralists into the region (see, for example, Wilmsen 1989; Solway and Lee 1990; Gordon 1992). The people of /Xai/Xai hunted, gathered, grazed their domestic animals, raised crops, and engaged in intergroup exchange with relatively little governmental interference until the founding of the Tswana state in the late 1700s and the establishment of the Bechuanaland Protectorate in 1895. These saw the introduction of British colonial administration (Tlou 1985). For the past century or more, the northwestern Kalahari has supported groups that have mixed economies, with varying emphases on hunting and gathering, pastoralism, agriculture, and wage labor (Tlou 1985; Wiessner 1977; Howell 1979; Lee 1979, 1993; Bieseke *et al.* 1989; Katz 1982; Marshall and Ritchie 1984; Bieseke *et al.* 1989; Wilmsen 1989; Hitchcock 1988, 1992, 1996; Hitchcock and Masilo 1995; Hitchcock *et al.* 1996; Katz, Bieseke, and St. Denis 1997).

Research Methods

The /Xai/Xai community-based natural resource management project was assessed for this case study at two different times: first in October, 1995 and then again in July-August, 1996 (see Hitchcock and Masilo 1995; Hitchcock *et al.* 1996). Data were collected from a sample of /Xai/Xai residents who were either living in /Xai/Xai or residing on cattle posts (e.g., Xhaba) or in towns such as Tsau and Maun. In July 1997, the author also collected data from people working on road clearing between /Xai/Xai and Tsau. Methods employed included participant observation, ethnographic interviews of individuals and groups, problem-solving sessions, discussions with local, district, and central

government officials, and analyses of censuses, reports, meeting minutes, and archival materials.

Detailed information was provided by the Natural Resources Management Advisor Edwin Ruigrok, his co-worker Tineka Alons, the chairman of the Village Development Committee John Marenga, the Regional Wildlife Officer Charlie Matshubi, and the Senior Land Officer in North West District Ian Tema. In Gaborone, assistance was provided by the Natural Resources Management Project, the Department of Wildlife and National Parks, the U.S. Agency for International Development, and the Basarwa Research Committee of the University of Botswana.

The author also drew on the work of the various researchers and development personnel who have done work in and around /Xai/Xai over the past four decades. Without their detailed data and analyses, it would have been much more difficult to understand the situations faced by the people of /Xai/Xai. The /Xai/Xai CBNRM Project has kept careful records and done a series of assessments that were both careful and perceptive (Ruigrok 1995a, b, 1996a, b, 1997; Ruigrok and Alons 1995). Some land use zoning and assessment surveys were carried out in the region in the early 1990s (Smit and Kappe 1992; van der Sluis 1992; Sub-District Land Use Planning Unit Working Group Western Communal Remote Zone 1993; Ngamiland District Land Use Planning Unit [DLUPU] *et al.* 1994). An investigation of Remote Area Dwellers (RADs) was conducted in the nearby region extending from Botshelong west to the Kgwebe Hills in the zone south of Lake Ngami in North West District (Campbell and Main 1991). The Department of Wildlife and National Parks and the Natural Resource Management Project (NRNP), a joint Botswana government-U.S. Agency for International Development (USAID) project, have visited the western Ngamiland area a number of times and done some training and assessment work. /Xai/Xai also served as a study area for the investigation of the use of Special Game Licenses (SGLs) (Hitchcock and Masilo 1995).

District Context

The post-colonial Republic of Botswana, which gained independence on September 20, 1966, has, like a number of other African countries, attempted to decentralize development management and planning to district-level institutions (Tordoff 1984, 1988, 1994; Egner 1987). While the central government has representatives at the district level who do such tasks as overseeing development administration and planning, the districts also have Councils composed of councilors who either stand for election every five years or are appointed. These councils have seen their influence increase over the

past two decades as a result of expanded budgets, technical capability, and responsibilities ranging from social service provision to land use planning.

The community of /Xai/Xai is located in one of the ten districts in Botswana, North West District, often locally called Ngamiland. The North West District Council (NWDC), the Tawana Land Board (TLB), and the Tawana Tribal Authority (Egner 1987; Ministry of Finance and Development Planning 1997) administer the region. The North West District stands out among the various districts in Botswana in that it has a District Council that oversees two districts, North West and Chobe, and it has a reputation in Botswana for resisting central government initiatives and for asserting its right to make its own decisions in the face of efforts to establish national-level policies that draw on the resources of the district. This is the case particularly with reference to wildlife and tourism and the use of the waters of the Okavango Delta (International Union for the Conservation of Nature and Natural Resources (IUCN) 1993). The North West District, located in northwestern Botswana, is 109,130 square kilometers in size. The district land use plan indicates that 61,840 sq km (56.7 percent of the district) has been zoned communal land, which is under customary tenure and can be allocated to people for agricultural, grazing, and residential purposes. Two areas of North West District, covering 6,950 sq km, or 6.4 percent of the district, have been designated as commercial land, which can be leased out to individuals and groups who then have *de jure* leasehold rights over that land in exchange for a rental payment to the district land board (the Tawana Land Board). A fairly sizable proportion of the district's land has been designated either as game reserve (3,600 sq km, or 3.3 percent) or Wildlife Management Areas (19,100 sq km, or 17.5 percent), areas in which wildlife and habitat conservation and tourism are to be the primary land uses. Finally, some of the district's land is considered State Land (17,640 sq km, or 16.2 percent), some of which has been allocated for use by the Ministry of Agriculture (e.g., as veterinary camps for livestock) (Campbell and Main 1991; Smit and Kappe 1992; Okavango Community Consultants 1995).

The North West District has long recognized the importance of natural resources to its economic, social, and political well being. The Tawana tribe, the main ethnic group occupying the district, established a tribal game reserve at Moremi in the late 1950s. It was one of the first of its kind in Africa. The land use zoning by North West District authorities acknowledges the region's special environmental qualities by setting aside large areas in which the primary land use is to be the utilization of natural resources (Ngamiland District Land Use Planning Unit *et al.* 1994; Okavango Community Consultants 1995). There were four Wildlife Management Areas (WMAs) zoned in the North West District land use plan: (1) Kwando, (2) Okavango, (3) Ngamiland State Lands, and (4) G/wihaba (Quihaba). After 1989, the WMAs were subdivided further into

rezoned Controlled Hunting Areas. Some of these Controlled Hunting Areas have been zoned for community use, including two in western Ngamiland known as NG 4 and NG 5. The idea behind having Community-Controlled Hunting Areas was that control of these units by a single institution such as a company or a community trust would theoretically lead to better natural resource management and greater economic returns to local people.

The idea of trusts, cooperatives, village shareholding corporations, or other types of institutions for community-level utilization of economically valuable flora and fauna is being implemented in several parts of North West District, including /Xai/Xai in the west, Sankuyo, which is just to the south of Moremi Game Reserve, and the village of Khwaai, which is at North Gate, one of the entrances to Moremi. Each of these community-based natural resource management programs have their own unique features. Sankuyo, for example, leased out its rights over wildlife resources to a safari operator in exchange for payments of Pula (P) 285,000 (U.S. \$79,230) in 1996 and P345,000 (U.S. \$95,910) in 1997 (Maotonyane 1996, 1997). Khwaai has opted to run its own programs and not to sublease the rights over its resources.

/Xai/Xai, which has had a community-based natural resource management program since 1994, elected to run its own programs, and has worked closely with a resident Natural Resource Management Advisor (NRMA) who is from SNV, the Netherlands Development Organization. It has also worked with the Sub-District Land Use Planning Unit (Sub-DLUPU) based at Gomare and with other district and central government agencies. /Xai/Xai established a Quota Management Committee (QMC) in 1996. By doing so, the community was allowed to have the management of the quota for the wildlife resources in western Ngamiland, in line with government policy on natural resource-based business venture development in community areas.

Box 1.
The /Xai/Xai Tlhabololo [Wildlife] Trust

In October of 1997, the Ju/'hoansi San and their neighbors the Mbenderu (Herero) in the northern Kalahari formed, and officially registered with the central government, a body known as the /Xai/Xai Tlhabololo Trust. This non-government organization has several goals. It aims to enhance the economic well being of the 350 people of the village of /Xai/Xai, and to diversify their economy by expanding craft production and marketing, tourism, small-scale business (vending), and

food production. The trust hopes to promote biodiversity conservation in the /Xai/Xai area, and has been working hard to enhance the organizational capacity of the community to utilize and manage its natural resources. It also concentrates on preserving cultural traditions and raising the awareness of the general public about the Ju/'hoansi's and Mbenderu's unique lifeways.

The /Xai/Xai Trust is a representative and accountable management body with a board, a constitution, and a set of officers (Chairman, Vice Chairman, Secretary, and Treasurer). It is registered officially with the Government of Botswana. All adult members of the community are members of the Trust. Elections for the Trust Board are held every five years. The trust attempts to maintain transparency by holding frequent meetings and by providing information and feedback to community members. The Trust has its own bank account, from which it will pay lease fees if it enters into any lease agreements with private sector operators such as safari companies. In 1997, the /Xai/Xai Trust was allocated the wildlife quota for Community-Controlled Hunting Areas (CCHAs) NG 4 and NG 5 by the Department of Wildlife and National Parks. The trust also engaged in income-generating activities including tourism.

Technical assistance is provided to the /Xai/Xai Trust by the /Xai/Xai Community-Based Natural Resource Management Project (CBNRMP), a joint Botswana government-SNV (Netherlands Development Organization) effort that began in 1994. A Natural Resource Management Advisor (NRMA), Edwin Ruigrok, is based at /Xai/Xai. A producer unit of the trust is !Kokoro Crafts, a 60-member group that manufactures and sells handicrafts to tourists and to craft outlets. Training activities and workshops for members of the /Xai/Xai Trust have been provided by the Netherlands Development Corporation (SNV), the North West District Council (NWDC), the Tawana Land Board, the Sub-District Land Use Planning Unit, the Ministry of Agriculture, the Department of Wildlife and National Parks, and the Natural Resources Management Project, a joint U.S. Agency for International Development (USAID)-government of Botswana (GOB) development project.

In October 1997, the /Xai/Xai Tlhabololo Trust was registered officially with the government of Botswana. This trust, which is broadly representative of the community, has sought to establish natural resource management, ecotourism, and small-scale business opportunities for people in /Xai/Xai. The community had already engaged in a number of activities which had generated income, such as handicraft production and marketing through a local crafts group, !Kokoro Crafts, which brought in P13,500 (U.S. \$3,700) in 1995-96 and P8,000 (U.S. \$2,200) through tourism (the latter benefiting 20 people). Consumer goods were also sold for a total of P600 (U.S. \$160) in 1996. Some of this money went to individuals while other money was deposited in savings accounts for use by the community-based organization.

The /Xai/Xai Trust has a board of trustees led by a young man whose father is Mbanderu and whose mother is Ju/'hoan. According to members of the community and to the NRMA as well as government officials, the young man "is growing fast into a leader." The /Xai/Xai Tlhabololo Trust is engaged in a number of conservation and development activities, some of which have had positive implications for biodiversity conservation and community cohesion. The management of the quota by the local Quota Management Committee meant that animals were not available for hunting by people from outside of the area. This situation reportedly resulted in a reduction in the numbers of animals killed. Several people noted that this meant that conservation objectives were being achieved through these means.

A RECENT CHRONOLOGY FOR /XAI/XAI COMMUNITY, BOTSWANA

1965	Border fence erected between Namibia and Botswana.
1966	1960s drought breaks. Botswana's independence declared, September 30.
1967	First store established at !Xangwa in the western Ngamiland region.
1973	First /Xai/Xai school opens.
1974	Bushman Development Office (later, Remote Area Development Office) established in Botswana.
1975	Tribal Grazing Land Policy (TGLP) declared in Botswana. First resident missionary arrives in Dobe-/Xai/Xai area.
1975-76	Western Ngamiland Ju/'hoansi dig wells to gain de facto rights over the surrounding grazing; /Xai/Xai groups at G/wihaba and G/um//geni fail to

	strike water.
1976-8	Initial land use zoning exercises in western Ngamiland, which was declared a communal zone. Ngamiland Land Use Plan drawn up by district personnel.
1980	Immanuel Marenga, a Herero, is appointed headman of /Xai/Xai.
1982	First groups of Ju/'hoansi leave Tjum!kul to re-establish themselves on their n!oresi (traditional territories).
1983	Village Development Committee (VDC) established at /Xai/Xai.
1985	Norwegian assessment of Botswana Remote Area Development Program leads to establishment of a NORAD- (Norwegian Ministry of Development Cooperation) funded Accelerated Remote Area Development Program (ARADP).
1991	In July, Sub-District Land Use Planning Unit in Western Ngamiland forms a Working Group to devise a land use and development plan for the western communal remote zone.
1992	In August, consultations held at /Xai/Xai by the Ngamiland Western Communal Remote Zone Working Group; kgotla meeting held in October by personnel from the Department of Wildlife and National Parks, the North West District Administration, and the Natural Resources Management Project. Proposed land use plan presented to /Xai/Xai community at a December kgotla. /Xai/Xai community agrees to plan, though some key members, including n!ore kxaosi (territory owners), not present.
1993	/Xai/Xai Land Use Plan approved by Tawana Land Board in February and accepted by North West District Council in August. Preliminary discussions held by district officials with the people of /Xai/Xai concerning possible CBNRM activities in the region. Road debushing between /Xai/Xai and !Xangwa done as part of the drought relief program; air strip at /Xai/Xai also cleared.
1994	Survey on potential community-based natural resource management project conducted; SNV (Netherlands Development Organization) Natural Resource Management Advisor (NRMA) posted to /Xai/Xai.
1995	Contagious Bovine Pleuropneumonia (CBPP) breaks out in western Ngamiland. A veterinary cordon fence around the G/wihaba Hills is proposed to the community. !Kokoro Crafts is established at /Xai/Xai.
1996	Proposal on tourism at /Xai/Xai submitted to the North West District Council and the government of Botswana. Tourist group discouraged from going to /Xai/Xai by the Botswana Defense Force (BDF. All cattle in

	/Xai/Xai destroyed by the Ministry of Agriculture after CBPP outbreak. Complete stop to Special Game Licenses in North West District announced in July. Quota Management Committee (QMC) formed by community at /Xai/Xai; it requests and receives control over the NG 4 quota. Representatives of the /Xai/Xai community visit the new veterinary cordon fence; community writes to Tawana Land Board requesting fence realignment.
1997	Ongoing discussions concerning the impacts of the veterinary cordon fence. Food provided to /Xai/Xai to compensate for cattle destruction during CBPP eradication campaign. /Xai/Xai Tlhabololo Trust registered with the government in October.

Situation of the Management Unit within the Nation of Botswana

/Xai/Xai is an excellent case to examine in part because it has many of the qualities that are said to be crucial to successful biodiversity conservation and natural resource management, including broad-based participation in decision-making, local governance structures, long-standing customary occupancy rights over natural resources which have been strengthened by the passage of enabling legislation, equity in access to resources at the local level, and compatibility of the interests of local stakeholders with those of people at the district and national levels (for a discussion of these factors, see Brown and Wyckoff-Baird 1992; International Institute for Environment and Development 1994; Lutz and Caldecott 1996; Murphree 1997). While the community people of /Xai/Xai received rights over wildlife resources under Botswana's Wildlife Conservation Policy relatively recently--in 1996--the people of the /Xai/Xai area had exerted *de facto* control over these resources for a substantial period, at least several hundred years.

/Xai/Xai was remote enough from the main centers where Department of Wildlife and National Parks game scouts operated that its inhabitants were still able to continue to exploit wild animal resources, even after these legal changes, without having to worry too much about being arrested for violating the country's wildlife laws. Additionally, the Ministry of Agriculture, whose Forestry Section oversees timber resources in the country, concentrates its efforts primarily on the forests in the Chobe District and, to a lesser extent, on the forest resources around the Okavango Delta. Mineral resources are also overseen by the state and controlled by government legislation such as the Mines and Minerals Act. There were cases where people collected semi-precious stones and sold them to outsiders, but this was unusual. There was also a case in which bat guano was dug out of the main cave at G/wihaba, but local people

received no benefits. The variability in the ways in which natural resources have been used and managed is treated in more detail below.

/Xai/Xai: Geographic Context

/Xai/Xai is a relatively isolated community on the northern fringe of the Kalahari Desert. Located on the western edge of Botswana, some 247 km (153 miles) from the main district capital at Maun, /Xai/Xai is situated in an area defined by the Botswana government as the western communal remote zone (Zone 6) of North West District (Smit and Kappe 1992; van der Sluis 1992). The village lies in a transitional zone between the drier shrub savanna 180 km to the south and the more lush Okavango River region 180 km to the north. The Dobe-/Du/Da region of the northern Kalahari Desert, which includes /Xai/Xai, is some 11,000 km² in area (Yellen and Lee 1976:28).

The vegetation of the /Xai/Xai region consists of semi-arid tree-shrub savanna (Weare and Yalala 1971; Lee 1979:87-96; Thomas and Shaw 1991:99-106). The tree species include baobab (*Adanitolsonia digitata*), several species of acacias, and various broad-leaved trees on the dunes and flats. Numerous trees, shrubs, and vines provide fruits, nuts, gums, barks, and roots that are used for food, medicinal and ritual purposes, the manufacture of household implements, and for construction, fuel, and crafts. Local people exploit over 150 species out of a total of 500 plant species in the area, some of which, such as mongongo nuts (*Ricinodendron rautanenii*) and morula fruits (*Sclerocarya caffra*, *Scleracarya birrea*), are important sources of subsistence for sizable numbers of people (Lee 1979:158-175, 182-204). There are several mongongo nut groves within 15-20 kilometers of /Xai/Xai which can be exploited even in bad years when little surface water is available.

Table 1. Natural Resources Used for Craft Production in /Xai/Xai, Botswana

SCIENTIFIC NAME	SETSWANA, JU/'HOAN NAMES	PART UTILIZED	PRODUCTS MADE
<i>Acacia tortilis</i>	mosu, /aqri	root	quivers
<i>Boscia albitrunca</i>	motlope, zaqn	stem	animal/human figurines, spoons
<i>Burkea africana</i>	mosheshe, !ku	stem	drums, thumb piano bases

<i>Colophospermum mopane</i>	mophane	stem	bracelets, rings, walking sticks, animals
<i>Combretum apiculatum</i>	mohudiri, //aqean	stem	etched plaques
<i>Combretum imberbe</i>	motswere, /'o	stem	figurines, spoons
<i>Commiphora spp.</i>	mokomoto or seroka depending on species	stem	animals, figurines, drums
<i>Gardenia resiniflua</i>	morala	tem	spoons, bowls
<i>Grewia flava</i>	moretiwa, n/ang	branch	bows, digging sticks
<i>Kirkia acuminata</i>	modumela	stem	figurines, candle holders, toy chairs
<i>Lonchocarpus nelsii</i>	mohatha, //haoh	stem	figurines, spoons
<i>Phragmites australis</i>	letlhaka, //ang/o	branch	arrows
<i>Pterocarpus angolensis</i>	mukwa, n/hang	stem	drums, thumb piano bases, plaques
<i>Riciodendron rautanenii</i>	mokongwa, g//kaa	stem (trunk)	stools
<i>Sansevieria scabrifolia</i>	mokotshe, g!oma	leaves	snare, mats, bow strings
<i>Sclerocarya Birrea</i>	morula, kaqe	stem (trunk)	bowls, pestles, plaques
<i>Terminalia sericea</i>	mogonono, za'o	stem	etched plaques
Data obtained from Marshall (1976:144-152, 414-415); Yellen (1977b:137-143); Lee (1979:119-157); Campbell and Hitchcock (1985); Terry (1991:H3-H4); Dickens (1994:341-349); Cole (1995); and fieldwork by author.			

The Western Communal Remote Zone of North West District, in which /Xai/Xai lies, is some 33,000 square kilometers in size. Population density in this region is low, with slightly over two people per square kilometer (van der Sluis 1992; Ministry of Finance and Development Planning 1997). A portion of the region has been zoned as Wildlife Management Area and has been allocated to the people of /Xai/Xai, according to the district land use plan. The area actually used relatively intensively by the people of /Xai/Xai stretches 15-20 kilometers north into the Aha Hills, east some 30-35 kilometers to G/wihaba, south approximately 35 kilometers to //Gum//Geni, and west approximately 20-30

kilometers into Namibia. This area is virtually equivalent, in both geographical location and in ecosystem types, to the area which, according to Wiessner (1977:19), was exploited in the early 1970s. It covers approximately 2,000 square kilometers. The area south of //Gum//Geni, stretching to the Kuke veterinary cordon fence on the boundary of Ngamiland and Ghanzi District, is largely unpopulated, although it is used on occasion by people from /Xai/Xai for long-distance hunting and wild plant collecting purposes.

The area that has been allocated by the North West District Council and the District Administration to the /Xai/Xai community to manage and oversee is part of the G/wihaba Wildlife Management Area. This Wildlife Management Area is divided into two Community-Controlled Hunting Areas (CCHAs), NG 4 and NG 5. The Controlled Hunting Area that the people of /Xai/Xai are allowed to use is NG 4, which covers an area of 9,293 sq km. For the time being, according to North West District officials, people from /Xai/Xai are also allowed to use NG 5, which is 7,673 kilometers in size. The management unit is bounded on the west by the Botswana-Namibia border, which is marked by a high wire cordon fence. Some of the people of /Xai/Xai (the Ju/'hoansi San) are allowed to cross the border fence without using passports so that they can visit relatives on the other side of the border. The southeast boundary of the NG 4 Controlled Hunting Area is a fossil river valley known as the Eiseb.

The area in which /Xai/Xai falls is zoned as communal land, which means that local people have *de facto* rights to the land under Tswana customary law. The area does not transect jurisdictional boundaries as it falls entirely in the western communal remote zone (Zone 6) of North West District. The /Xai/Xai land use plan, which was agreed upon by the community and later by the North West District Council, went into effect in 1993 (see Sub-District Land Use Planning Working Group, Western Communal Remote Zone 1993).

From the perspective of the people of /Xai/Xai, the substantial degree to which they have had access to their traditional territories has, until recently, declined over time, so they have not felt as comfortable as they once had crossing the border into Namibia to visit relatives or to go to Tjumi!kui where there is a clinic and a store. They also have been concerned that their access to the area to the north of /Xai/Xai, which now lies in CHA NG 3, could potentially be reduced if the government decided that the people of Dobe, Mahopa, and !Xanga have control over that area or if alternative arrangements were made for the use of that land (e.g., as a military base for the Botswana Defense Force). In addition, there has been a great deal of concern among people at /Xai/Xai that their access to the G/wihaba Hills, some 30 km to the east of /Xai/Xai, would become restricted. The G/wihaba Hills fall in one of the traditional territories (n!oresi) of some of the families at /Xai/Xai, and people visit them on a fairly regular basis to collect wild plants and obtain honey from the caves in the hills.

There has been some internal conflict in the community over whether or not these hills should be turned into a National Monument under the Monuments, Relics, and Antiquities Act (Republic of Botswana 1970), a controversy which contributed to the community's decision to form its own trust so as to gain greater control over land and resources in the region.

Fauna

The /Xai/Xai region is significant in part because it represents a superb example of a Kalahari savanna ecosystem. It supports a diverse array of wild animal species, from elephants (*Loxodonta africana*) to bush squirrels (*Paraxerus cepapi*). Nearly all of the major antelope species common to southern Africa are found there, as is the full range of large and small predators (for a list of these animals, see Yellen 1977b:28; Hitchcock et al 1996:165, Table 1). The bird populations are also of significance both scientifically and in terms of subsistence. There are pans (shallow lakes) on both sides of the border, especially on the Namibian side, that provide stopover points for migrating waterfowl, some of which are very rare (Brown 1995; Jones 1995). At least nine species of birds are hunted for food, including guinea fowl (*Numida meleagris*) and francolin (*Francolinus adspersus*) (Yellen 1977b:29). Ostrich (*Struthio camelus*), while not hunted very often, are very important to local people because of the eggs that they produce; the contents of these eggs are eaten, while the eggshells serve as canteens to carry water on trips and the broken eggshells are used in the manufacturing of beads. The ostrich eggshell bead items are sometimes exchanged among individuals and families in the community and with people long distances away in a reciprocal exchange system known as hxaro (Wiessner 1977). The ostrich eggshell products are thus important not only from an economic standpoint, where they generate cash, but also from a social and ideological standpoint, since they underwrite and reinforce social alliances.

Some of the fauna of the /Xai/Xai region are year-round residents while others are gregarious and move through the area on a seasonal basis. Ungulate species that are year-round inhabitants include kudu (*Taifelaphus strepsiceros*), impala (*Aepyceros melampus*), duiker (*Sylvicapra grimmia*), and steenbok (*Raphicerus campestris*). Mobile species include hartebeest (*Alcelaphus bucephalus*), eland (*Taurotragus oryx*), wildebeest (*Connochaetes taurinus*) and zebra (*Equus burchelli*). Giraffes (*Giraffa capelopardalis*) are seen in small herds, and in the past they were a favorite prey item, but they were declared "royal game" by the Tswana chiefs in the early 20th century, and both the colonial and post-colonial Botswana governments imposed restrictions on the hunting of giraffes (Spinage 1991). Some species that in the past were

used for food by the people of the /Xai/Xai region are now considered endangered. These include the antbear (*Orycteropus afer*), which people today are not allowed to hunt them since they are listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and in the Botswana Wildlife Conservation and National Parks Act (Republic of Botswana 1992:A212). Elephants were listed on Appendix I of CITES in 1989; people in the /Xai/Xai region already did not hunt them except when accompanying people from the outside who were hunting for purposes of procuring ivory.

Aerial census data for western Ngamiland in the period 1989-91 indicated that the average biomass for wildlife was 5,467 kilograms per square kilometer while the biomass estimate for livestock was 15,607 kilograms per square kilometer (van der Sluis 1992:30-33). The general trend in wildlife numbers and densities in the northwestern Kalahari in the 1980s and early 1990s, with the notable exception of elephants, was downward (Department of Wildlife and National Parks 1994). In 1996, virtually all of the cattle in the North West District were destroyed in an effort to control an outbreak of lung sickness (Contagious Bovine Pleuropneumonia, CBPP), and as a result some of the wild ungulates have reportedly experienced population increases.

One of the issues about which questions were raised by people in /Xai/Xai was the impact of veterinary cordon fences on wildlife populations, but there is little data available to demonstrate trends in wildlife numbers as they relate to the fences. This issue is of importance to biodiversity conservation in /Xai/Xai because local people have sought to have the cordon fences in the area taken down or realigned so as to reduce potential impacts on wildlife movements and access to water, grazing, and browse. As of late 1997, the fences were still in place, but government officials had told people that their concerns were going to be dealt with and the fences realigned. If this does, in fact, occur, then the /Xai/Xai Tlhabololo Trust and the people of western Ngamiland will have had a positive impact on biodiversity conservation.

Demographic Characteristics

The total resident human population of /Xai/Xai is less than 400. In addition to the resident population, there is a temporary population of approximately 20 people who work at the clinic, school, and tribal police headquarters. At the time of the July 1997 investigation, the population was 343, including 183 adults and 200 children. There were also 20 people living at a cattle post east of /Xai/Xai known as Xhaba, and another 30-50 people working on roads projects. In-migration into the region is minimal with the exception of people

moving into the area on a temporary basis for work. There have also been short-term visitors to the region including anthropologists, tourists, development workers, and members of mineral exploration teams.

The majority of the population resides at /Xai/Xai, where there is a borehole (a deep drilled well cut through rock to tap a deep sub-surface aquifer), a school, a health post, and a small administrative center. Roads into the region are unimproved dirt tracks, making access relatively difficult except for four-wheel drive vehicles. Population density is low, less than two people per square kilometer, and population growth rates are moderate, averaging around 2.5 percent per annum, which is below the national average for Botswana. Both health and nutritional status for the people in the /Xai/Xai region are moderate to good, with the exception of some of the more vulnerable members of the population such as children below the age of five and pregnant and lactating women, especially in poorer households. (see Box 2, below).

Box 2.
The Health and Nutritional Status of the /Xai/Xai People

The health status of the people of /Xai/Xai is moderate to good for a rural agropastoral and part-time foraging population in southern Africa. Ministry of Health data indicates that the health and nutritional status of local people generally have improved, in part because of the availability of health services at the /Xai/Xai clinic. Some of the health problems affecting the people of the /Xai/Xai area include malaria, tuberculosis, influenza, tonsillitis, colds, pneumonia, parasitic worms (e.g., hookworm, *Necator americanus*), and skin and eye infections. Some people were suffering from anemia, and a number of women have had complications relating to pregnancy and childbirth. Clinic records reveal that venereal disease was relatively common (Howell 1979:64). The Botswana government has had a tuberculosis (TB) control program in place in northern Botswana since 1974. Malaria affects a fairly substantial portion of the population, especially during the rainy season (roughly November to April). Concern about effects of alcohol consumption was expressed by local residents, non-government organization staff, and government officials, who cited it as a major factor in social difficulties in

/Xai/Xai, including fights and child neglect. Topics identified by Ju/'hoansi and Mbanderu as being of importance to the health and nutritional status of people in /Xai/Xai were availability of social services, jobs, pensions, food aid, and cash-for-work programs.

There have been some indications of undernourishment in the area, especially in the late dry season. Wilmsen (1989:305-312) points out that Ju/'hoansi in western Ngamiland shows a clear pattern of seasonal variation in weight gains and losses, which he attributes to food availability. The loss of livestock in the /Xai/Xai region has had significant impacts on local people in western Ngamiland. Local people said that they were low on energy because of their reduced food intake. Some people fell back on foraging, going into the bush to collect wild foods. Others crossed the border into Namibia to live with relatives. Still others went east and established themselves in villages such as Tsau, Gomare, and Maun.

In 1997 virtually all of the families received food rations as part of the Contagious Bovine Pleuropneumonia relief campaign. The ration basket consisted of maize (corn) meal, sorghum, beans, and oil. The amounts of food given to people depended on household size. There was a fair amount of pressure for households that received greater amounts of food to share it, in line with traditional rules of reciprocity. Failure to do so sometimes caused resentment. One of the reasons people at /Xai/Xai came to accept the idea of establishing a community trust was that they felt that it had the potential of generating income and hence resources for food supply for local people.

The government of Botswana provides food and other goods (so-called destitute relief) to those people who live below the Poverty Datum Line (PDL) and who have difficulty making a living. There were also 65 people from /Xai/Xai employed in road clearing, for which they received cash, 50 working for the District Council, and 15 for the Roads Department. Some people also earned income through the sale of handicrafts, while others worked for the District Council. An examination of the employment of residents of /Xai/Xai in 1997 reveals that there were 80 people working there, two of whom who were

working for the Natural Resources Management Advisor.

Socio-Cultural Characteristics of the Population

The majority of the residents of /Xai/Xai are Ju/'hoansi San (also called !Kung). The Ju/'hoansi speak a Northern Bushman language, part of the Khoisan group of click languages in southern Africa (Barnard 1992:39-61). The Ju/'hoansi, who are part of the larger population of San (Bushmen, Basarwa) peoples of southern Africa, are found not only in the North West District of Botswana but also in Namibia. Today there are some 3,300 Ju/'hoansi in Botswana and around 12,000 Ju/'hoansi in northern and eastern Namibia. They are well known for their egalitarian social system in which policy decisions are made on the basis of extensive public discussions in which all adult members of the community, both male and female, have an equal say. There are 316 Ju/'hoansi in 23 households living in /Xai/Xai today.

The other people residing in /Xai/Xai are Mbanderu (Herero), numbering 47, in 4 households. Mbanderu are Bantu-speaking people who originally came from Namibia after the German-Herero Wars of 1904-1907. The Mbanderu in /Xai/Xai usually are characterized as pastoralists (livestock keepers) who supplement their subsistence and incomes with wage work, crop production, and occasional foraging. According to informants, the Mbanderu families living at /Xai/Xai arrived in the late 1920s. The Mbanderu population in the western Ngamiland region expanded in the 1950s as people moved out of the Sehitwa and other areas around the Okavango Delta to avoid outbreaks of tsetse fly (*Glossina morsitans*) (Pennington and Harpending 1993:201-202). The number of Mbanderu at /Xai/Xai grew between the mid-1950s and the 1990s to the point that there was a population of nearly 50 living there fulltime.

The ethnic differences within the /Xai/Xai population are significant. There are major cultural and socioeconomic differences between the Ju/'hoansi and the Mbanderu, with the former generally making a living through foraging, small-scale craft production, and odd jobs and the latter being, until 1996, relatively wealthy pastoralists. The Mbanderu sometimes employed Ju/'hoansi as herders or as domestic workers, paying them relatively low to moderate wages and/or providing them with food, clothing, and tobacco in exchange for their services (Bieseke *et al* 1989; Wilmsen 1989; Pennington and Harpending 1993).

The Mbanderu have tended to dominate local institutions, including the Village Development Committee (VDC). In the 1990s, the officers of the VDC were nearly all Mbanderu, with the exception of the Vice Chairman who was a

Ju/'hoan man. In the 1990s there were sometimes conflicts between the Mbanderu and the Ju/'hoansi since the latter frequently felt that their voices were not being heard in the Village Development Committee meetings and in public policy discussions. The Mbanderu also resented the Ju/'hoansi because they felt that the Ju/'hoansi received special privileges and assistance based on their being designated as Remote Area Dwellers (RADs) under the Botswana government's Ministry of Local Government, Lands, and Housing Remote Area Development Program (RADP). Resentment regarding hunting rights was particularly acute as Remote Area Dwellers, who depended to a significant extent on hunting and gathering, were allocated Special Game Licenses (SGLs) by the government, but Mbanderu were not given the licenses. Remote Area Dwellers in possession of these licenses were allowed to hunt a fairly sizable number of different species, some of which were not on the regular quota set by the Department of Wildlife and National Parks (Hitchcock and Masilo 1995). One way the Ju/'hoansi attempted to get around this problem was to share with the Mbanderu some of the meat that they obtained using Special Game Licenses.

There were also cases, although they were rare at /Xai/Xai, of Ju/'hoansi allowing Mbanderu to hunt using Ju/'hoansi Special Game Licenses. One reason that they did this, they said, was that the Mbanderu were very good hunters and they had access to horses and sometimes trucks. In general, the relationships between the Ju/'hoansi and Mbanderu in /Xai/Xai could be characterized as symbiotic, although there were instances in which members of each group took issue with the ways that they were treated by the other group. Perhaps this situation was best seen in the ways in which the Village Development Committee operated, with the Ju/'hoansi either playing little role in the activities of the committee or feeling that their views were being ignored. The problems in the VDC were one of the reasons that many of the people of /Xai/Xai wanted to form a new institution, the /Xai/Xai Tlhabololo Trust.

Socio-Cultural Values Relating to Conservation

The Ju/'hoansi have been described as "conservationists par excellence" (Campbell 1997). They have detailed environmental knowledge about flora and fauna that they share among themselves and pass down from one generation to the next. A wide range of conservation strategies are employed by the Ju/'hoansi, including the declaration of certain species of plants and animals as "off-limits" if they are perceived as being few in number. The Ju/'hoansi will also stop foraging in an area if they feel that there are too few resources, thereby allowing the area to rest so the plants and animals can rebound.

Informants noted that they sometimes used a kind of hunting and gathering zone rotation strategy, successively going out in different directions from their residential locations.

In the past, there were efforts made by local people to encourage the growth of desirable plant species or to get rid of undesirable species by burning the bush. Some people referred to this strategy as "Bushman plowing." People also used fire to get rid of ticks and other pests that caused difficulties for themselves and for wild and domestic animals. Several people pointed out that fire was used to clear off areas for the purpose of camping and so that they could see the tracks of snakes and predators such as lions (*Panthera leo*) and leopards (*Panthera pardus*). People in the /Xai/Xai area also engaged in transplanting desirable plant species such as morama (*Tylosema esculentum*) which produce highly nutritious nuts and roots. Several informants pointed out that one of the reasons that the wild plant populations in the /Xai/Xai region stayed healthy was that the Ju/'hoansi exploited over 120 species, and that way if certain species were becoming scarce, they could shift their emphasis to others.

Table 2. Nutritional Composition (grams/100 grams) of Some Major Plant Food Resources Used by Ju/'hoansi and Mbenderu in the /Xai/Xai Region, Botswana

Species/Common Name		Protein	Fat	Carb.	Water
Acanthosicyos naudiniana					
(Herero cucumber)	(tuber)	1.3	0.04	6.2	74.7
(n/uah, dcaa)	(fruit)	1.3	0.2	4.8	90.6
Bauhinia petersiana					
(wild coffee bean)	(seed)	25.2	18.10	35.4	6.8
(/anggo/oa)					
Citrullus lanatus					
(tsama watermelon)	(flesh)	0.1	0.02	0.9	94.2
(tamah)	(seed)	7.9	20.2	12.5	5.7
Coccinia rehmannii					
(/aan)	(fruit)	2.0	1.0	4.7	89.1
	(tuber)	1.2	0.1	6.7	89.1

Cucumis kalahariensis					
(hu'uru)	(tuber)	1.1	0.20	8.9	88.7
Grewia flava					
(wild currant bush)	(dried flesh)	4.6	0.20	82.1	
(n/ang)					
Grewia retinervis					
(Kalahari raisin)	(fruit)	6.3	2.7	42.9	6.9
(g'loan)					
Hyphaene ventricosa					
(Ivory palm)	(fruit)	4.9	0.4	69.6	6.6
(!hani)					
Ochna pulchra					
(wild pear)	(seed)	6.3	7.52	0.6	63.2
(kokxulma, !ai)					
Ricinodendron rautanenii					
(mongongo, mangetti)	(fruit)	6.6	0.6	70.2	3.4
	(nut)	28.3	58.4	3.7	4.2
Terfezia					
(truffle)	(fresh)	2.5	3.3	5.2	80.1
(dcodcoo)	(dried)	24.6	17.0	34.1	
Tylosema esculentum					
(morama bean)	(seed)	32.9	37.8	20.5	3.7
(n//ang)	(tuber)	0.7	0.1	6.0	90.5
Note: Data are drawn from Lee (1979:479-488); Tanaka (1980:56, 71, Tables 8 and 12); Arnold, Wells, and Wehmeyer (1985:78-80, Table 6.1); and Dickens (1994:308-315, Appendix 1).					

The religious system of the Ju/'hoansi serves to reinforce the thoughtful way the environment is treated. Nature is viewed as invaluable and is to be managed carefully by people (Bieseke 1993). As one woman put it, "We are the stewards of our habitats and our resources; we care for them so that our

children and our children's children will be able to live well." The traditional land management system of the Ju/'hoansi is structured in such a way that individuals and families have rights to territories (n!oresi) that they utilize for purposes of obtaining food, fuel, building materials, medicines, and other goods. The rights to these territories are handed down from one generation to the next, and people are able to gain permission to use other people's territories if the resources in their areas are low. This flexibility in land use systems helps to ensure that people do not starve, and it serves to reinforce social alliances among groups and individuals (Bieseke, Green and Hitchcock 1992).

The territories of local groups are arranged in flower petal-like fashion around /Xai/Xai pan, and people residing in /Xai/Xai know who has rights to which area. Each area is overseen by an individual known as a n!ore kxao. If a person wishes to go hunting or gathering in that area, he or she must approach the n!ore kxao and ask for permission to enter the n!ore. In most instances, this permission is granted, although there have been cases where entrance was refused because the n!ore kxao felt that the resources in the territory were low. These judgements were usually based on information about the state of the resources brought back to the village by people who had gone out foraging.

There have been cases of conflict over land use at /Xai/Xai. In 1974, a group of 40 people began digging a well at //Gum//geni, a summer water point about 30 kilometers south of /Xai/Xai. The group decided to exclude the n!ore kxao of the area because he did not wish to help dig the well. Subsequently, the n!ore kxao decided to prevent further digging of the well because he feared that he might lose his rights to the area (Wiessner 1977:54-55). There were also cases where people who were found collecting in another person's n!ore were told to leave because they had failed to ask permission to forage there; such an incident occurred at G/wihaba in 1995, for example, and it contributed to concerns about the future of G/wihaba since it was believed that some people at /Xai/Xai favored government plans to limit access to the area. One group under Xixae attempted to establish a well near G/wihaba in order to gain de facto rights to the area so that they could later serve as the custodians of the region and provide assistance to the tourists who come to G/wihaba to visit the caves and to camp. This effort was unsuccessful, but it did reinforce the customary rights of Xixae's group to the G/wihaba territory.

The Mbanderu also employed a variety of conservation strategies, including grazing their animals in different directions from the water point at /Xai/Xai and varying the numbers and types of animals that they kept in particular grazing areas. The Mbanderu, like the Ju/'hoansi, have extensive indigenous knowledge about the resources of the areas where they live. They utilize a number of different techniques to husband their wood resources, including precluding the use of specific species for firewood. They apply dung to the soil

around the pan to improve its consistency and to add nutrients for agricultural purposes, and they remove certain kinds of shrubs that they see as harmful to the growth of grasses and vines that are important as forage for their animals. The Mbanderu saw themselves as integrally linked with the Ju/'hoansi and with the rest of nature, and they believed that if they treated their human and non-human neighbors well then they would benefit over the long term.

Economics: /Xai/Xai Livelihood Options and Constraints

The economy of the /Xai/Xai area is mixed, with people engaging in a combination of hunting and gathering, livestock and crop production, sales of crafts, and wage employment. In the 1980s, because of drought in the northwestern Kalahari, the government of Botswana initiated food relief operations and maize meal, oil, and other goods were provided to local families. There were also cash-for-work programs in which people were paid to do projects such as building roads and clearing fields. Dependency on government relief increased in /Xai/Xai in 1996-97 as a result of the destruction of the cattle population. Large amounts of relief food were provided to the people of /Xai/Xai and other parts of Ngamiland. In some cases, there was so much food that people had to sleep outside their houses where it was stored.

Some residents of /Xai/Xai generate income through the production and sale of ostrich eggshell bead necklaces, leather items, and other kinds of crafts. A substantial proportion of these crafts are manufactured from natural resources obtained in the /Xai/Xai region. In some cases, there are conflicts over the uses to which these resources should be put. Some people, for example, choose to cut down mongongo and morula trees in order to make stools, pestles, and other items, whereas others preferred to keep these trees alive so they would continue to bear fruits and nuts. The treatment of wood resources was an issue discussed at length in the community, particularly as some of the species that were considered valuable were seen as declining in number.

In 1995, the community of /Xai/Xai formed a crafts committee which they called !Kokoro Crafts. This committee, which is made up of 60 members, consists primarily of women, most of whom are Ju/'hoansi. A small number of Mbanderu women are in !Kokoro Crafts. When asked why this was the case, several Mbanderu said that it was because they were not very good at making crafts, while others said that it was because they were too busy taking care of their agricultural fields and their domestic animals to participate in the crafts group. The advantage of having a craft group, according to the people of /Xai/Xai and the Natural Resources Management Advisor, was that they could pool their knowledge and their resources. In addition, they said that together

they could make arrangements with craft outlets such as those in Maun, the district capital, and they would be able to supply the outlet with a sufficient number of crafts to ensure continued interest in their products. Yet another advantage of having a craft cooperative, they maintained, was that it would enable them to get similar prices for the same kinds of crafts.

The !Kokoro crafts group has been relatively successful in its operations. It has held training sessions, some of which have concentrated on upgrading craft quality and diversifying the skills of producers. The sessions have also dealt with business management skills, helping people understand pricing policies. An important focus of the discussion in the !Kokoro crafts meetings has been the situation of the resource base or, as they were told by people from Maun, "biodiversity conservation." There were concerns expressed by local people about the possibility that certain kinds of resources that were popular in the manufacture of crafts would be overexploited.

The !Kokoro Crafts committee discussed the idea of imposing limits on the numbers and types of plants that could be exploited by members of the group. A set of rules was drawn up which stipulated that members of !Kokoro Crafts had to tell the committee if the plants that they were exploiting were becoming scarce. A second rule was that people who were going out from /Xai/Xai to collect plants had to seek permission of the appropriate !ore kxao before foraging in that person's area. A third rule was that certain species would be set aside for the future, notably fan palm (*Hyphaene petersiana*) which is used by people from around the Okavango Delta for making baskets (Terry 1991). The women at /Xai/Xai were well aware that this palm was becoming depleted in the Okavango area, and they did not want the palms in their area to be overexploited. In fact, this is one of the reasons that people gave for setting up the /Xai/Xai Tlhabololo Trust, the organization with which !Kokoro Crafts collaborates. By establishing the /Xai/Xai Trust and gaining control over the NG 4 area as a representative and accountable management body, the Trust and !Kokoro Crafts together will be able to have a greater say about who enters the area and thus they will have greater control over the local resource base. It is interesting to note that relatively few Ju/'hoan or Mbanderu women make baskets from fan palm, but they recognize its importance as an economically significant resource for the future, and they want to have the option of moving into basket manufacture at some later point.

In 1997, its members discussed whether or not !Kokoro Crafts should be registered as a cooperative or become a producers' unit under the /Xai/Xai Tlhabololo Trust, once that was established. Many of the community's members leaned toward the latter option because they felt that under that arrangement the Crafts group would be more administratively efficient and

better coordinated, and that such an arrangement would provide greater internal control over natural resources. By coordinating the efforts of the Trust and the crafts unit, they felt it would be possible to establish a comprehensive set of rules concerning resource management. So far, !Kokoro Crafts has not received official status as a cooperative.

Hunting and Wildlife Management

Between 1995 and 1997, several meetings were held by either the local community or by district officials addressing the issues of wildlife management, conservation, and sustainable utilization. Wildlife in Botswana is the de jure (legal) property of the state (Republic of Botswana 1986; Spinage 1991). As Steiner and Rihoy (1995:17) have pointed out, the enabling process pursued in Botswana thus far has focused on decentralizing the right to manage and exploit the resource, rather than on addressing ownership status. Local people do not get to make decisions about the size of the quota or the range of animals to be exploited; the Department of Wildlife and National Parks make these decisions. A major point of contention at local kgotla (council) meetings on natural resource management in /Xai/Xai has been that local people have not had the right to choose which animals they could hunt or how many they were allowed to hunt. There were also concerns expressed about the numbers of people being arrested by wildlife officers for allegedly violating wildlife laws. In July 1995, for example, seven people from /Xai/Xai were arrested for hunting illegally.

The current wildlife policy of Botswana empowers the Department of Wildlife and National Parks to work out arrangements with local communities and district authorities on how the wildlife resources within their areas will be handled. Local communities not only can apply for a quota, but they can also lease out some or the entire quota to private safari operators. Alternatively, they can keep the quota for themselves and use it for subsistence purposes or not use it at all, making the choice instead to conserve it for the future.

Their members and their local institutions, in conjunction with district authorities and the Department of Wildlife and National Parks (DWNP), make the rules by which the committees operate. In the case of /Xai/Xai, the deliberations over how to handle the issue of getting a quota lasted nearly two years, until 1996. Some members of the community, particularly the Ju/'hoansi, were reluctant to set up a Quota Management Committee because to do so would mean that they had to give up their Special Game Licenses. They were fully aware that the Special Game Licenses allowed them to take a larger number of animals than was the case under the Department of Wildlife

and National Parks' annual quota (see, for example, Department of Wildlife and National Parks 1995).

Some members of the community felt that forming a Quota Management Committee (QMC) and, later, a trust, would enable them to have greater control over the resources of their area. They believed that having a quota in their name would mean that outsiders would not be able to come in to NG 4 to hunt without having the permission of the community. Eventually, in July 1996, the community decided to establish a Quota Management Committee, and it was recognized officially by the North West District Council and the Tawana Land Board as well as by the DWNP.

In both 1996 and 1997, DNPW gave the community control over the quota. When asked what impact this action had on the community and its resource base, several members of the community pointed to the fact that fewer animals were killed in 1996-97 than was the case in 1995-96 or prior to that (see Table 3). In 1997, only five large animals were killed by /Xai/Xai hunters, as opposed to 19 large animals in 1994-95 (for comparative data, see Hitchcock *et al.* 1996). Several members of the community went so far as to suggest that having a community quota was tantamount to having a conservation program. As they pointed out, fewer animals could be killed if one had a quota (presuming, of course, that poaching was not taking place). Thus, from a conservation standpoint, the shift away from Special Game Licenses toward a community quota system appears to have had a salutary effect on the resource base. On the other hand, the shift has caused a certain amount of consternation among some members of the /Xai/Xai community, who feel aggrieved that they can no longer hunt using Special Game Licenses. The decision to form a Quota Management Committee was thus seen by some, especially the Ju/'hoansi, as further imposition on their right to hunt, which they felt was a right under traditional customary law and, to them, also a human right. These sentiments were expressed vigorously in 1997 after all of the cattle at /Xai/Xai had been killed and the amounts of animal protein available to the local population were extremely low.

The presence of game scouts and of other central government officials has made people more cautious about hunting in the /Xai/Xai region. This was particularly true after July 1995, when several hunters were convicted for having killed four eland in the /Xai/Xai area. One result of this arrest and conviction was that people had important hunting materials confiscated, including weapons (six spears), knives, ropes, harnesses, saddles, and bridles, in addition to four horses and 20 donkeys. People said that they are now very careful not to hunt species of animals that are considered conserved, not only to avoid arrest but because, they contend, the presence of these animals is important to the well-being of the natural environment. Also, as one woman

put it, the presence of conserved species can serve as a draw for researchers and tourists who are interested in wildlife and who might be willing to employ local people or purchase their products.

Table 3. Wildlife Obtained by Subsistence Hunters at /Xai/Xai in 1995-96 and 1996-97

Species	Scientific Name	Quota for NG 4	Number Obtained by /Xai/Xai Hunters
1. Hartebeest	<i>Icelaphus bucelaphus</i>	105	95-96: 1 96-97: 1
2. Springbok	<i>Antidorcas marsupialis</i>	29	95-96: 0 96-97: 0
3. Kudu	<i>Taetalaphus strepsiceros</i>	100	95-96: 7 96-97: 1
4. Impala	<i>Aepyceros melampus</i>	11	95-96: 0 96-97: 0
5. Warthog	<i>Phacochoerus nethiopicus</i>	15	95-96: 3 96-97: 1
6. Gemsbok	<i>Oryx gazella</i>	49	95-96: 5 (1 confiscated) 96-97: 1
7. Eland	<i>Taurotragus oryx</i>	10	95-96: 4 (all confiscated) 96-97: 0
8. Duiker	<i>Sylvicapra grimmia</i>	1086	95-96: 11 96-97: 4
9. Steenbok	<i>Raphicerus campestris</i>	1390	95-96: 5 96-97: 2
10. Monitor lizard	<i>aranus spp.</i>	0	95-96: 4 96-97: 2
11. Wildcat	<i>Felis lybica</i>	0	95-96: 4 96-97: 0
12. Blackbacked jackal	<i>Canis mesomelas</i>	0	95-96: 2 96-97: 0
13. Bat-eared fox	<i>Otocyon megalotis</i>	0	95-96: 0 96-97: 0
14. Silver fox	<i>Vulpes chama</i>	0	95-96: 0 96-97: 0
15. Genet	<i>Genetta genetta</i>	0	95-96: 0 96-97: 0
16. Caracal	<i>Felis caracal</i>	0	95-96: 0 96-97: 1
17. Spotted Hyena	<i>Crocuta crocuta</i>	5	95-96: 1 96-97: 0

18. Baboon	<i>Papio ursinus</i>	5	95-96: 0 96-97: 0
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Gender, Age, Ethnicity, and Class Issues in /Xai/Xai

Discussions at the various meetings held in /Xai/Xai and interviews of the residents of the community have underscored the fact that there are differences of opinion between men and women, old and young, and among individuals, groups, and socioeconomic classes at /Xai/Xai concerning the ways in which to handle land use and resource management issues. Some of the men want to see greater access to wildlife resources. Women feel that although hunting is important, greater attention should be paid to floral resources. Women have been particularly concerned about the implications of the government of Botswana's 1994 ostrich policy (Republic of Botswana 1994), which requires that anyone wishing to exploit ostriches and their products (e.g., ostrich eggshells) must first form a management group and get that group registered with the government. The people of /Xai/Xai were well aware of the fact that women in some of the settlements in Ghanzi District to the south such as East and West Hanahai had a difficult time getting their craft producers' group registered, and as a result they could not get access to the quota for ostriches. Some members of the /Xai/Xai community have discussed the idea of setting up an ostrich farm, but they knew how capital-intensive such a strategy would be.

!Kokoro Crafts members have talked about ways to conserve, manage, and propagate certain kinds of wild plants (e.g., those used in the manufacture of wooden beads). Some of the members of the /Xai/Xai Parents-Teachers Association have discussed the possibility of establishing a school garden and an agroforestry project. School children have expressed a desire to raise rare birds, but they were told that to do so would require permission from the Department of Wildlife and National Parks.

The people of /Xai/Xai and other areas in western Ngamiland expressed frustration over the lack of control that they had over wildlife policy. They felt that they had a greater say over veld ("field") products, those wild plant resources that were so important to the subsistence and income of local people, especially female-headed households and those headed by people who were elderly or incapacitated in some way.

Discussions over tourism and conservation led to a split in the community in 1994-95 that was along both gender and ethnic lines. The Mbanderu in the region wanted to encourage tourists to come to the region by agreeing to Botswana government ideas about changing the status of the /Gwihaba

National Monument and the Aha Hills. The government spokespersons expressed the desire to enhance the conservation status of these areas and to proclaim them in such a way that people would not be allowed to enter the areas for purposes of foraging, grazing, or camping. The Ju/'hoansi, especially Ju/'hoan women, felt strongly that the G/wihaba Hills traditionally belonged to them and that the people whose territory the hills were in should continue to have access to the hills. Besides, they said, who better to be the "stewards of the hills," staying there and managing the resources carefully until tourists came, who then hopefully would be willing to pay people for the privilege of having the Ju/'hoansi show them around a place that was considered spiritually significant.

Cleavages within the /Xai/Xai community over the issue of the conservation status of G/wihaba, the Aha Hills to the north, and the Koanaka Hills to the south were serious, especially in light of the fact that the traditional land managers, the !ore kxausi, were left out when the North West District officials showed the people of /Xai/Xai the boundaries of the area included in the /Xai/Xai land use plan. One of the lessons for community-based natural resource management and decentralization is that not only must all members of the community be consulted on their views about proposed projects and plans, but special efforts must be made to include traditional leaders and people involved with land and resource management in the planning and implementation process. These individuals should also be represented on any committees that are formed to handle decentralized decision-making regarding resource management. Fortunately, according to local people, individuals in various central government agencies, including the Ministry of Labour and Home Affairs, which houses the National Museum and Art Gallery, were sympathetic to their concerns and were willing to listen to their ideas. This was also true, they said, of people at the district level.

By 1996-97, members of the community at /Xai/Xai demonstrated a high level of interaction, having come to some agreements at the community level regarding how best to handle their natural resources. Also encouraging this interaction were the extensive efforts made by the Natural Resource Management Advisor to hold workshops and training sessions, and to engage extensively in the everyday discussions and activities of the community. Additionally, as some of the people of /Xai/Xai noted, they were faced with much bigger problems than cleavages along gender, age, ethnic, and class lines, particularly given the fact that they had lost all of their cattle, which had formed an important part of the socioeconomic system of the community.

The people of /Xai/Xai were united in their concerns about incursions from the outside and about the likelihood that the Botswana government was going to establish a Botswana Defense Force base not far to the north of /Xai/Xai. The

community felt this could have adverse effects on the resource base and on their abilities to continue hunting and crossing the border into Namibia to forage and to visit relatives. There were those who were concerned about the potential social and environmental effects of a military base, but they said that they were reluctant to protest it because they were "good citizens" and because it could generate more sources of economic support. They were well aware of the issue of trade-offs between economic gain and environmental degradation, and they argued that they were willing to invest their energy in arriving at a balance between economic benefits and environmental costs.

One way to measure the impacts of biodiversity conservation and the effects of the establishment of community-based conservation and development organizations such as the /Xai/Xai Tlhabololo Trust and !Kokoro Crafts is to look at the effects on the behavior of the residents of the community. If one assesses the numbers of people from /Xai/Xai who engage in hunting, for example, there are fewer people hunting today than in even the recent past, when nearly all adult males (and some females) engaged in hunting; those hunts that have taken place have usually included older adult males. Young people are not learning the skills of tracking, stalking, and shooting arrows at game like they did in the past. When asked why this was the case, several young men told me that it was because the government was much more involved in their lives these days and because they themselves want to live a different way than their ancestors did. Besides, they noted, it was much more difficult today to hunt without running into a game scout or a member of the Anti-Poaching Unit (APU). The amount of labor invested in hunting has thus decreased.

Females, too, have been witnessing changes in strategies involving procurement of wild resources. While some young women were learning craft making from their mothers, a number of young women and girls have recently expressed their feeling that the work of going out to collect wild plants was too onerous, and they did not want to engage in it. When pressed as to why they might not want to go out collecting, several Ju/'hoan women said that they were "afraid of wild animals." Two women said that the increased presence of Botswana Defense Force and Department of Wildlife and National Parks game scouts in the area made them concerned for their own safety. With fewer people out collecting wild products, the resource depletion rates were lower than when virtually all women were engaged in wild resource procurement.

In 1997, a concern of the Natural Resource Management Advisor and of some of the women in /Xai/Xai was that the number of women involved in the Quota Management Committee, which stood at eight when it was formed in 1996, had declined substantially. One reason given for this decline was that the work involved in organizing and setting up the committee and managing its affairs

was considerable, and women had other obligations to attend to, including feeding and clothing their families and taking care of other domestic responsibilities. The women were adamant that they supported the work of the committee and the trust, but that they felt it was better if they served in advisory capacities rather than spending a lot of time going to meetings. They also felt their time would be better spent if they concentrated on natural resource management and use directly, and by teaching their children to respect other people and nature.

Conflict Resolution Issues in /Xai/Xai

The /Xai/Xai community continues to feel that its future is still largely in the hands of central and zidistrict government institutions. The members of the community have moved to establish greater control over their area by requesting the Tawana Land Board give them land. They have also asked the National Museum, Monuments, and Art Gallery to set up a means for some of the benefits from the visitors to G/wihaba to go to local people. The /Xai/Xai Village Development Committee has some control over local-level decision-making, but lacks its own budget. One reason local people wanted to establish a community trust was that it would generate income that could be used for local projects. Another reason was that they felt a trust would give them greater control over the land on which they lived. This was true particularly in the case of safari companies, which now have to ask permission from the /Xai/Xai Trust before they can visit the NG 4 area. This was also true for tour companies, who could now be requested to pay higher prices for taking part in or observing local activities such as accompanying people on gathering trips or observing dances. In 1996, one safari company paid !Kokoro Safaris P8,000 (approximately U.S. \$2,225) for their work with a group of tourists from the United States. The tourists' perceived preference for interacting with Ju/'hoansi was not lost on the Mbanderu, who felt in some cases that they were being ignored.

This resentment has played out in various ways. One of the problems in the past was that the /Xai/Xai Village Development Committee tended to be dominated by the Mbanderu. The Ju/'hoansi representation on the /Xai/Xai VDC is lower than would be expected given the proportion of the overall population of /Xai/Xai that they represent (85 percent). Power and wealth in /Xai/Xai are largely in the hands of the Mbanderu minority, and the Mbanderu VDC officers and members were said to favor projects that were in their own interests. This situation seems to have changed in the 1996-97 period due to shifts in local political dynamics as a result of the killing of the Ngamiland cattle herd, the major source of wealth of the Mbanderu.

Conflict resolution mechanisms in /Xai/Xai have consisted of discussions and meetings at the !Kokoro tree or at the local kgotla, the council place. Outsiders, including government officials, non-government organization representatives, and occasionally anthropologists, have interceded in some of the conflicts in /Xai/Xai. In some cases, the advice of outsiders has been followed, while in other cases their efforts were viewed as meddling in affairs that were not their concern. There have been tensions within the community, as noted previously, because of perceived preference by the government and visitors to help, work with, or observe the Ju/'hoansi. The Natural Resource Management Advisor has come under a certain amount of criticism for "favoring the Basarwa." This researcher's observation is that the Natural Resource Management Advisor uses a balanced approach, and assistance and training is provided to members of all ethnic groups and families. Indeed, this is an important lesson for community-based natural resource management; that is, to have equitable treatment of all groups by anyone dealing with the community.

Interestingly, the efforts to establish a community trust and to obtain the quota from the Department of Wildlife and National Parks have helped bring some of the conflicts to the surface so that they could be dealt with directly. Now that the community has a quota and has established a registered trust, it can "get on with the business of managing natural and human resources," as one government official expressed in 1997. One of the members of the /Xai/Xai Trust board said that conflict-solving sessions were an important part of the deliberations of the trust. Another man said that the traditional means of Ju/'hoan solving a conflict, through subtle or sometimes not-so-subtle public criticism, was an effective strategy of preventing conflicts from worsening. When some members of the community became too argumentative or violent, a way to handle him or her was to "go and get a Mbanderu" who would then attempt to bring the person to his or her senses. From this perspective, the presence of different ethnic groups in /Xai/Xai had its advantages.

Resource conflict is a fundamental issue in natural resource management. There are certainly resource conflicts at /Xai/Xai, one example being the struggle between those who favored the change in the status of G/wihaba and those who did not. There were also concerns expressed about mining companies coming into the area, something that was favored by a number of /Xai/Xai residents because they thought it would lead to greater numbers of wage-paying jobs. There were others who felt that the presence of mining companies was damaging to the environment and that the costs of the exploration and mining activities would outweigh the benefits. Some /Xai/Xai residents said that they were worried that the same thing that happened to the people of the Central Kalahari Game Reserve would happen to them, that is, they would be resettled out of an area to allow mining and high-cost tourism to go forward. In the past, there were disagreements between cattle

owners and foragers who felt that the cattle were trampling veld resources and getting into fields and eating people's crops. Some of the conflicts at the community level were gender-related, as can be seen in the case of income from craft sales, which women wanted to control; this was disconcerting to their husbands. The issue of craft income became particularly contentious when it was learned that in 1996, the members of !Kokoro Crafts earned some P13,500 (U.S. \$3,800). Questions were raised about reciprocity, and members of the crafts group were pressured to share some of their cash; many of them did this willingly in order to maintain peace among relatives and friends.

A major concern among the people of /Xai/Xai was that the benefits of community-based natural resource management should not go to a minority (e.g., the board of the trust) who claim to be acting on behalf of the population at large, but rather to the population as a whole. The recourse available to the members of the community is that they can recall the members of the board of trust, or they can call for a new election of board members. At present, there are few sanctions that can be imposed other than removing them or charging them with abridgement of the trust's constitution or the laws of Botswana. Thus far, no such action has taken place, but questions were raised about board members' action in other trusts in Botswana; the people of /Xai/Xai are aware of this. One of the strategies suggested by people in /Xai/Xai to avoid the kinds of problems that other conservation trusts have experienced is to set up rules which dictate that people on the board cannot receive goods, such as a borehole or livestock, as individuals. Rather, all benefits forthcoming from the trust would have to be accessible to the community as a whole. Without efforts to ensure broader-based distribution of benefits, they said, conflicts would ensue.

Institutional Arrangements

The /Xai/Xai Tlhabololo Trust has the power and authority to make decisions at the community level. Unlike the Village Development Committee, it has fairly substantial capital resources, and it is registered with the government, which gives it some significance in the eyes of local people even if they are distrustful of the intentions of the central government. The /Xai/Xai Trust is similar to other trusts involved in conservation in Botswana in that it not only has a constitution, but also that it is a membership body made up of all adult members of the community. The elections are public affairs, and the members of the board are viewed as representatives of the people. It is the /Xai/Xai Trust

that interacts with government officials such as Department of Wildlife and National Parks officers. The overlap between the Village Development Committee and the /Xai/Xai Trust ensures that both institutions are seen as having a role in the functioning and management of /Xai/Xai. Various conservation activities are coordinated by the /Xai/Xai Trust, and !Kokoro Crafts and !Kokoro Safaris collaborate with the trust in their activities.

The data on which conservation decisions of the trust are made are derived from members of the trust, usually in the form of verbal reports. The Department of Wildlife and National Parks makes data available on the status of the wildlife populations, while the Ministry of Agriculture provides information to the community on livestock, range condition, and the status of certain economically valuable plants such as grapple plant, also known as devil's claw (*Harpogophytum procumbens*). The Forestry Section of the Ministry of Agriculture deals with timber; in /Xai/Xai, this is considered more important on a domestic level than on a community level. Nevertheless, estimates of the returns to traditional forestry activities in /Xai/Xai in 1996-97 were around P4,600 (U.S. \$1,300). Sales of thatching grass, which is a common property resource, brought in P450 (U.S. \$130), some of which was contributed to the trust to help underwrite its activities.

Relatively few non-governmental organizations have worked in /Xai/Xai. Visits have been paid to /Xai/Xai by Kuru Development Trust from Ghanzi District, and some /Xai/Xai residents have attended meetings of the Working Group of Indigenous Minorities in Southern Africa (WIMSA) and national-level workshops on San peoples. Some of the people of /Xai/Xai have relatives in Namibia who belong to the Nyae Nyae Farmers Cooperative (NNFC). The existence of the NNFC, a multipurpose community-based organization that covers some 37 different communities in Eastern Otjozondjupa, has been useful for the /Xai/Xai people because it has enabled them to watch a grassroots organization evolve (Bieseke 1994; Wyckoff-Baird 1996). While Botswana government policy and the Botswana Constitution guarantee equitable treatment of all citizens regardless of ethnicity, gender, class, or religious orientation--in practice, ethnic minorities such as the Ju/'hoansi are able to exercise fewer rights than other groups, especially in terms of gaining access to land and a voice in national- and local-level policy. The same is true of the Mbanderu, who are considered by some in Botswana government circles to be Namibian and thus not deserving of the same treatment as other Botswana citizens.

One of the topics about which there has been a great deal of discussion in the meetings of both the /Xai/Xai Trust and !Kokoro Crafts has been wild plant resources and how best to manage them. Botswana's vegetation is protected legally by three laws: (1) the Forest Act of 1968, (2) the Agricultural Resources Conservation Act of 1972, and (3) the Herbage Preservation (Prevention of

Fires) Act of 1977. This legislation deals mainly with timber resources rather than non-timber forest products (NTFPs). The Agricultural Resources Board (ARB) of Botswana deals mainly with a limited number of economically valuable species like grapple plant, and it is supposed to play a role in fire management. The people of /Xai/Xai note that they have seen little evidence of the work of the Agricultural Resources Board in their areas. The reason that this topic is important to the issue of institutional arrangements is that in the past there were farmers' associations composed of livestock owners and crop producers at /Xai/Xai. Many of these people were Mbanderu, as the Ju/'hoansi owned relatively little in the way of livestock and produced a small number of crops. The Mbanderu wanted to control burning patterns through the Herbage Preservation Act, while the Ju/'hoansi felt that such use of the act and of the powers of the Agricultural Resources Board represented an imposition on their traditional land and resource management systems. Once the cattle were gone in /Xai/Xai, this matter was no longer such a contentious issue, and variability in burning and range management practices has become a subject of positive discussion.

Some member organizations of the /Xai/Xai Trust have requested the assistance of non-government organizations in dealing with timber and non-timber forest products. Among them are Thusano Lefatsheng and Permaculture, which deals with veld products, and the Forestry Association of Botswana (FAB), which deals with timber. The community feels that the Ministry of Agriculture has generally not provided them with much assistance when it comes to veld and forest products. Some of them are just as happy about this because, they say, it means that "government is not interfering in our activities." Since wild plant resources are, for all intents and purposes, common pool resources, local people want to maintain their rights to exploit them. At the same time, they have established a set of rules about the kinds and numbers of plant resources that can be exploited, something that they maintain will ensure the long-term availability of key economic resources.

The /Xai/Xai community wishes to maintain its wildlife and other natural resources both for subsistence utilization purposes and for ensuring sustainability of the resource base. They want to conserve resources in order "to ensure that there are animals and plants for our children." Individuals in /Xai/Xai maintain that they wish to have wildlife and wild plants around "because it pleases them" and because their existence will provide "learning opportunities for our children." They also make an ideological argument in favor of conservation and sustainable use. Ju/'hoansi and Mbanderu in /Xai/Xai have said that they want to make sure that there are sufficient animals, plants, and other resources "for the spirits" and "for the ancestors." Some wildlife species are considered ritually as well as economically significant to local people, notably eland (*Taurotragus oryx*), so much so that efforts are made to

impose limits on their exploitation and specialized rituals are practiced to promote their well being. As local people in /Xai/Xai expressed, non-economic values are just as important as economic values in maintaining resources. As evidence of this, people maintained that they did not hunt eland even when they were listed on the Special Game Licenses; the reason being, they said, was that the eland was "sacred." They said that eland were known as "rain animals," important to the health of the land.

The balance among the various competing interests at the local level in /Xai/Xai is complex. There is no question that the Ju/'hoansi and Mbanderu would like to have larger numbers of certain species on the quota (e.g., kudu, gemsbok (*Oryx gazella*), and ostrich). There is also a sense among local people that lions are a big problem, but there are few lions on the quota. The DWNP is supposed to take care of problem animals (through Problem Animal Control, PAC), but in fact does not often show up to do this. Many local people would like to expand their domestic livestock holdings, in part because cattle represent the best source of income for people in remote areas in Botswana. The problem is that the expansion of livestock numbers sometimes leads to the loss of veld foods (e.g., moretwa berries (*Grewia flava*) and morama beans).

The people who are largely dependent on foraging and craft production generally feel that greater efforts should be made to control the numbers and movements of cattle. Some people from outside of the /Xai/Xai area would like to see commercial cattle ranches established in the western part of Ngamiland. Most of the people in /Xai/Xai oppose this because they realize that large-scale cattle ranches would have negative impacts on their grazing and wild plant and animal resources. They are fully aware that the establishment of commercial cattle ranches elsewhere in Botswana has not led to a reduction of stocking rates or the improvement of range and livestock management.

Some of the people of /Xai/Xai expressed the opinion that the kinds of institutional arrangements being proposed by the Botswana government and its advisors were too complicated and unwieldy to represent the stakeholders properly. As they put it, "These are highly bureaucratic institutions." What they wanted instead, they said, were institutions based on existing traditional resource management bodies (e.g., the n!ore kxausi), which have local legitimacy and are recognized as being responsive to the needs of community members. In 1997, it was noted that some of the members of the /Xai/Xai Trust were arguing in favor of using the n!ore kxausi (the territory owners) both as sources of information and as managers of the resource base. The idea being floated was that the traditional n!ore system should be used as the basis for the land management plan for the /Xai/Xai area since it was much more effective at spacing people out so that they did not overexploit resources, and it provided a measure of local control over resource utilization. Using traditional

systems of resource control as the basis for modern systems of management had the additional advantage of what some people called "cultural familiarity."

Dealing with Threats to the Resource Base

The /Xai/Xai community has demonstrated that it is willing to deal with threats from the outside by writing to various authorities about their concerns, filing formal requests for land and for resources with district-level and national authorities, and making their views known at local and regional meetings. Some of the community's members have attempted to gain access to water points, which provides de facto control over the grazing and other resources around them, but thus far these efforts have not been successful. The /Xai/Xai Quota Management Committee decided not to allocate any of its quota to safari companies or other private operators in 1996 and 1997. Thus there has been no legal hunting carried out by safari companies in the NG 4 and NG 5 areas in the past two years.

At a practical level, the /Xai/Xai Trust and its advisors worked hard to promote biodiversity conservation through training, information sharing, and carrying out of resource management strategies. Fewer people were involved in hunting, gathering, and livestock production than was the case in the past. It is difficult to quantify the conservation of resources, but there is no question that from a qualitative standpoint and from the perspectives of both local people and outside observers, the natural resource situation in western Ngamiland was better in 1996-97 than in the early 1990s.

The !Kokoro Crafts management committee engaged in greater levels of craft production and sale in the 1996--1997 than before. It is difficult to say, however, how and to what degree the increased exploitation, production, and sale of goods has affected local numbers, types, and densities of wild resources. Some people in the /Xai/Xai area admitted that they had problems making some complex natural resource management decisions, such as determining numbers and types of wild plants to be allocated to the members of the !Kokoro Crafts as well as to non-members. The eradication of cattle has meant that all of the grazing, browse, and water resources of the region have been available solely to wild animals and people, and there reportedly has been an overall increase in wild fauna and in grazing, much to the delight of local people.

The Ju/'hoansi and Mbanderu are considered by many to be extremely skillful in making local-level resource management decisions. The degree to which they plan natural resource management activities is still to be determined, but

they have placed sustainable utilization and conservation high on their agenda. Over the past three years, the people of /Xai/Xai have spent a considerable amount of time and energy in meetings and discussions on natural resource management and development issues, an indication of their concern about these topics. It is unclear how well community-based organizations in /Xai/Xai represent and negotiate their constituents' interests in a broad arena, for example, in pushing for rights to veld products at the national level. However, they have actively sought to represent their beliefs and objectives at local, district, national, and even international meetings (Bieseke 1994; Hitchcock 1996). At these meetings, people from northwestern Ngamiland and northeastern Namibia have been proactive in developing recommendations to manage land and resources, and they have outlined regulations for tourism, safari hunting, and livestock farming.

The /Xai/Xai community has sought to negotiate with various private sector organizations (e.g., Ker and Downey, Safari South), and it has been in touch with Operation Raleigh and with some tour groups from outside of Botswana. Thought has been given to applying for funds from the Botswana Natural Resources Management Project (NRMP) and various Botswana non-government organizations for technical assistance. A major constraint in generating funds is the ability to write proposals to donor agencies. The community was well aware of the success of the Nyae Nyae Farmers Cooperative in obtaining funding and training assistance from outside agencies. A number of people argued that they needed greater literacy, numeracy, and business management training. Training sessions from the SNV Natural Resource Management Advisor and his assistants and through the government and district council have been extremely useful, they maintain, particularly because they focus on issues they consider important.

A major concern of the people of /Xai/Xai from a policy perspective was the lack of de jure control over land and water resources. They noted that they would like to be able to obtain freehold or leasehold rights over their area so that they could exclude outsiders who they felt were not providing much in the way of benefits to local people or who were seen as utilizing resources without ensuring proper conservation. People from /Xai/Xai and adjacent areas expressed tremendous consternation about the lack of willingness of government agencies, such as the Ministry of Agriculture to consult them about the erection of the veterinary cordon fences and the establishment of ranching projects in their area. The people of /Xai/Xai responded by seeking formally in writing to have the fences realigned and to have the ranching projects shelved. They also argued in meetings that there should be greater government efforts to conduct social and environmental impact assessments. While the fences have not been taken down, the attention brought to bear on the impacts of the fences has led to promises made by the government of

Botswana that impact assessments and fence realignments would be carried out. The people of /Xai/Xai are well aware of the impact of the media, and they have sought to forge linkages with international media as well as with international human rights and environmental organizations such as Survival International, Greenpeace, and the World Wildlife Fund. These linkages, they hope, will get the message out about the threats they are facing from ill-conceived and poorly planned fences.

One of the most serious threats to the resource base, from the standpoint of the local people, though not the central government, is the establishment of a military base north of /Xai/Xai. While the people of /Xai/Xai, some of whom have served in the military, are in favor of national security, they are worried that the presence of large numbers of soldiers could potentially pose threats to the health and safety of both people and the environment. They are aware that some Botswana Defense Force units "live off the land" and that the rations hunting activities of the BDF could lead to a reduction in wildlife numbers. While they have not attempted to lobby the government to stop the planning of the army base in the region, they have certainly made their concerns known to people who visit the area. These concerns were voiced especially after the Botswana Defense Force stopped a tour group from visiting the /Xai/Xai area; the local people saw this as a threat to their sovereignty and economic well-being.

Both the Ju/'hoansi and the Mbanderu at /Xai/Xai have a strong commitment to maintaining traditional cultural values and belief systems. One of the reasons that the people of /Xai/Xai say that they want to engage in resource management and community-based tourism activities is the opportunity to "show outsiders" their lovely craft items and their unique dances and ritual healing systems. At the 20th anniversary celebrations of the independence of Botswana on September 30, 1986, a group of dancers from /Xai/Xai performed and was praised widely. While being cautious about the kinds of stereotyped notions outsiders sometimes possess, the members of the /Xai/Xai community wish to be seen as people who treat each other with respect and manage their resources carefully.

Now that the /Xai/Xai Tlhabololo Trust has been formed, it is possible for the community to enter into legal agreements with the private sector and with the North West District Council and Tswana Land Board. The community-based unit still lacks the power to make and enforce rules in their own areas since various ministries still have the bulk of the power. Until there is localized control, according to local people, there will not be very successful community-based natural resource management in Botswana.

Devolution, Deconcentration, or Decentralization

Botswana has been characterized as an administrative state in which bureaucratic elites have control over processes of decision-making (Picard 1987). After the founding of Botswana as a modern state in 1966, civil servants played a significant role in planning and implementing development activities. A major question that has arisen in Botswana is to what degree decision-making has actually been devolved to the district and the local levels. Some central government and district government personnel maintain that Botswana has devolved a great deal of authority and power to the districts. Others argue that the central government still holds the purse strings and sets much of the development agenda for the country. In this sense, Botswana is seen as not having done much in terms of actual decentralization.

It is useful to draw a distinction between deconcentration and devolution of power and authority. Deconcentration is used here to refer to the delegation of decision-making powers from the central government and its agencies to one of its own field institutions or personnel at the local government level. Botswana has engaged in a kind of deconcentration by establishing District Administrations, which are headed by District Commissioners responsible to the Minister of Local Government, Lands, and Housing in the central government. Devolution, on the other hand, means the transfer of decision-making power and regulatory control from the central government to a local authority, resulting in an increase in the power of that local authority, in Botswana's case the District Councils. Some people at the district level in Botswana, as well as a number of individuals in the private and non-government sectors, suggest that the central government has been reluctant to actually devolve real power and authority to local councils and especially to communities.

While the central government ministries state that their priorities are to increase community participation and to strengthen local authorities, as illustrated in the latest National Development Plan, evidence suggests that the emphasis has instead been on deconcentrating central government power rather than devolving more power to local authorities (Egner 1987:47-48; Sharp 1993). Central government ministries and departments in the 1980s accounted for 80 percent of development expenditure in the districts (Tordoff 1988:201). Some of the people the author spoke with at the district level in Botswana believed that the District Councils continue to lack the necessary financial, technical, and personnel resources to implement development projects efficiently and to provide enough services to meet the needs of their constituents. At the same time, there is a sense that District Councils' capacity is increasing and that training provided to them has been useful in enhancing their ability to carry out their responsibilities. People have made similar remarks in local communities in which conservation and development projects

have been implemented.

When asked whether or not the government had truly decentralized power and authority to the local level, the people of /Xai/Xai maintained that the government had done so only to a certain extent. Wildlife resources were still in the hands of the state, they noted, and they were not allowed to make decisions themselves about mineral resources. They did feel, however, that they had the capacity and willingness to make their own decisions, if only the central and district governments would let them. One of the advantages of working with non-government organizations such as SNV, they said, was that SNV did not have the power to force them to do things that they did not want to do. They felt strongly that the give-and-take of discussions with members of non-government organizations was very productive. They were also appreciative of the fact that NGOs were involved in providing training to local people. It was noted as well that some internationally financed projects such as the USAID-supported Natural Resources Management Project (NRMP) was useful because the members of that project had assisted them in learning useful skills. Several people noted that they appreciated the work that was going on through Kuru at D'Kar in the Ghanzi District, and they said that they wanted to be able to have the same level of technical assistance available at /Xai/Xai. Plans have been made to have a Kuru Development Trust or a Working Group of Indigenous Minorities in Southern Africa (WIMSA) office in Ngamiland; the people at /Xai/Xai are very excited about this. Overall, they felt that the decentralization had occurred, but not far enough.

Conclusions

The /Xai/Xai experience demonstrates that a number of conditions must exist if sustainable development, environmental conservation, and equity are to be achieved in community-based natural resource management projects. It must be realized at the outset that community-based natural resource management is a time-consuming and labor-intensive process. Agencies and individuals at all levels must be willing to be patient and to work collaboratively with local people. At the same time, mechanisms must be put in place to foster accountability and responsibility, not just participation. The management and administration systems should not be overly complex from an organizational standpoint. In addition, capital and technical inputs must be planned in such a way that they do not overwhelm the capacity of local institutions attempting to cope with them.

The activities undertaken must be monitored carefully in order to ensure that they do not overtax the environment. For example, in the /Xai/Xai case, if it is found that the expanded handicraft production and marketing process is leading to a reduction in certain plant species, then efforts should be made to seek alternative resources or to establish conservation and plant propagation programs. One way to do this is to draw on local expertise. In the case of /Xai/Xai and many other parts of the world where there are people with substantial amounts of indigenous environmental knowledge, it is useful to build on this knowledge in drawing up management rules and training programs.

The /Xai/Xai case demonstrates that natural resource management and governance regimes must take account of diverse interests. To ensure this is done, it is necessary to conduct baseline social, economic, and political assessments of communities that focus on gender, age, power, and class characteristics. In order to avoid class conflicts, individuals and groups working with community-based organizations should pursue activities that are beneficial and equitable to as wide a number of people as possible. Alternatively, they should develop a diverse array of activities that meet the needs of a variety of groups or sets of individuals in the community.

In the case of /Xai/Xai, there is a mixture of an egalitarian social system (that of the Ju/hoansi) with a more hierarchically organized one (that of the Mbanderu). If one is to be successful in ensuring that different kinds of systems work in cooperation and not in competition, efforts must be invested in ensuring that conflict resolution mechanisms are in place and that the playing field is as even as possible no matter how the social systems are organized. Having people in the area who are willing to work collaboratively with both kinds of groups in even-handed and open-minded ways is crucial. One area that needs particular attention, and which has been a source of concern and debate in /Xai/Xai, is the composition of the leadership cadre of the local institutions such as the Village Development Committee and the /Xai/Xai Quota Management Committee.

If it is to be successful, the devolution of authority must be done through negotiation and interaction rather than through statutory mandate and the imposition of strict rules and conditions. A participatory and openly consultative set of strategies works well in many contexts, including those involving natural resource management. A protectionist and top-down approach to natural resource management has its drawbacks, in part because it leads to people distrusting central government authorities. In Botswana, the DWNP, the Ministry of Agriculture, and other government agencies would be well-served to employ a community-oriented approach, in which game scouts and extension officers work closely with local people and provide training and assistance

rather than focusing attention on "catching poachers" or sanctioning people for burning the bush. People respond more positively to incentives than they do to disincentives like arrests and confiscation of their goods.

As the /Xai/Xai experience indicates, communities must have decision-making power and authority to undertake projects and conservation activities that they deem necessary. Local institutions should be self-governing, and members should have a significant voice in the operations of those institutions. Crucial to the success of a community-based organization are transparency, openness, and flexibility. Working at the rhythm of communities is critical in local development. Community-based organizations and non-government organizations must set their own priorities and mobilize themselves to achieve those priorities. There must also be a willingness of national and district-level institutions to devolve power and authority to local authorities, and support provided, in the form of formal and informal recognition, of community-based institutions and their leaders.

People working with community-based organizations must pay careful attention to the ways governments and the private and non-government sectors treat specific groups, particularly indigenous minorities or people who are perceived as being non-citizens or those who are "outside the universe of obligation." If it is determined that there are biases in the ways that groups are treated, efforts must be made to ensure that all actions are equitable and that they do not either favor or harm a specific group. Equity and fair treatment are keys to successful development and natural resource management.

One of the valuable lessons of this /Xai/Xai case is that people who have chosen to initiate their own programs can have positive impacts on conservation and development when they are in control of planning and decision-making. It is in the best interests of community-based natural resource management and local communities for the state and other agencies to officially recognize those communities as proprietary units maintaining perpetual de jure rights over land, wildlife, veld products, minerals, and other natural resources. Devolution of authority, responsibility, and power to people in most direct contact with natural resources can enhance both biodiversity conservation and development when those people have the right to make informed decisions about how they will handle those resources over the long term.

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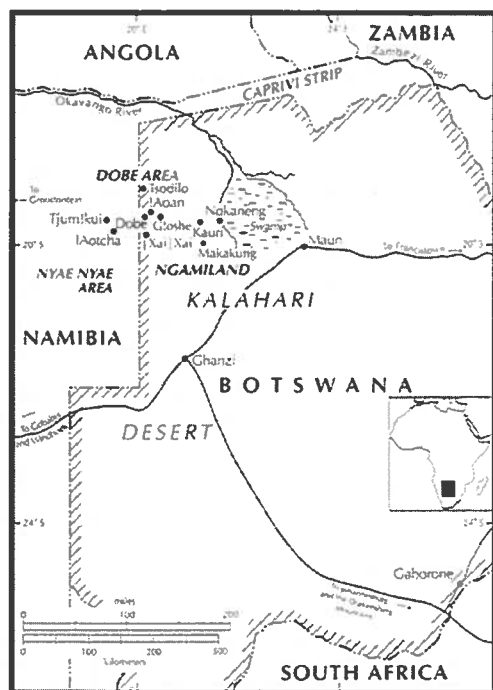
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Figure

Figure 1. Map of the /Xai/Xai Area in Northwestern Botswana and Adjacent Areas in Northeastern Namibia



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About the Biodiversity Support Program

The Biodiversity Support Program (BSP) is a consortium of World Wildlife Fund, The Nature Conservancy, and World Resources Institute, funded by the United States Agency for International Development (USAID). BSP's mission is to promote conservation of the world's biological diversity. We believe that a

healthy and secure living resource base is essential to meet the needs and aspirations of present and future generations. BSP began in 1988 and will close down in December 2001.

A Commitment to Learning

Our communications activities are designed to share what we are learning through our field and research activities. To accomplish this, we try to analyze both our successes and our failures. We hope our work will serve conservation practitioners as a catalyst for further discussion, learning, and action so that more biodiversity is conserved. Our communications programs include print publications, Web sites, presentations, and workshops.

Visiting BSP Web Sites

We invite you to visit our general and program-specific Web sites, even after the program closes down in December 2001.

Biodiversity Support Program

www.BSPonline.org

Biodiversity Conservation Network

www.BCNet.org

CARPE: Central African Regional Program for the Environment

<http://carpe.umd.edu/>

KEMALA: Supporting Indonesian NGOs for Community Based Natural Resource Management

<http://www.bsp-kemala.or.id/>

BSP Listserv

Through June 2001, you can receive e-mail updates about BSP through www.BSPonline.org.

To join our listserv, click on **stay informed** and enter your e-mail address. We will keep you posted on project highlights, upcoming events, and our latest publications.

Contact BSP

For more information, to give us feedback, or to order copies of BSP publications, contact us.

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