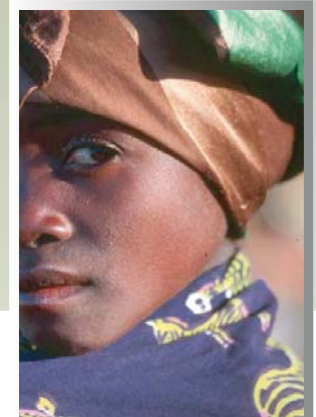




7

People: predators and protectors

Humankind is both the enemy and guardian of the Delta. Certain people use it, while others abuse the wetland; some people remain on the land, while others move away.



Concerns about increasing pressures being placed on the Delta's natural resources contributed to the reasons for writing this book. Some threats come from far afield, such as climate change and potential developments upstream of the Delta (see page 130), but others are due to local processes. And because the Delta matters most to the people who live there, much of the obligation to care for the wetlands falls on local shoulders.

The health of the Delta is thus very much a matter for local people, on whom we now focus. As the chapter will show, this is a sparsely populated

area compared to most places in the world. It is also one where people are in rapid transition from traditional lifestyles to others associated with modern economics and commodities. And, with many people being recent immigrants from elsewhere in Botswana and other countries, the population is diverse in character and origin.

The majority of people live on the outskirts of the Delta rather than within the wetlands themselves. For this reason and the fact that most demographic information is aggregated for Ngamiland, many of the statistics presented are for this district.



The people of the Delta have been highly mobile in various ways, and the lives of many continue to change. Making judgments about what is good and what is undesirable is extremely difficult. Charting a course that seems best for today may not hold for tomorrow, and what suits one group of people may be troublesome to others.

Historical perspectives

Associations between people and the Delta started long before it came to the attention of the wider outside world during the second half of the 19th century (see page 10). But rather little is known of those earlier times, which are largely shrouded in legend. For example, Tsodilo Hills, which are adorned with over 4,000 rock paintings, are claimed by several peoples, including the Hambukushu, Bugakhwe and Xanikhwe, Ju/'hoansi as their ancestral 'home'.¹

From archaeological records it is clear that northern Botswana has been inhabited for the past 100,000 years at least, and probably for much longer before that. Evidence of occupation has been found at many sites around the Delta (Figure 34), and we can assume that all areas between these sites were also occupied at various stages.

It is also certain that the Delta's resources, such as fish, game and water, were vital to those who lived nearby, and that people who lived further away would likewise have made excursions to gather food from the wetland.

The Delta and its immediate surroundings have therefore been a home and pantry for much longer than we often imagine. Those who first lived here were hunter-gatherers, and today's so-called Bushmen,



Rock paintings at Tsonxhwa Hill, just south-east of Savute camp. How different was the reasoning of people who painted these images from those who took the photographs in this book? The sets of images were captured in different media (paint, film or digital code) but all conceivably reflect the esteem in which the subjects were held.

San or Basarwa are perhaps their descendants. The populations of the earliest inhabitants would have been small, and they would have moved widely and frequently in pursuit of sustenance provided by wild plants and animals.

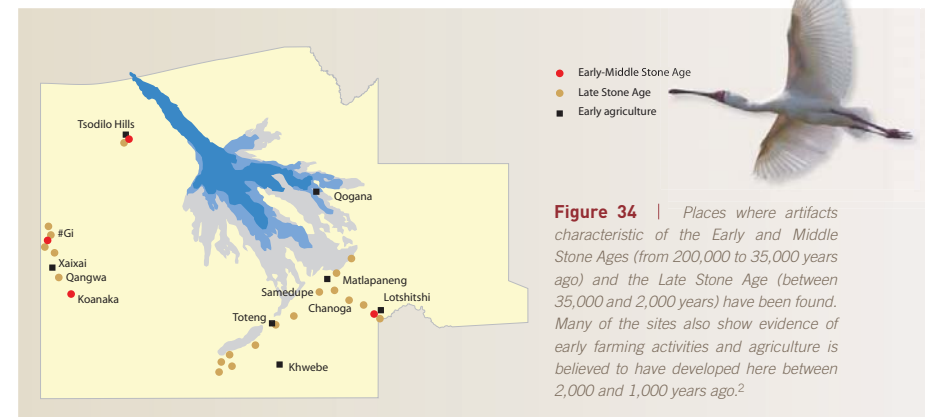


Figure 34 | Places where artifacts characteristic of the Early and Middle Stone Ages (from 200,000 to 35,000 years ago) and the Late Stone Age (between 35,000 and 2,000 years ago) have been found. Many of the sites also show evidence of early farming activities and agriculture is believed to have developed here between 2,000 and 1,000 years ago.²

Permanent settlements were established only when livestock and crop farming was introduced by Bantu people. Directly or indirectly, these first farmers were probably the forefathers of the BaKgalagadi, Wayeyi and Hambukushu, Dxeriku, Herero and Tawana, even though some groups appear to have settled around the Delta more recently.³

Indeed, the history of most people associated with the Delta is characterised by frequent migration towards newly found natural resources or economic opportunities, or to escape livestock and human disease, conflict, drought or flooding.

For example, the Tawana people initially came on hunting forays to Ngamiland, where they established their first settlements in about 1800. Over the next 100 years, they moved their capital eight times between places such as Kgwebe, Toteng, Nokaneng and Tsao. The last move was in 1915 to Maun.⁴ The rinderpest epidemic in

1896 wiped out all the cattle in Ngamiland, while outbreaks of sleeping sickness (transmitted by tsetse flies) led to several settlements in the Delta being abandoned in the 1940s and 1950s.

Conflict frequently played a role. Raids by the Matabele in the second-half of the 19th century forced residents of many settlements to flee. Most Herero people escaped to Ngamiland to avoid extermination during the 1904-1906 German-Herero war in Namibia. And more recently, Hambukushu people were relocated to the Etsha settlements in 1969 and 1970 to evade conflict in Angola.

Exoduses to escape hardships are better documented than movements prompted by the lure of new resources or opportunities, which are more gradual and less dramatic. As we shall see, mobility in pursuit of better livelihoods remains a feature as large numbers of people forsake their rural homes for urban ones.

And families now often have diverse sources of income. This is another characteristic with a long history that stems from the need to be flexible and resourceful in a land where rainfall and flooding was variable, diseases common, and natural resources spread over large areas, for instance.⁵ Family members therefore often had different roles. Their activities during the dry season also differed from those after rain had fallen, or from one year to the next, depending on flooding, access to resources, labour and capital.⁶

The number and spread of people

Official census figures were gathered in the first half of the 20th century by requesting everyone to assemble and be counted at villages of their headmen. This

was the basis for estimates of 21,550 people in 1904, and also for figures in 1911, 1921 and 1936, some of which seem rather high or low (Figure 35). Subsequent counts were more reliable, and we can be confident of the population totals that have risen so steeply between 1964 (42,572 people) and the latest estimate of 138,654 people in 2006.

Whilst migrations led to some population increases, most of the district's recent population growth was due to better survival rates, particularly as a result of health

The first attempt at a systematic appraisal of population size was by Siegfried Passarge in 1898. By counting huts and villages, and estimating how many villages lay beyond his route, he arrived at an estimate of 5,000 inhabitants in Tsau, the then Tawana capital, and between 20,000 and 25,000 in the whole region around Lake Ngami.



Figure 35 | The population of Ngamiland has grown rapidly, particularly after the widespread introduction of health services during the 1960s and 1970s. Between 1981 and 1991, the number of people grew by 3.3% each year. This rate dropped to 2.8% between 1991 and 2001, and is now estimated to be 2.1%.⁷ This is good news, but only means that the rate at which more natural resources are consumed each year is perhaps not as high as it was. Indeed, demands on natural resources continue to rise even if populations remain constant because so many people seek western, consumerist livelihoods, a trend made clear by the rapid growth of Maun's population.

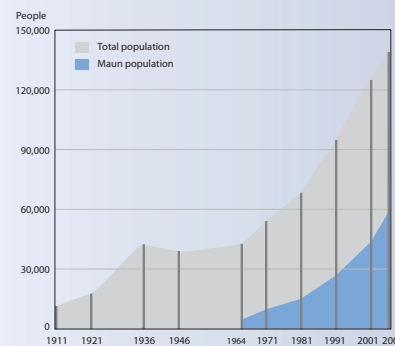
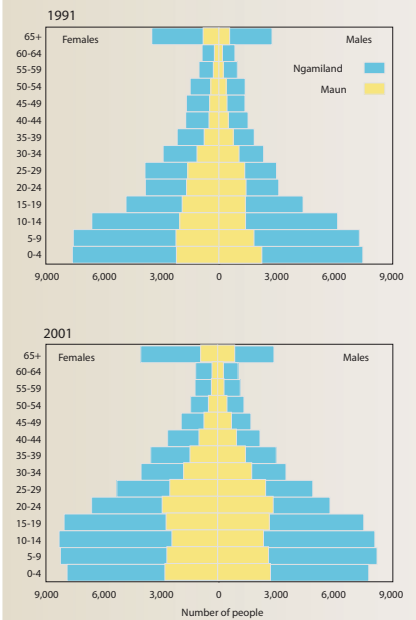
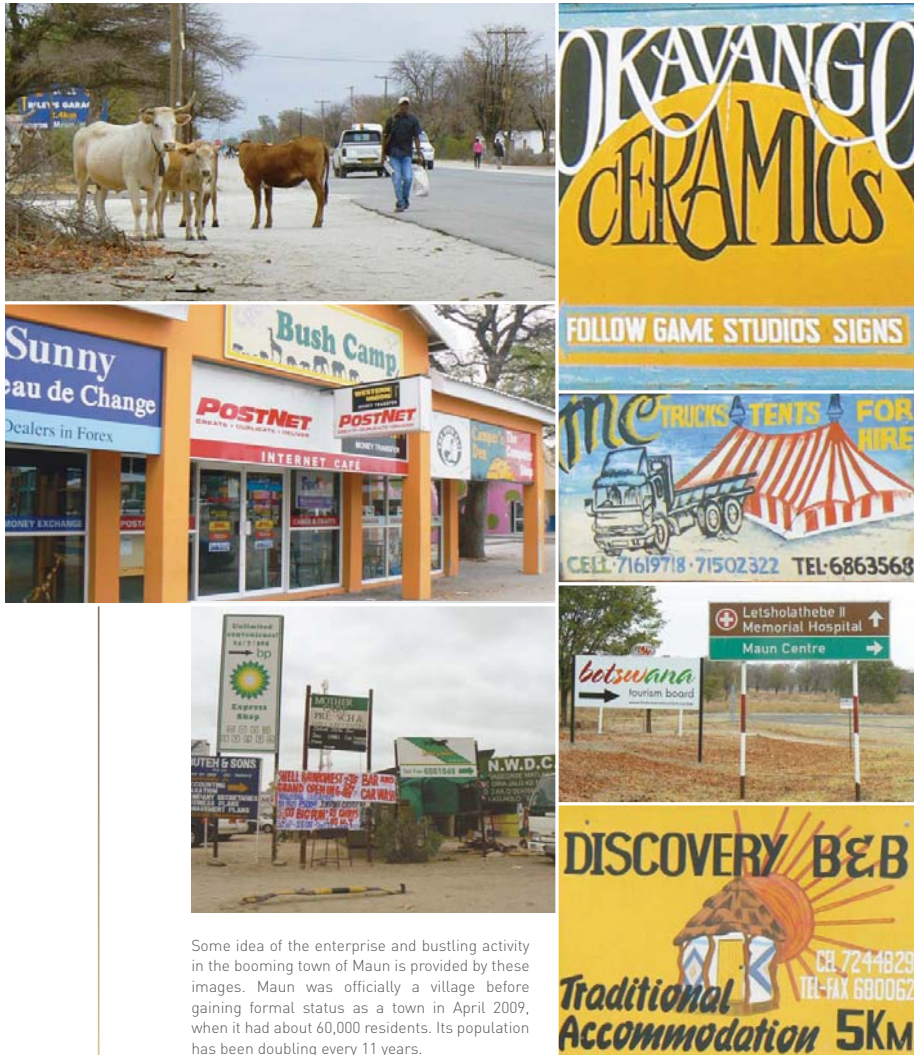


Figure 36 | Declining birth rates in Ngamiland are reflected by the smaller proportions of young children in 2001 compared to 1991. The age pyramids also show that the swelling population of Maun consists largely of people of working and job-seeking ages.





Some idea of the enterprise and bustling activity in the booming town of Maun is provided by these images. Maun was officially a village before gaining formal status as a town in April 2009, when it had about 60,000 residents. Its population has been doubling every 11 years.

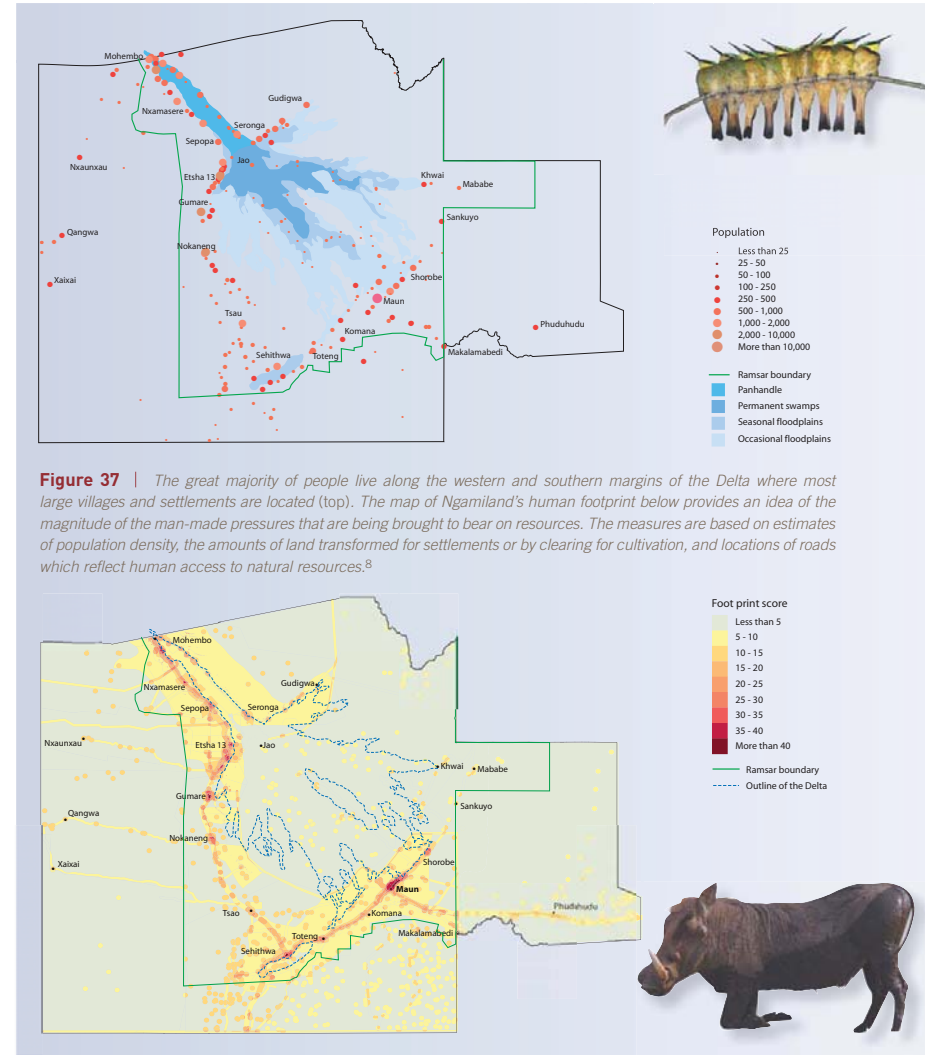


Figure 37 | The great majority of people live along the western and southern margins of the Delta where most large villages and settlements are located (top). The map of Ngamiland's human footprint below provides an idea of the magnitude of the man-made pressures that are being brought to bear on resources. The measures are based on estimates of population density, the amounts of land transformed for settlements or by clearing for cultivation, and locations of roads which reflect human access to natural resources.⁸



services reducing disease and mortality among children. Prior to the establishment of clinics and hospitals the people of Ngamiland were often the victims of malaria, gastro-intestinal infections, sleeping sickness, tuberculosis, venereal diseases, bilharzia and other maladies.

Populations throughout the world have grown, not because more children were born, but because more have survived. In fact, birth rates in Botswana have dropped significantly in recent decades. In 1981, the average number of children born to a woman in Botswana was 6.6, but this had halved to 3.2 children in 2006.⁹ The decline in birth rate can largely be attributed to women attaining progressively higher levels of education, and therefore spending more of their lives in employment than at being mothers.

While declining birth rates have caused the overall expansion of the population to slow in recent years, mortality and illness from HIV/AIDS has probably had a substantial impact on growth. Infection rates in Botswana have been amongst the highest in the world for a long time, and about one-quarter of people aged 15-49 in Ngamiland were infected in 2004.¹⁰

Although infection rates may not have dropped, the situation has since improved because increasing numbers of people have access to anti-retroviral drugs and therefore survive. Before the drugs became widely available, life expectancy dropped from an average of 65 years

in 1990–1995 to just 40 years in 2000–2005. Botswana was the first African country to provide antiretroviral drugs to everyone in need.¹¹

No one lives permanently in most areas of the inner Delta and the remote areas of western and northern Ngamiland. Of the settlements that do exist, most are very small (Figure 37), with a high proportion of the population clustered in a handful of larger villages and in the district capital of Maun. From census data gathered in 2001, the largest villages, each with more than 1,000 residents, were (from largest to smallest): Gumare, Shakawe, Etsha 6, Etsha 13, Seronga, Nokaneng, Sepopa, Sehithwa, Nxamasere, Mohembo West, Tsao, Matlapana and Xakao. In total, these 13 larger villages together with the town of Maun were home to about 84,800 people, or 58 % of Ngamiland's population. Since 1981, Maun's rate of growth has exceeded 6% per year, with the population doubling every 11 years. Other settlements, such as Shakawe and Gumare, have also grown rapidly.¹²

As a result of migrations over a long period of time, a large variety of people labelled as belonging to different ethnic and language groups live in Ngamiland. The most populous groups are the Tawana (also called BaTawana, most of whom live in Maun and various large villages), Wayeyi (mostly in smaller settlements along the southern and western margins of the alluvial fan, Hambukushu (mainly in settlements and villages along the western Panhandle) and Herero (largely in the south-west of the alluvial fan in such places as Sehithwa and Tsau). Other, smaller groups are Tcanikhoe (also spelled Xanekhwe or //Anikhwe), Bugakhwe (alternatively Bukakhwe), Deti (or Teti), Hura (or Ura), Ju/hoansi, Gomahing, BaKgalagadi, BaKhurutsi, Masubia, Makalaka, Dixeriku, and various Europeans and Asians.


Some of the rapidly changing circumstances of peoples' livelihoods are illustrated in the table on the next page, which compares the results of the 1991 census with those of 2001. For example, whereas the majority of homes (78%) were traditional structures with thatched roofs (*built with labour*) in 1991, almost half had corrugated iron roofs (*built with cash*) in 2001. Two out of five people were employed

in agriculture or the harvesting of natural resources in 1991, compared to about one in six people in 2001. Over three quarters of households had access to piped water in 2001, compared to about half in 1991. Other measures that have changed a good deal over the last few decades, and continue to change, are improved levels of education (with more people going to school and/or completing higher levels of education), greater access to health care, and higher levels of possession of imported manufactured goods, such as vehicles, telephones, radios and other domestic appliances.

Farming

Two types of agriculture predominate in Ngamiland: livestock and crop farming, and both are largely practised using traditional methods which depend on family labour and local natural resources such as water, soil nutrients, pastures and browse.¹³ Much of this farming is 'subsistence' in nature, providing local residents with food for domestic consumption and, in the case of cattle, capital security. Approaches are thus quite different from those used in commercial farming operations where most inputs, for example fertilisers,

	1991	2001
Homes with piped water or using communal taps	52%	77%
Households using river water	17%	9%
Homes with corrugated iron roofs	18%	46%
Homes with thatched roofs	78%	49%
People employed in public administration	7%	19%
People employed in wholesale and retail enterprises	9%	15%
People employed in farming and harvesting natural resources	40%	15%




The Okavango Ramsar site has about 194,000 cattle and 99,000 goats.¹⁴



Flood recession farming is mainly practised along the western edges of the alluvial fan between the Etsha villages and Tsao, and also in the south-east between Shorobe and the upper reaches of the Boteti River.

farm managers, livestock feed, pesticides, electricity and water for irrigation, are specially purchased or hired.

Livestock are generally based at cattle-posts or the homes of their owners (especially goats) from where they graze outwards on a daily basis. Cattle and goats are the most abundant stock, with smaller numbers of sheep and donkeys. Most stock are held on communal or tribal land, and the great majority of animals are kept south of the buffalo veterinary fence. Less than half of all rural families have cattle and goats. For example, 37% of households in Ngamiland owned cattle in 2001, while 43% owned goats. Livestock ownership is thus very unequal, and the biggest herds or flocks also belong to relatively few owners. Goats are slaughtered infrequently for household consumption or sold when their owners need additional cash. With the exception of Herero farmers who frequently market cattle for commercial gain,¹⁵ most people keep cattle as security assets and for occasional ceremonial use, for example when a family member marries or dies.

Fields are divided into those planted with rain-fed or dryland crops, and those used for flood-recession or *molapo* cultivation. By the year 2000, some 48,900 hectares had been cleared for crops in Ngamiland, of which 75% were dryland fields and 25% were fields in floodplain areas.¹⁶ However, only about 10,000 hectares are used in any given year, the remainder being abandoned or left fallow.

Each *molapo* field (plural *melapo*) averages about two hectares, and is cleared on ground that slopes down into channels or broader floodplains. Maize, sorghum and vegetables, such as beans and pumpkins, are planted most often, usually in late winter and spring as temperatures begin to warm. The crops are planted in strips parallel to water lying in the channels or floodplains to benefit from floodwater moisture remaining in the soil. Although early rains in October and November provide supplementary water, the success of *molapo* farming is primarily determined by flooding – both the previous season's flooding and that of the coming season. Either too much or too little flooding is detrimental to *molapo* crops.

Yields from *melapo* are generally higher than those from dry lands, which can only be planted after the first good rain fall. Dryland crops also frequently suffer from shortages of water as a result of both limited and episodic falls of rain, and the low capacity for water retention in soils that are mainly sandy. Average yields for dryland crops are 162 kilograms of maize, 121 kilograms of sorghum and 144 kilograms of millet per hectare. These yields amount to less than US\$100 per hectare if they are translated into values that would be paid for packaged cereals.

Although their methods and commodities differ, livestock and crop farming share several features.

The first is that these activities largely supplement the livelihoods of most rural families who live off a range of different incomes. Farming is just one source of income, and it is often small compared to cash earnings, remittances and social benefits. For instance, it was estimated in 2003 that at least 50%, and perhaps as much as 76%, of all rural income in Ngamiland was not

generated by farming activities. Another set of figures showed farming to be the most important livelihood activity for less than one in four rural households.¹⁷ Agriculture is therefore not the mainstay livelihood for most people in Ngamiland, and its importance will continue to diminish as people increasingly seek cash-based incomes in towns.

Secondly, these farming strategies are typical of a 'low input, low output' system. For example, farmers seldom invest in, or take measures that many outside observers would assume as necessary for better production. Few farmers thus add fertilizers, compost or manure to improve soil fertility, and weeds are not removed as often as they might be. As a result, crop yields are low. So too, are off-take rates of livestock that are often allowed to graze freely, when herding might provide better forage for the animals.

The major reason for low inputs is due to a third feature of farming in Ngamiland. This is the significant risk of failure or loss, which means that extra investment or effort often doesn't pay off. For example, pests and diseases plague both crops and livestock. Rinderpest wiped out most cattle in 1896, and lung sickness (Contagious Bovine Pleuropneumonia [CBPP]) effectively did the same in 1995 and 1996.¹⁸ Earlier on, over a quarter (28%) of all cattle starved to death during the dry years that lasted between 1982 and 1988. Outbreaks of tripanosomiasis and foot-and-mouth disease occur from time to time. Crops are attacked by various parasites, stripped by locusts and red-billed quelea birds, and suffer from shortages of rain or floodwater. For example, Botswana declared droughts in 27 of the 33 years between 1964 and 1997.¹⁹ Wildlife exerts further tolls on farming, for example by damaging crops and killing livestock. Indeed, the increasing incidence of such conflicts may undermine goodwill towards wildlife and the conservation of the Delta.

A fourth similarity is that it is usually impossible for most farmers to earn reasonable amounts of money because of low levels of production, and because market opportunities for surpluses are limited. This was not a problem before cash became essential, but nowadays everyone needs cash for necessities such as decent clothing, medicines, cell phones and efficient transport. And it is this need for money that now drives so many people to forsake farming for urban livelihoods where they have reasonable chances of earning incomes from employment or enterprises.

Finally, both livestock and crop farming enjoy very substantial subsidies from government. For example, crop farmers can get support to obtain draught animal power, animal-drawn farm implements, fencing materials, water tanks, fertilisers, threshing machines, mini-silos, chaff cutters, scotch carts, and canoes and paddles. Grants are also available for stock farmers to obtain poultry and guinea fowl, sheep and goats, equipment for boreholes and wells, fodder, fodder barns, dip tanks, kraals, crushes and loading ramps.²⁰ In addition, extension and veterinary officers provide farmers with free advice, veterinary medication and soil testing services. Very poor families can receive food baskets.

Rural life in Ngamiland would be even tougher without all these subsidies. Traditional farming clearly provides some food and security, but does little to provide most residents with the necessities of modern life. However, it is also true that farming is valuable to poor families that have few or no other sources of income. For example, a recent assessment of poverty found that about 28% of all households were below the poverty datum line.²¹ What proportions of these were in rural and urban areas is not known. A challenge for the future is to evaluate whether the best options for alleviating poverty really lie in farming or other economic livelihoods. Likewise, we need to consider whether farming (and what kind of agriculture) or other enterprises are apt to make the best use of land in and around the Delta.

Land uses

All land in Ngamiland is either state-owned or communal, which is often also called tribal land (Figure 38). Government departments directly manage state land while the Tawana Land Board is responsible for the administration and allocation of communal land. The state land consists of the Moremi Game



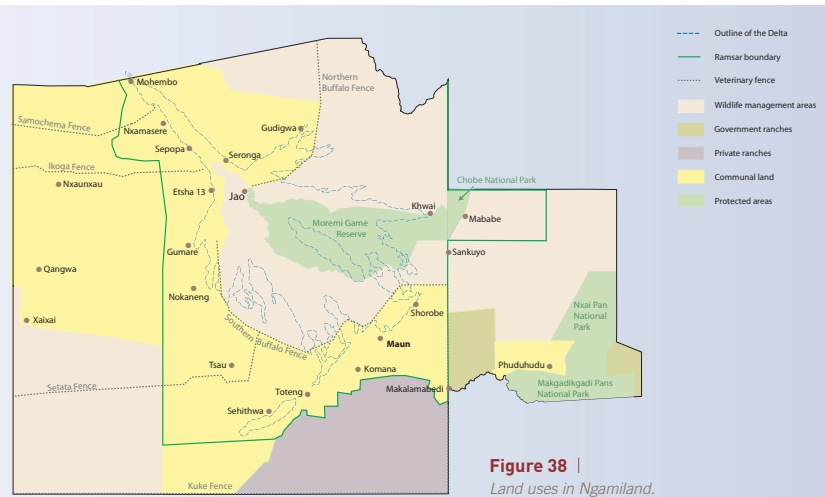


Figure 38 |
Land uses in Ngamiland.

Veterinary cordon fences were erected to limit the spread of disease between wildlife and livestock and to control infections between domestic animals when outbreaks occur. For instance, foot-and-mouth disease is easily transmitted from buffalo to cattle, and an epidemic of this disease could jeopardise the whole of Botswana's export beef industry.

However, veterinary (and other) fences are detrimental environmentally. This is particularly true in arid landscapes where animals need to roam over large areas to obtain water and forage because rainfall is erratic in space and time. As a result of the southern Buffalo fence, regular wildlife migrations from the Delta westwards towards Namibia and southwards to Lake Ngami have been stopped. Dramatic declines in numbers of wildlife in the Kalahari are probably due to their migrations being cut off, especially by the Kuke fence (Figure 38). In addition, fences create biological islands where animals are prevented from inter-breeding with populations elsewhere. Genetic diversity is therefore reduced, while in-breeding may have unwelcome effects.

Reserve (covering 4,871 square kilometres), the 344 square kilometres of Chobe National Park that fall within Ngamiland, several large cattle ranches (used for experimental breeding, artificial insemination and quarantining) and the town of Maun.

In terms of the Tribal Grazing Land Policy (TGLP) of 1975, a large area of designated communal or tribal land was divided into commercial ranches. Most of the ranches each cover between 4,000 and 7,000 hectares. While the ranches were allocated as leaseholds to individual farmers, they have effectively become private property.

Land uses in the remaining communal areas are divided between those where emphasis is placed on crop and livestock farming and those where the primary use of land is for wildlife and tourism. The latter are called Wildlife Management Areas (WMAs), and each is known by a unique number, such as NG/21 or NG/33. Their boundaries and broad purposes were introduced in 1992 as part of a community-based natural resource management (CBNRM) programme. The goals of CBNRM are to provide local communities with benefits from wildlife and simultaneously to maintain large areas in and around the Delta for tourism and conservation. Many of the WMAs also provide buffers between farming areas and protected wildlife zones.

Of 29 WMAs in Ngamiland, rights for the use of 15 are currently leased to private entrepreneurs who use the areas for tourism and/or trophy hunting. Another 13 WMAs are allocated to communities, which usually enter into joint-venture agreements with tourism and/or hunting enterprises.²² A variety of benefits accrue through the joint ventures. For example, local residents gain incomes from employment by the enterprises, which also pay royalties to community management trusts for tourism and hunting rights. Other benefits include support to local social services, such as schools and clinics, and the distribution to local residents of meat from hunted animals.

The economic conditions of people in some WMAs have improved substantially, especially in those areas where benefits are shared between relatively small numbers of households, and where the joint ventures have high commercial value for tourism and trophy hunting. For example, there were very few jobs or sources of cash in the settlements of Sankuyo, Khwai and Mababe prior to them establishing joint ventures, which now provide employment to about 50% of all the



Communal land provides the poor with places where they can live and farm for free. But communal land is also free for the rich, which often leads to severe over-grazing. As the first president, Seretse Khama, observed in 1975: 'Under our communal grazing system, it is in no one individual's interests to limit the number of his animals. If one man takes his cattle off, someone else moves his cattle in'.

resident adults.²³ While the agreements with tourism and hunting operators may impose restrictions on land uses in certain areas, local residents are generally free to practice traditional farming. Cattle are, however, not allowed in the northern WMAs because of veterinary controls.

The boundaries of the Ramsar site run around the Delta and enclose a substantial area of Ngamiland. This is one of the largest Ramsar sites in the world, and was so designated in 1997 in recognition of its 'significant value for Botswana and... for humanity as a whole... because of its international significance in terms of ecology, botany, zoology, limnology or hydrology.'²⁴ The Ramsar site includes Botswana's frontage on the Linyanti Swamps and Kwando River. Since most of these wetlands lie across the border, it would be of value if Namibia were to extend the Ramsar site into its territory.



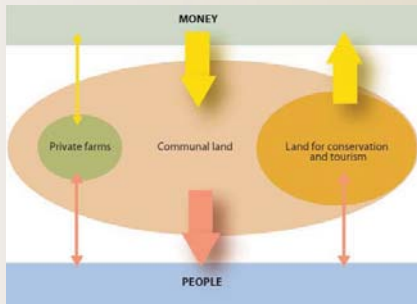


Figure 39 | Major land use areas, and the flows of money and people into and out of these areas. All land in Ngamiland was originally communal for farming and the harvesting of natural resources. Recently, some land has been given to private commercial farms, while a larger area was set aside for the primary purpose of conservation and tourism and hunting enterprises. Large sums of money flow to sustain families in the remaining communal areas where it is hard to make a decent living, and many people therefore leave to live and work in urban areas. By contrast, large sums of money flow out of profitable wildlife and tourism areas, but critical questions are often asked about the beneficiaries of the revenues. Few questions are raised about the merits of private ranches, however. The narrow arrows reflect the small flows of people and money in and out of private farms, and of people in or out of tourism and wildlife areas.

Figure 38 provides a perspective on the spatial extent of land uses. Another way of looking at this is provided by **(Figure 39)** which illustrates the flows of revenue and people associated with different land uses.

The allocation of large areas in and around the Delta for tourism and conservation by the Botswana government has been good for international tourists, the economy of the country,

for investors in tourism, and for naturalists who value wildlife and wild places. However, it is often stated that the use of land for wildlife and tourism has been at the expense of rural livelihoods because residents have lost access to natural resources that they harvested traditionally.²⁵ Areas available for farming, collecting reeds, fishing and hunting, for example, have shrunk. In addition, the number of rural residents has grown, and so less land is available to support more people. Legal restrictions on the use of natural resources have also increasingly been introduced.

The status quo of land allocation in Ngamiland and its uses is frequently lamented. It is strongly argued that the loss of resources is unfair because conservation largely serves the interests of foreign tourists and of investors outside the Delta, many of whom are not Botswana citizens. Moreover, the great majority of beneficiaries are the white owners, senior employees and shareholders of tourism businesses.

Much of this is true, although increasing numbers of black citizens of Botswana are earning revenues from the same tourism industry, largely in the service sectors but increasingly as shareholders and employees in tourism enterprises. For example, a significant proportion of Maun’s economy revolves around tourism with its knock-on effects, and the great majority of Maun’s approximately 60,000 residents are Botswana citizens.

Furthermore, rural livelihoods are not lost to tourism and conservation as generally and significantly as critics often claim. There are three reasons for this. First, natural resources are lost to other land uses as well, for example through the allocation of communal land to private farms which are given free to select owners, many of whom are not from Ngamiland. Some communal land has also been set aside for government uses that are unrelated to tourism and conservation. And natural resources that should be for the sole use of rural residents, at least from an ethical point of view, are often used disproportionately by relatively wealthy people from towns. They frequently invest some of their savings in cattle which they place at rural cattle posts where their large herds consume much of the available



The Delta attracts about 100,000 visitors each year, largely to about 60 camps and lodges. Revenues earned from them, combined with those from trophy hunters, make up the bulk of Botswana’s GDP now generated by tourism. Tourism is thus a major sector in the country’s economy, coming second only to diamonds in terms of revenue generated. About 40% of the employment available in Ngamiland is provided by the tourism industry.²⁶ Some jobs directly serve visitors at lodges and camps or as poing guides, for example, while others indirectly support the tourism industry through services, such as those in retail outlets and the public service. Botswana’s tourism policy has three principle goals: (a) to encourage tourists who occupy permanent accommodation, as opposed to casual campers; (b) to maximise financial returns from tourism for the people of Botswana, especially those who tolerate the costs of living close to wildlife, and (c) to ensure that tourism is carried out in an ecologically sustainable way.

pasture. Local, poorer residents with small herds are placed at a significant disadvantage. Frequent bush fires (see page 84) and the on-going clearing of land for crops also contribute to the loss of natural resources.

Second, the so-called *dependence* of most rural families on local natural resources is simply exaggerated. As described earlier (see page 118), many rural residents gain most of their income as cash from sources that are independent of local natural resources that they may use. Ironically, much of the off-farm income is also a product of tourism and conservation enterprises, the very activities that supposedly limit the

economic health of local households. Thus, many salaries, royalties, remittances, social benefits and government subsidies are funded by taxes derived from enterprises that make money from tourists and wildlife.

Third, arguments that rural people should have more land for farming and other forms of natural resource harvesting assume (a) that decent livelihoods can be made from traditional land uses and (b) that rural life is preferable. Both suppositions are tenuous. Even where land is available, farming is difficult for the reasons discussed above (see page 119). Fish yields are also very low (see page 103) and there are few



markets where occasional surpluses can be sold. And this remains true despite significant government subsidies to support small-scale farming and fishing. Rural life also appeals only to certain people, whereas the great majority of schooled men and women are attracted to urban lifestyles.

Debates on the pros and cons of tourism/conservation vis-à-vis the necessity of maintaining rural livelihoods are not easy to conclude. The contentious issues may also be viewed from different angles and framed differently, for example by asking if local interests should prevail over wider ones. Are long term goals more important than those that meet immediate needs? More directly: 'Whose Delta is it?' and 'How long should the Delta's resources remain useful?' And are traditional livelihoods preferable to modern ones and, if so, preferable to whom?

The Botswana government recently grappled with these tough questions while compiling the Okavango Delta Management Plan, which was completed in 2008, and the Ngamiland Integrated Land Use Development Plan, finalised in 2009.²⁷ Both plans emphasise the economic and conservation values of the Delta's natural resources for the country, international community and local residents, and the need to maintain the natural processes that keep the Delta functioning, as described in Chapter 4. Proposals are made to enhance and distribute the benefits of these resources more fairly. The plans also recommend the expansion of zones for wildlife management, and to physically separate land uses where the potential for conflict is high.²⁸ These include conflicts between farming and wildlife, and between different kinds of farming. The challenge now remains for these and other useful recommendations to be implemented.

People living in rural areas are much more diverse than is commonly perceived. Some are members of rich and large families, others are small and poor. The former usually depend on off-farm incomes for their daily needs, while poorer people depend much on farming and the use of other local resources. In achieving a balance between conservation, the economic value of tourism and trophy hunting, and uplifting the livelihoods of local residents of the Delta, it seems important that these poorer families be given the best opportunities of using natural resources. There is also a need for benefits derived from wildlife to be more evenly spread across the Delta's population.

KEY POINTS

1. The population of Ngamiland has grown rapidly as a result of medical services that have improved survival, but growth rates have recently slowed because fewer children are born nowadays.
2. Crop and livestock farming produce low yields, and are risky as a result of disease, pests, shortages of rain, and too much or too little flooding. Inputs to farming are therefore low.
3. In addition to low agricultural production, rural livelihoods are tough as a result of limited access to services, cash incomes and modern necessities.
4. Whilst farming is valuable to very poor families, most income in rural areas is not from farming or from the direct harvesting of natural resources, but rather comes from salaries, business earnings, remittances, social benefits and subsidies.
5. Rates of urbanisation have been high as increasing numbers of people, especially younger men and women, have moved to seek salaries and services in towns. Over half the population now lives in urbanized settings in towns and large villages.
6. The daily activities of most people therefore now focus on earning money, on purchasing food (rather than harvesting it), on buying clothes (rather than making them), on quick, comfortable transportation (rather than walking) and on fast electronic communication (as opposed to the 'bush telegraph').
7. Likewise, modern medicine has largely replaced traditional cures, and food security has taken the place of food self-sufficiency. Formal education is held in high esteem, and its teachings are more highly regarded than folklore. Likewise, public services and government play stronger roles than traditional leadership.
8. Most land is used for three purposes: communal farming, private ranching, and wildlife conservation and tourism.
9. There is considerable debate over the beneficiaries and comparative value of communal land and that used for tourism and conservation.