

Land Use and Development Plan for the Managed Resource Use Zone of the Bwabwata National Park

2020/2021-2029/2030



Ministry of Environment, Forestry and Tourism
Directorate of Wildlife and National Parks



Republic of Namibia





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Republic of Namibia

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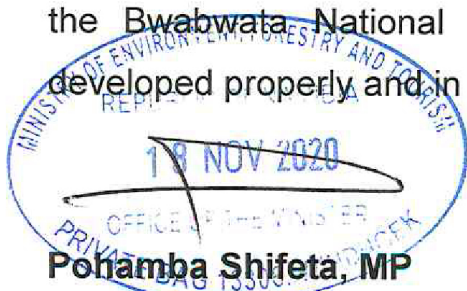
FOREWORD

Namibia has a well-developed network of protected areas that makes a major contribution to the conservation objectives in the country's development goals. Some of the National Parks and Game Reserves has for many years remained largely separate from the people who live around their borders or within the parks themselves. As a result, there are often negative impacts on the habitats and wildlife conserved by the protected areas because park residents or neighbours are hostile to the parks. Further, the considerable economic opportunities that protected areas offer have in the past remained outside the reach of local communities and local entrepreneurs.

People living in or next to protected areas often suffer losses from wildlife such as predators that kill livestock or elephants that damage crops and property. Most protected areas were established on land that in the past was occupied by people and many park neighbours today have cultural associations within the parks. Bwabwata National Park is very special in that it supports a large wildlife population and a large human population. The major accomplishment of the Bwabwata National Park is that human and wildlife are now living in a status quo that offers tremendous benefits to both conservation and rural community development. In Bwabwata National Park, park neighbour and resident relations is key to long term conservation initiatives and the quality of life for local communities. It is a win-win situation.

This Land Use and Development Plan sets out the objectives and guidelines to conserve and develop the Bwabwata National Park Managed Resource Use Zone in a coordinated and organized approach for the benefit of the park residents, the park and country in general.

It is the responsibility of every staff member and stakeholder involved to ensure that the Bwabwata National Park Managed Resource Use Zone is managed and developed properly and in accordance with this plan.



Ponamba Shifeta, MP
MINISTER



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ABBREVIATIONS

BNP	Bwabwata National Park
CA	Conservation Agriculture
DVS	Directorate of Veterinary Services
HWC	Human Wildlife Conflict
IRDNC	Integrated Rural Development and Nature Conservation
KA	Kyaramacan Association
KAZA	Kavango Zambezi
LUDP	Land Use and Development Plan
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MOA	Memorandum of Agreement
MRUZ	Managed Resource Use Zone
NDC	Namibia Development Corporation
NGO	Non-Governmental Organisation
NP	National Park
OVP-DMC	Office of the Vice President, Division Marginalised Communities
TFCA	Transfrontier Conservation Area
Y	Year

EXECUTIVE SUMMARY

Managed Resource Use Zone of the Bwabwata National Park is primarily focused on the enhancement and maintenance of the consumptive use opportunities inherent in ecosystems, habitats and specific biodiversity features. Some non-consumptive opportunities may still be accommodated in this zone.

From a consumptive use perspective, the types of activities that may be permitted in this zone are primarily related to the harvesting of natural resources such as medicinal plants, food such as fruits and honey, etc. From a non-consumptive perspective and in consideration of the need to keep the levels of consumptive utilization within limits of potential concern, these zones may retain its natural and cultural appeal to the extent that they are able to accommodate some tourism facilities and activities, and these may be strongly oriented towards the cultural features of the park residents.

This document provides a land use and broad development plan for the Managed Resource Use Zone of the Bwabwata National Park in north-eastern Namibia. It sets out the management objectives of the BNP as contained in the park management plan as well as a set of strategic principles for conservation and land use in the MRUZ.

Specific objectives of the plan are to:

1. Support appropriate and sustainable land use and development practices in the Managed Resource Use Zone.
2. Protect the Bwabwata National Park by encouraging compatible land uses in the Managed Resource Use Zone.
3. Contribute to the social and economic wellbeing of residents of the parks by supporting sustainable use of certain natural resources.
4. Conserve important habitats and habitat diversity, which includes the varied structure, function and composition of habitats.
5. Manage and maintain biodiversity.

The document provides for the establishment of an integrated development plan for park residents aimed at addressing poverty and food security based on improved food production, improved income generation and the provision of basic services.

Actions are made for addressing human-wildlife conflict management, the specific zonation of the MRUZ, infrastructure development and the introduction of measures to control entry of people and cattle into the park.

With this plan, MEFT shall establish and coordinate a coherent programme of development in the park, with the overall objective of diversifying land uses in the MRUZ for improving livelihoods. This would require an integrated approach under a coordinated conservation and development programme with the following intervention areas: food production, increased income, and provision of basic services. Land uses that should be avoided in the MRUZ include prospecting and mining, large scale commercial agriculture, manufacturing industries and high volume, high impact tourism.

Main infrastructure and services such as schools, clinics, proper sanitation and electricity from the main grid should be provided at specific development nodes. The Managed Resource Use Zone has been zoned to provide for a coordinated approach in development and conservation management.

1 INTRODUCTION

Bwabwata National Park (formerly Caprivi Game Park and Mahango Game Park) straddles the largest section of the Kalahari Woodland in the Zambezi and Kavango East Regions of Namibia, stretching from the Kwando River in the east to the Kavango River in the west.

An outstanding feature of Bwabwata National Park is the high number of large mammal and bird species that are nationally rare. The mulapos and their associated grasslands are habitat for roan (*Hippotragus equinus*), sable (*Hippotragus niger*) and tsessebe (*Damaliscus lunatus lunatus*). Typical trees include mukusi or Zambezi teak (*Baikia plurijunga*), mukwa (*Pterocarpus angolensis*), musheshe (*Burkea Africana*), mungongo (*Schinziophyton rautanenii*), and several others, including several broadleaf woodland on deep sands, mixed woodland on the more loamy soils of the alluvial floodplains of the Kavango River, and riparian woodland.

In February 2009, MEFT established a Technical Committee for the BNP with a mandate to make recommendations on important issues related to the management and development of the park. MEFT subsequently established a BNP Advisory Committee involving key stakeholders to advise on such important management issues (see Annex 1).

The Managed Resource Use Zone (MRUZ) of the Bwabwata National Park (BNP) is settled by several thousand people, and various government departments provide services to the residents. Although there is a general park management plan, there has so far been no land use and development plan (LUDP) that provides guidance to the MEFT, residents and other Ministries on allowable land uses or specific zonation of the MRUZ for development and conservation purposes. This situation has negatively affected ecosystem management and biodiversity conservation in the park. In the absence of a land use plan, essential elements for achieving the goal of sustainable development and rational conservation efforts are compromised.

This LUDP for the Bwabwata National Park Managed Resource Use Zone therefore aims to address this situation and to serve as a planning document for activity and planning.



2 HISTORY AND LEGAL STATUS OF THE BWABWATA NATIONAL PARK

The history of this protected area is complex, with various proclamations and policies affecting the North-East Parks and neighbouring communities. It consists of the former Caprivi Game Park, Mahango Game Park and the Kwando Triangle, which in the past did not have explicit conservation status.

The first people to live in the area now referred to as Bwabwata National Park were the San (Khwe and Kung), before the first bantu tribes entered the area in the late 18th century. In 1945, following tsetse fly infestation, resident Hambukushu, Mafwe and Mayeyi people moved out of the low lying areas in the Park.

The Zambezi Strip between the Kavango and Kwando rivers was first proclaimed as a Nature Park in 1963, mostly for strategic military reasons in view of independence struggles starting in Namibia, Angola and Zambia. In 1964, a recommendation by the Odendaal Commission to create a homeland for the Khwe in the Zambezi Strip, which would allow them to continue their traditional livelihood of hunting and gathering, was dismissed.

The Caprivi Nature Park had its conservation status elevated to that of Game Park in 1968 following an ecological survey that clearly confirmed the significant ecological value of the area. However, since its proclamation in 1968 up until the independence of Namibia in 1990, the entire area was treated as a military zone by the South African Defence Force, which meant that officials of the Department of Agriculture and Nature Conservation were denied access to the area.

Only in 1990, when the military forces left Namibia, could conservation staff work in the Caprivi Game Park for the first time. Upon the disbanding of the South African military in Namibia, the Khwe communities staying at military bases inside the Park were allowed to continue living there.

Mahango was settled by the Hambukushu around 1800 and occupied thereafter until 1982. The park has always been an important traditional hunting and fishing area to this community. In 1982 an agreement was signed between the Administration of Kavango and the Department of Agriculture and Nature Conservation to proclaim Mahango as a State protected area (along with Khaudum and Popa Falls). Based on this agreement, the Administrator General of South West Africa approved the declaration of Mahango as a game park in 1988. Mahango was officially gazetted in February 1989.



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Following independence and the withdrawal of the South African military, the MEFT commissioned a socio-ecological survey that included the Bwabwata National Park and surrounding areas. Recommendations from the survey included the extension of the eastern boundary of the Park to the middle of the Kwando River, thus including the 'Kwando Triangle'; to zone two Core Areas (Kwando and Buffalo) for special protection and controlled tourism; and to zone the central area of the park to provide for a Multiple-Use Area referred to as Managed Resource Use Zone of community-based tourism, trophy hunting, human settlement and development (Figure 1).

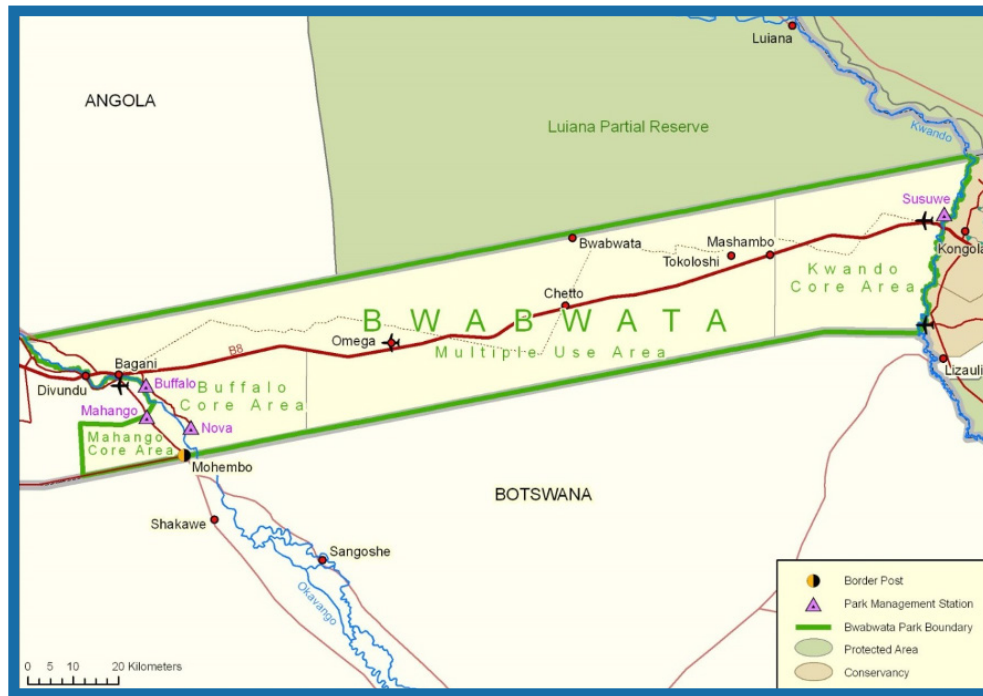


Figure 1. Zonation of the BNP

In 1998, also following recommendations of the socio-ecological survey, a vision for the North-East Parks was developed. This paper documented the vision shared by stakeholders for conservation, tourism development, equity and the creation of partnerships in the parks. Cabinet approved this vision in 1999, which in summary included the following:

- To merge Mahango Game Park and Caprivi Game Park to form the newly renamed Bwabwata National Park;
- To extend the eastern boundary of the Park to the middle of the Kwando River, thus including the 'Kwando Triangle';
- To zone the three Core Areas (Kwando, Buffalo and Mahango) for special protection and controlled tourism;
- To zone the central area of Bwabwata National Park to provide for a Multiple-Use Area of community-based tourism, trophy hunting, human settlement and development;
- To prohibit cattle in Bwabwata National Park (and all North-East Parks);
- To give neighbouring and resident communities conditional tourism rights within the Park to allow for tourism facilities in own initiative or as joint-ventures;
- To invite tender proposals for developing a tourism lodge at Buffalo Camp in the Buffalo Core Area.

In line with this Cabinet Decision and following a lengthy consultation process, Bwabwata National Park was finally proclaimed in November 2007. Furthermore, in 2009 this Cabinet decision became the basis for preparation of a tourism development plan for the Park.

The park residents established a community-based natural resource management programme in the Managed Resource Use Area. The residents further formed a representative legal body, the Kyaramacan Association, which is managed on democratic principles and is accountable to its members.

3 STRATEGIC DIRECTION

3.1 VISION

To be a high collaborative wildlife conservation and development area along with the park residents, the majority being the Khwe community.

3.2 GOAL

To conserve and develop the Bwabwata National Park Managed Resource Use Zone in a coordinated and organized approach for the benefit of the park residents, the park and country in general.

3.3 OBJECTIVES

- 3.3.1 Support appropriate and sustainable land use and development practices in the Managed Resource Use Zone.
- 3.3.2 Protect the Bwabwata National Park by encouraging compatible land uses in the Managed Resource Use Zone.
- 3.3.3 Contribute to the social and economic wellbeing of residents of the parks by supporting sustainable use of certain natural resources.
- 3.3.4 Conserve important habitats and habitat diversity, which includes the varied structure, function and composition of habitats.
- 3.3.5 Manage and maintain biodiversity.

3.4 PRINCIPLES

The following are the strategic principles for conservation and development in the Managed Resource Use Zone, which shall guide the implementation of this plan:

- 3.4.1 The environment and natural resources of the Managed Resource Use Zone must be managed to promote biodiversity conservation, to maintain ecosystem services and to provide a foundation for rural development for the legitimate residents of the Managed Resource Use Zone.
- 3.4.2 Development must be consistent with the objectives of the National Park, while respecting the right of residents to enjoy appropriate services and facilities, such as proper housing, water, electricity, access to health and education facilities, and access to employment.
- 3.4.3 Where certain land uses or practises are incompatible with the objectives of the NP, MEFT will ensure that appropriate means are taken through the development of diversified livelihood strategies so that livelihoods are not negatively affected.
- 3.4.4 An agreement between the MEFT and the Kyaramacan Association (KA) will formally acknowledge the rights of park residents in accordance with national policies and park objectives regarding access rights, settlement rights, natural resource utilisation rights and other livelihood rights.
- 3.4.5 Provision of infrastructure and services must be centred on the growth nodes identified in this LUDP.
- 3.4.6 The provisions of the Environmental Management Act (EMA) regarding Environmental Impact Assessment must be strictly enforced for all developments.

4 LAND USE AND DEVELOPMENT STRATEGIES

4.1 ZONATION

Zonation is the spatial, multi-dimensional and temporal interpretation of management objectives and the identification of related management zones. Zoning defines what can be done and cannot occur in different areas of the park in terms of natural resources management; human use and benefit; visitor use and experience; access; facilities and park development; maintenance and operations.

Through management zoning the limits of acceptable use and development in the MRUZ of the park are established.

Strategic approach

The extent and boundaries of the Managed Resource Use Zone should be amended by extending the western boundary of the Buffalo Core Area along the buffalo veterinary fence northwards to the Angola border and extending the eastern boundary of the core area in a straight line to the Angolan border. No people live in the area being added to the Buffalo Core Area or farm there. No cropping, livestock or settlements are to be allowed in the extended Buffalo Core Area, however controlled access for natural resource harvesting including gathering harvesting veld food and medicinal plants shall only be allowed with approval of the MEFT. In the Kwando Core Area, controlled access for natural resource harvesting including gathering harvesting veld food and medicinal plants shall also be allowed for the villages of Poca and Mashambo in specific areas with the approval of the MEFT.

The following is the zonation of the Managed Resource Use Zone with permitted and prohibited land uses (see Figure 2 below for the location of the zones):

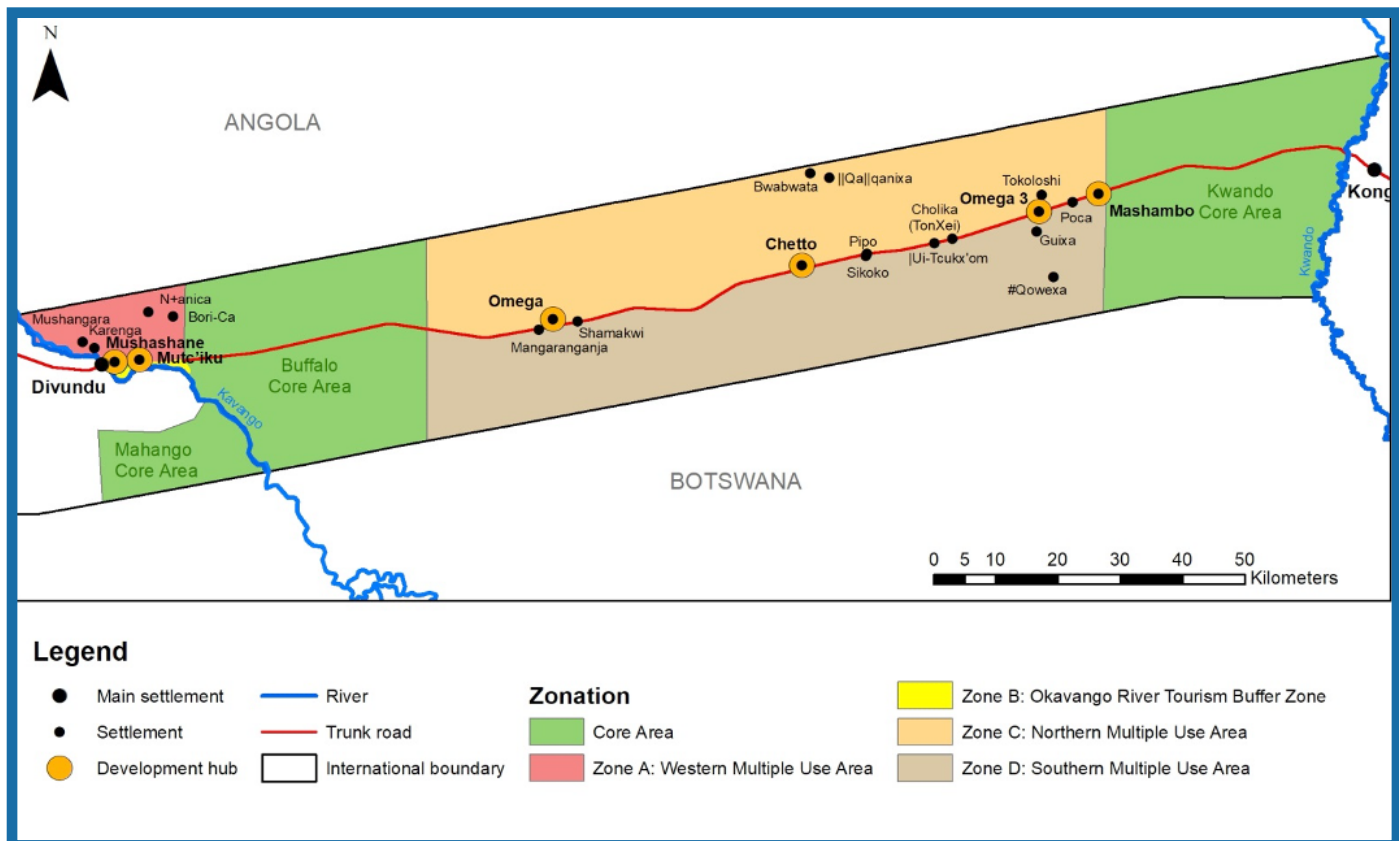


Figure 2. Zonation of the MRUZ



• **Zone A: Western Managed Resource Use Zone:**

This area is situated between the Kavango River and the western Buffalo fence. Its objective is to provide for human settlement and development, tourism and conservation of biodiversity. An exclusive area should be demarcated around any tourism developments (e.g. lodges or camping sites). The size of the exclusive area would be determined by the MEFT and included in a concession agreement. No settlement, crop fields, livestock grazing, or infrastructure other than what is necessary for tourism would be allowed within the exclusive areas. Apart from these exclusive tourism areas, permitted uses in Zone A are settlement, services, tourism, small stock farming, small businesses, the existing prison farm, an agricultural demonstration farm, fishing, sustainable forest resource harvesting (including medicinal and veld food collection and wildlife). Prohibited uses are further large scale commercial agricultural schemes, large businesses (warehouses, manufacturing etc.), cattle and hunting.

• **Zone B: Kavango River Tourism Buffer Zone:**

This area is situated 500m from the Kavango River towards the B8 road and starting in the west at the area known as White Sands up to the boundary of the Buffalo Core Area. The purpose of this zone is to protect the riverine vegetation and associated biodiversity along the river and the view and ambience for the lodges on the west bank of the river from encroaching settlement and further clearing of land for fields. Permitted uses are cultural tourism, collection of water from the river/watering of livestock, gathering of veld food and medicinal plants, fishing and wildlife. The following are prohibited activities in this zone: cultivation/cropping, large scale agricultural schemes, settlements and businesses, infrastructure such as lodges and tented camps unless specifically designated for cultural tourism, schools, clinics, police stations, military bases, cutting of trees and bushes, and cattle.

• **Zone C: Northern Managed Resource Use Zone:**

The main purpose of this section of the Managed Resource Use Zone, which is the remaining part of the MRUZ north of the B8 main road, is for human settlement and development, tourism and conservation of biodiversity, and sustainable use of wildlife. Permitted uses are: Settlement & services (focused on development hubs); low impact tourism (campsites with basic facilities, cultural tourism); small stock farming; cropping; small businesses; the operation of the Omega 1 agricultural scheme (currently the NDC farm); sustainable forest resource harvesting including veld food and medicinal plants; and sustainable use of wildlife including own use hunting according to quota and trophy hunting. Additional large-scale commercial agricultural schemes, cattle and lodges are not permitted. An exclusive area should be demarcated around any camp sites. The size of the exclusive area should be determined in discussion with MEFT and included in concession agreements. No settlement, crop fields, livestock grazing or infrastructure other than what is necessary for tourism, is allowed within the exclusive areas. No hunting should be done close to the campsites or along the 4x4 route.

• **Zone D: Southern Managed Resource Use Zone:**

The purpose of this section of the Manged Resource Use Zone, which is the remaining part of the MRUZ south of the B8 main road, is to provide for tourism, conservation of biodiversity, harvesting of forest products, and sustainable use of wildlife. Permitted land uses here are low impact tourism (campsites with basic facilities, cultural tourism), wildlife including own use hunting according to quota and trophy hunting, herded small stock grazing, cropping linked to existing villages and sustainable forest resource harvesting, including veld food and medicinal plants. As with the northern MRUZ, an exclusive area should be demarcated around camp sites. The size of the exclusive area should be determined by MEFT and included in concession agreements. No settlement, crop fields, livestock grazing or infrastructure other than what is necessary for tourism, is allowed within the exclusive areas. No hunting should be done close to the campsites or along the 4x4 route. The establishment of new settlements will be prohibited in this zone, along with infrastructure such as lodges, schools, clinics, police stations, military bases and businesses. Cutting of trees or bushes for commercial use will also be prohibited, as well as expansion of fields beyond the ones already established in this zone.



Table 1. Zonation and permitted land uses for the Bwabwata National Park Managed Resource Use Zone

ZONES	OBJECTIVES	PERMITTED USES	PROHIBITED USES
A. Western MRUZ. The MRUZ west of the Buffalo fence.	To provide for human settlement and development, tourism and conservation of biodiversity	Settlement & services	Additional large scale commercial agricultural schemes
		Tourism	Large businesses (warehousing, manufacturing, etc.)
		Small stock farming	Cattle
		Cropping	Hunting
		Small Businesses	
		Prison farm	
		Agricultural demonstration farm	
		Fishing	
		Sustainable forest resource harvesting, including veld food and medicinal plants	
		Wildlife	
B. Kavango River Tourism Buffer Zone. 500 from the Kavango River towards the B8 road and starting in the west at the area known as White Sands up to the boundary of the Buffalo Core Area	To protect the riverine vegetation and associated biodiversity along the river and the view and ambience for the lodges on the west bank of the river from encroaching settlement and further clearing of land for fields	Cultural tourism	Cultivation/cropping



		Collection of water from the river/ watering of livestock	Large agricultural schemes
		Gathering of veld food and medicinal plants	Settlement
		Fishing	Businesses
		Wildlife	Infrastructure such as lodges and tented camps unless specifically designated for cultural tourism, schools, clinics
			Police stations, military bases
			Cutting of trees and bushes
		Cattle	
C. Northern MRUZ. Remaining MRUZ north of the B8 main road	To provide for human settlement and development, tourism and conservation of biodiversity, sustainable use of wildlife	Settlement & services (focused on development hubs)	Additional large scale commercial agricultural schemes
N.B. Exclusive area to be demarcated around any camp sites. Size of exclusive area to be determined by MEFT and included in concession agreement. No settlement, crop fields, livestock grazing or infrastructure other than what is necessary for tourism within the exclusive areas. No hunting close to the campsites or along the 4x4 route.		Low impact tourism (campsites with basic facilities, cultural tourism)	Large businesses (warehousing, manufacturing, etc.)
		Small stock farming	Cattle
		Cropping	Lodges
		Small Businesses	
		Omega 1 Agricultural scheme	
		Sustainable forest resource harvesting, including veld food and medicinal plants	
	Wildlife including own use hunting according to quota and trophy hunting		





ZONES	OBJECTIVES	PERMITTED USES	PROHIBITED USES	
D. Southern MRUZ. Remaining MRUZ south of the B8 main road	To provide for tourism, conservation of biodiversity, harvesting of forest products, sustainable use of wildlife	Low impact tourism (campsites with basic facilities, cultural tourism)	New settlements	
		N.B. Exclusive area to be demarcated around any camp sites. Size of exclusive area to be determined by MEFT and included in concession agreement. No settlement, crop fields, livestock grazing or infrastructure other than what is necessary for tourism within the exclusive areas. No hunting close to the campsites or along the 4x4 route.	Wildlife including own use hunting according to quota and trophy hunting	Infrastructure such as lodges, schools, clinics, police stations, military bases
			Small stock grazing (herded)	Businesses other than tourism
			Cropping linked to existing villages	Cattle
			Sustainable forest resource harvesting, including veld food and medicinal plants	Large scale commercial agricultural schemes
Cutting of trees and bushes for commercial use				
		New crop fields not linked to existing villages		

4.2 POVERTY AND LIVELIHOODS IN THE MANAGED RESOURCE USE ZONE

A socio-economic survey carried out in the Bwabwata National Park confirmed that most residents living in the Managed Resource Use Zone, particularly the San community, are poor and that food insecurity remains a challenge for many. The results of the survey included the following:

- A large majority of park residents have low levels of education;
- Unemployment in the Managed Resource Use Zone is extremely high;
- The high reliance by residents on food aid, pensions, cash from the KA, piece work and social grants is a clear indication of high levels of poverty;
- Many residents of the Managed Resource Use Zone lack access to electricity or households, and cannot afford to pay for electricity where it is available;
- There are high levels of crop losses to wild animals;
- Few residents harvest sufficient quantities of the crops to sell some surplus;
- The collection of veld food to supplement the household's food supply remains an important livelihood activity;
- More than 90% of respondents had no toilet facility.



The results from the socio-economic survey indicate the need to establish a coherent and coordinated programme of development in the park, which targets, food production, provision of basic services and increased cash income. The overall objective of such a programme would be to diversify land uses in the Managed Resource Use Zone for improving livelihoods. This would require an integrated approach under a coordinated conservation and development programme with the following intervention areas:

- 1) Food production;
- 2) Increased income; and
- 3) Provision of basic services.

Strategic approach

MEFT shall coordinate, guide and work with line Ministries, NGOs, and donors to initiate the development of a development programme, which should also include conservation related income from conservation hunting, tourism and natural resources such as devil's claw.

4.3 DIVERSIFIED LAND USES FOR IMPROVING LIVELIHOODS

4.3.1 Food Production

The focus should be on the production of food for own consumption and not on a commercial scale, but with the possibility of the informal sale of any surplus produced. This is because important prerequisites for commercial production such as financial planning, marketing, quality control, irrigation, packing and processing facilities, transport vehicles and a market in reasonable proximity (50km) are well beyond the scope of most park residents and can also not be provided by ministries.

The remoteness of the park residents from markets such as Rundu and Katima Mulilo, their lack of skills and the lack of infrastructure make commercial production difficult to achieve within the next 10 years. All of these factors have to change for successful horticulture businesses to be developed.

The conditions at each village in the Managed Resource Use Zone are different, particularly in terms of the skills and interests of individual residents, and their specific needs. The process for improving food production should therefore avoid a one-size-fits-all or top-down approach. Government officials and supporting NGO personnel need to visit each village and consult the inhabitants before any projects that are aimed at improving the agricultural livelihoods of people are commenced.

Strategic approach

Government and NGO personnel supporting food production should:

- Cooperate with each other and plan together. Only concerted efforts will be effective in BNP;
- Develop a culture of respect and listening when consulting with communities, planning and implementing projects;
- Be sensitive to cultural and gender issues;
- Communicate clearly and provide transparent project designs based on agreement with the community;
- Keep their promises;
- Not raise unrealistic expectations as to what can be achieved;
- Ensure that their interventions are not initiated when residents are doing other important things such as devil's claw harvesting;
- Take the utmost care in identifying beneficiaries, based on current involvement, dedication and motivation in food production.



The Ministry of Agriculture, Water and Land Reform (MAWLR) is the main implementing agency for food production related livelihood interventions in the Managed Resource Use Zone. This would be advantageous because of its national mandate for agriculture, existing expertise, and supporting equipment and infrastructure (tractors, experimental farms, extension facilities and nurseries). Agricultural support activities should be guided through the BNP Advisory Committee, and should be in accordance with the provisions of this LUDP and the objectives of the BNP management plan. Where appropriate, MAWLR should be supported by NGOs and the KA should also be engaged to support food production in the Managed Resource Use Zone. NGO support should supplement what MAWLR does and be under a MAWLR programme that would continue if the NGO involvement ends. To help the MAWLR, the KA could also employ two agricultural extension officers (one for the West and one for the East of the Managed Resource Use Zone) to work in concert with the MAWLR.

The BNP Advisory Committee should encourage other Ministries involved in food production support or the Office of the Vice President, Division Marginalised Communities (OVP-DMC), to work in cooperation with the MAWLR.

Food production should be improved through a variable blend of vegetable gardens, fruit trees, veld foods, livestock and dryland cropping. Which of these and to what extent they are implemented in any given village needs to be ascertained through in-depth consultation with the given village community. Thus each village would have a different looking approach applied to it, based on what the people there need and want and what the MAWLR and others can provide.

Working with “the community” on food production (e.g. community gardens) and letting committees or community leaders choose trainees has proven to be ineffective in Namibia. Extension personnel need to spend time in the villages to identify motivated individuals who already have a field, garden or livestock and are dedicated to producing food from them. These individuals can be trained further through workshops and follow-up visits and can become lead farmers for demonstrating techniques to others and training their fellow villagers in the new skills. This peer-to-peer learning has proven to be very effective in agriculture projects in other areas of the country. Seeing an exemplary garden/kraal will motivate people and helps to spread new methods. This approach is much more effective than training people who have only been selected on the basis of residing in that given village, but are not dedicated to food production. The latter strategy has been implemented unsuccessfully all over Namibia and has been associated with a large waste of money and resources.

The extension approach should be based on the following:

- Extension personnel should themselves be experienced in food production.
- Gather trainees at an established garden/field/kraal and conduct practical workshops and demonstrations with the help of the existing examples. Avoid giving theoretical lectures.
- After every workshop conduct follow up visits to the gardens/kraals of participants and refresh the introduced methods and provide encouragement.
- Contact between staff and beneficiaries should happen at least every two weeks. Visits once a month, especially during planting season are not sufficient.
- Provide participants with meals during workshops. These should be low in sugar and high in protein and fibre (e.g. pulses, beans, meat); avoid any processed foods. This is part of fostering a culture of wholesome nutrition. Cooking can also be incorporated into the training.
- Support to residents should be regarded as a long term commitment for at least seven years.
- Interventions should be piloted in two or three villages before expanding the scope of support to other villages.

The MAWLR agricultural development centre at Omega 3 is not currently staffed. Therefore, it is recommended that it be staffed with one or more extension officers that are selected based on motivation and previous knowledge in food production in the area.



At Omega, another agricultural development centre could be established. Alternatively and to save costs, MAWLR staff could simply be integrated into the existing infrastructure of the NDC farm.

The following sub-sections provide guidelines for developing each pillar of food production:

Veld foods

As indicated above, veld food collection remains an important means of supplementing the diet of Managed Resource Use Zone residents. Figure 3 indicates the important areas in the BNP for collection of both veld food and medicinal plants. These areas need to be protected from disturbance due to other land uses such as large-scale crop fields.

Tceu (*Guibourtia coleosperma*), †ûmbé (*Dialium engleranum*), and /qom (*Schinziophyton rautanenii*), are the most important veld foods for most people. Five of Mashambo’s six tceu harvesting areas and one of Poca’s two tceu harvesting areas are in the Kwando Core Area. The Mangaranganja community harvests †ûmbé, tceu and /qom in the Buffalo Core Area. Harvesting areas are concentrated along the Trans-Caprivi highway and west of the Buffalo veterinary fence. The fence intersects the harvesting areas of three villages (Mutciku, Mashashani and Borica II) for †ûmbé and /qom, and Borica II’ harvesting area for tceu.

Residents travel especially far to access these harvesting areas. This could be due to the high population density of the central region limiting veld food abundance. Harvesting of veld food and medicinal plants shall be limited to the Managed Resource Use Zone.

There is evidence that certain types of veld food are being cultivated by residents of the Managed Resource Use Zone. /Qom or mangetti (*Schinziophyton rautanenii*), was most cultivated as it propagates easily from truncheons. Cultivation can make food plants available that are not locally found near a village but occur in distant harvesting areas such as tcindjere or bird plum (*Berchemia discolor*) and dinga (*Dioscorea sp.*). With an increase in cultivation less time could be spent harvesting and more time dedicated to growing veld foods and crops. The risk of over-harvesting in current harvesting areas could be reduced especially in densely populated areas, and cultivation might lead to reducing the need to collect veld food in core conservation areas. The cultivation of veld food should be further explored as a means of increasing food security. Wild veld foods could be integrated into vegetable gardens as well as planted around homesteads.

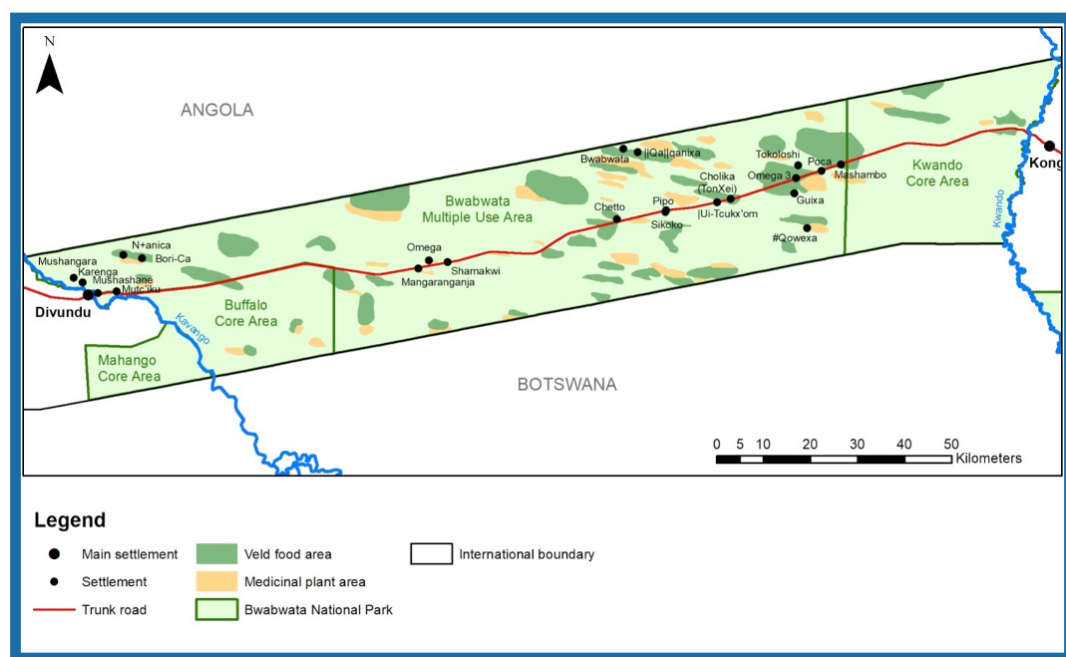


Figure 3. Areas in the BNP important for collection of veld food and medicinal plants



Vegetable Gardening

There is currently a lack of water at almost all individual houses in BNP. To be viable vegetable gardens need taps. As a result, vegetable gardening is currently not an option for most residents in BNP and would be dependent on improved water provision to individual households over time.

This could be done through the Directorate of Rural Water Supply (under the MAWLR), the Office of the Vice President and the KA. When establishing central boreholes and taps at individual houses it will be necessary to maintain that infrastructure on a regular basis. It is government policy that communities should maintain the water infrastructure provided for them. However, in the short-term communities in the BNP will not be able to do this without initial support. Maintenance of water infrastructure needs to be integrated into the plan for water provision from the start. This means that ideally in the longer term, the KA will need to maintain the infrastructure. Part of the costs could be recovered from communities through water fees. However, any such fees should be implemented only with the consensus of local residents, as they may not actually be able to afford this in some places.

Vegetable gardening should be encouraged on a small scale, and should start with one garden per household; the garden size should be no bigger than 10x10m (100m²). Within the next three years after commencement, the garden can be extended if need be. Small gardens are easier to maintain and require less water than large gardens and they help gardeners feel successful which is essential to encourage them to continue the practice.

Additionally, schools should be approached and motivated and dedicated teachers identified that want to implement a school vegetable garden. Again, it is of utmost importance to only establish gardens at schools that have truly motivated teachers to take care of the garden. School gardens should not exceed 15x15m (225m²) initially. Any successful garden can be extended in the future, but making a garden too big in the beginning increases the risk of failure.

Initial guidance on school gardens can be obtained from the school at Omega 3, which currently has a vegetable garden. However, every school (as well as every village) will need a tailor made approach.

Schools and individual gardeners should not be provided with all the required materials, tools and seeds but they should co-fund or provide some of these themselves. For example what has worked well before is to require the school or gardener to first build a perimeter fence before gardening equipment and seeds are given out and first build fences and dig holes and bring in manure for fruit trees before such trees are provided. Only those schools and individuals that are truly dedicated to food growing will do this. Therefore it is a good way of identifying those that should be worked with and are most likely to implement a successful garden. Simply handing out all the materials without pre-requisites has been seen to lead to failure elsewhere in the country. This is because people claim to be interested in gardening but are actually only after the free hand-outs.

If people cannot afford fencing material, fences can be built from thorn bushes or living fences that are planted with species such as *Euphorbia sp.*, Buffalo thorn (*Ziziphus mucronata*) and the kei apple (*Dovyalis caffra*) which also provides a source of food.

Endorsements of school gardens shall be made by the Ministry of Environment and Tourism, Ministry of Education, Arts and Culture and Ministry of Agriculture, Water and Land Reform. Close collaboration with the Ministry of Education, Arts and Culture on school gardens is also essential.

Furthermore, any gardening training should firmly be rooted in organic gardening. Organic vegetable gardening is environmentally more sustainable than conventional gardening (which uses synthetic fertiliser and chemical inputs for pest and weed control), eliminates unnecessary costs to gardeners, provides more nutritious food, avoids poisons ending up in the food and reduces the amount of labour.



The following topics should be included in the training of residents for vegetable gardening:

- Agroforestry (how to integrate trees into dryland crop fields and gardens);
- How to save your own seeds (do not provide hybrid seeds as these do not breed true to type and villagers can therefore not save their own seeds from them);
- How to mulch the soil with dead or living plant matter;
- How to intercrop and stack plants of different families and sizes on top of each other;
- How to add manure to the top of the soil twice a year;
- How to create a microclimate by growing hedges/windbreaks around fields and gardens;
- No-dig gardening;
- Organic pest control through improving soil fertility, inter-planting pungent pest deterring plants and having high diversity in crops;
- Organic weed control through weeding before seed set and mulching;
- Staggered planting in vegetable gardens for continuous harvests;
- When to plant which crop;
- How to use greywater for fruit trees and vegetable gardens;
- Different types of irrigation;
- How to save water in the garden.

Dryland cropping

Conservation Agriculture (CA) should be the preferred method for dryland cropping in the Managed Resource Use Zone as it enables high yields, is environmentally sustainable and mitigates climate change effects. In BNP climate change appears to be leading to more erratic rainfall patterns (longer dry periods with heavier downpours in between) and higher temperatures. CA increases the resilience of crops against droughts and floods and high temperatures (which lead to increased evaporation, among other things). Conservation agriculture can reduce the impact of large, tilled agricultural fields on wildlife areas and indigenous forests, and therefore decrease habitat degradation by producing higher yields of crops on a smaller plot, whilst ensuring food security.

Conservation agriculture farming practices include:

- Dry-season land preparation using minimum tillage methods and little soil disturbance;
- Crop residue retention as mulch;
- Permanent soil cover;
- Crop rotation;
- Precision input application (applying manure in basins or along rip lines);
- Nitrogen-fixing crop rotations;
- Timeline of planting is also an important component of conservation farming practices
- Integrated pest and disease control;
- Avoidance of burning of crop residue as burning results in the disturbance of the natural processes occurring in soil, e.g. burning kills micro-organisms and small invertebrates critical to soil formation.

Minimal soil disturbance coupled with the accumulation of organic matter in the long term results in soil and water conservation, higher crop yields and increased yields and profits for the farmers.

It is advisable to harmonize the approach between MAWLR and MEFT in terms of dryland cropping. Staff from all ministries should promote CA, agroforestry and small but intensive fields that utilise intercropping whenever engaging residents. All line ministries need to communicate the same message. However, on the ground support to dryland cropping should be led by MAWLR as this line ministry already has knowledge of implementing CA and has the relevant mandate, equipment and infrastructure. For example, the existing MAWLR infrastructure at Bagani, Chetto, Omega and Omega 3 should be used as a platform for supporting dryland cropping and all other food production practices in BNP.



As with the approach to vegetable gardens, interested and motivated persons should be identified for practical training and support in CA practices. Training should include appropriate follow up by extension officers. Once these farmers have experienced increased yields from CA, they should be encouraged to motivate and interest other villagers in CA.

The extension approach should be based on the following:

- The MAWLR to provide ripping/furrowing services for residents at a price that has been negotiated together with the people. Simply setting a price will most likely result in people not being willing or able to afford these important services.
- Tractor drivers should be trained in CA and how to rip/furrow in a slow and careful manner.
- Disc harrowing or moldboard ploughing services should not be applied in the Managed Resource Use Zone. These methods pulverise the soil, lead to soil erosion and loss of fertility, create an impenetrable hard pan in the sub soil and lead to poor yields. As an alternative, the MAWLR (together with donors) might want to look into providing dedicated farmers with donkey drawn ripper/furrowers. The equipment should be accompanied by relevant training to rip fields according to the CA method.
- In those villages where it is not possible for the MAWLR to provide ripping/furrowing services, residents should be trained in the hand hoe basin method of CA.
- In some villages, especially in the east of the Managed Resource Use Zone, residents may need to be supplied with food in order to have enough physical strength to work their fields (as hungry people will be too weak to work). Alternatively, any cropping workshop or training should be timed to coincide with the existing provision of food by government.

As part of the dryland cropping approach the distribution of seed should be improved and harmonised. Ideally all seeds should be distributed via the MAWLR and KA and delivered well ahead of the start of the planting season. Seeds that could be distributed thus include mahangu, maize, cow peas, bambara nuts, sorghum and pumpkins. To help the dryland cropping effort to become more sustainable it is also advisable to slowly phase in small fees for seeds (e.g. N\$5 in the first 2 years, N\$ 10 for the next 2 years and so on until the market price of seeds has been reached). This approach might help residents to get used to paying for the seed themselves and forward planning and will help MAWLR to be freed of seed distribution at some point in the future. However, if such an approach is to be taken, it needs to be first discussed with residents and only implemented with their agreement.

A separate intervention to improve seed availability in BNP could be to motivate local shop owners to buy seeds from their community and resell them in the next growing season. This would help to start a value addition chain for agricultural products by creating a local market for seeds.

The following is a list of methods that should be incorporated into any training on dryland cropping:

- How to rip/furrow fields according to the Namibia specific Conservation Tillage method;
- How to rip/furrow the same lines or re-dig the same basins every year;
- How to plant and mulch the furrows or basins;
- How to intercrop cereals with legumes and cucurbits;
- How to save your own seeds;
- How to integrate trees around and into fields (agroforestry);
- How to add manure to the places where seeds were planted;
- How to weed and use the weeds as mulch;
- How to dig hand hoe basins (where tractor ploughing services are unavailable).





Farm at Omega

The development of large scale commercial farms should not be permitted in the Managed Resource Use Zone as this is contrary to the objectives of the BNP Management Plan. However, there exists considerable infrastructure and equipment at the former Namibian Development Corporation (NDC) farm at Omega. This farm of around 900 ha is in the process of being handed over by MAWLR to AgriBusDev, the agency set up to manage Green Scheme Farms. Consideration should be given to involve park residents (communities) through the KA in this agricultural development. The farm can be made available to a commercial farmer under an agreement between MEFT, MAWLR (AgriBusDev) and the KA. Any fees generated could be split 50-50 with the KA as with the hunting concession fees.

In terms of such an agreement, the farmer should be required to use only CA on the land to grow crops as well as to practice agroforestry. Additionally, a training component should be added that requires a small number of Managed Resource Use Zone residents to be trained through work on the farm every year. This will help to spread the practice of CA and agroforestry to their villages of origin. Consideration should also be given to using a portion of the farm for the cultivation of veld food.

The funds that would be generated for the KA should then be used to support development projects as well as provide support to food production in other areas of the Managed Resource Use Zone. The farm should also support own consumption by local communities or park residents.

Human wildlife conflict mitigation measures should be put in place at the farm before any operations or development start. Any development at the farm should also be subject to a clear set of operating conditions set by MEFT.

Agro-forestry

Agro-forestry has potential in the Managed Resource Use Zone with the ideal being for each family to have a mix of indigenous and exotic fruit trees, some vegetable production and cereal cropping. Nitrogen-fixing and food trees would need to be planted 20 metres apart in fields. Large trees already in the fields such as the Kalahari Podberry (*Dialium englerianum*), False Mopane (*Guibourtia coleosperma*), *Combretum sp.*, and Kiaat (*Pterocarpus angolensis*) should not be removed. Trees should be planted in soil collected under Acacia trees, mixed with manure.

Priority trees that should not be touched when fields are cleared would include nitrogen-fixers such as the winter thorn/ana tree (*Faidherbia albida*) and poison-pod albizia (*Albizia versicolor*) the leaves of which can be used during the rainy season and winter, and produce up to 30 tons of nitrogen per hectare.

Fruit trees should be an important component of producing food in the difficult climate of BNP, even if only little or no water for irrigation is available. With their extensive root systems and low labour requirements, trees are ideal crop plants for the changing climate and low input, high output food production. Citrus, including some lemon and orange cultivars like frost and could also grow. Some species, such as mango, can be drought resilient, but need protection, fertilising and watering when young. A limiting factor for promotion of fruit trees would be whether these would attract elephants to fields and homesteads. Pecan, cashew and macademia nut trees are drought resistant, adapt to cold winters and rainy summers and though they are expensive, they can be grafted from good stock.

The MEFT could propagate fruit trees and distribute them to individuals that have shown dedication to tending the trees. This dedication can be gauged by having people first dig holes for the trees, build fences around the holes and bring in manure. Only if they have done this should they be provided with trees. Otherwise people will take trees and not take care of them, which is a waste of money, time and effort. Over time, residents should be trained on how to propagate these trees themselves, so that the load can be lightened on the Ministry. The KA could also be assisted by MEFT in establishing a tree nursery and an active programme to promote the planting of indigenous and exotic fruit trees.





Where water is available, the following fruit trees could be planted close to houses or in vegetable gardens and crop fields: pomegranate, figs, mulberry, moringa (*Moringa oleifera*), citrus (lemon, orange, naartjie, grapefruit), guava, date palms, custard apple, mango, feijoa (pineapple guava), granadilla, grapes, papaya, loquat, cassava (the leaf variety) and pecan nuts.

Where no water is available, the following trees could be planted early on during the rainy season (so that they can get established before the dry period arrives): Mulberry, neem, carob, kei apple (*Dovyalis caffra*), bird plum (*Berchemia discolor*), moringa (*Moringa oleifera*), baobab (*Adansonia digitata*), monkey oranges (*Strychnos sp.*), manketti (*Shinziophyton rautanenii*), sour plum (*Ximenia sp.*), marula (*Sclerocarya birrea*), and makalani palm (*Hyphaene petersiana*).

When promoting agro-forestry care must be taken to ensure no invasive alien species are introduced into the BNP.

Livestock

It is advisable to improve the use that residents make of their livestock that are allowed in the Managed Resource Use Zone. This could be done by integrating training on chicken, goat and equine husbandry into the cropping/gardening training efforts. Again, it is essential to train only those residents that have been identified as dedicated to looking after their livestock. Select trainees only if they already have livestock and have shown that they are taking good care of them. Even if only one or two people in any given village are trained, they can (over time) train their peers and thus the practice can spread.

It is vitally important that any training on livestock husbandry include instructions on planned grazing. The discipline of holistic grazing management should be known to all personnel providing such training. Planned grazing enables livestock to enhance local ecosystems through their grazing, instead of degrading them. This is important to maintain a healthy balance between livestock and conservation.

There should be no support to cattle farming within the Managed Resource Use Zone consistent with the Cabinet Decision of 1999.

Apiculture

There have been unsuccessful attempts to develop beekeeping and honey production in the park. There are now only three successful beekeepers, one at Omega and two at Kajenje. Residents that had attended beekeeping training previously all abandoned the practice apparently because it takes too much dedication. Beekeeping is difficult in the BNP because of a large number of bee predators and the bees tend to abscond. However, it is worth pursuing this activity further to understand why there are some successful beekeepers and see if beekeeping can be adopted more widely. MEFT, should support the practice of beekeeping in the BNP Managed Resource Use Zone. It would be preferable if MEFT staff are beekeepers themselves, or have relevant experience. Beekeeping should be promoted by supporting the existing beekeepers (such as in Omega and Katjendje) and inviting them to workshops, where they can talk to other residents about keeping bees.

Provision of meat

Residents already receive meat from conservation hunting but some villages claim they are left out of the meat distribution when meat from hunted animals is being shared. MEFT should work with the KA to ensure that meat from conservation hunted animals is distributed fairly.

Allowing hunting by individuals may be unsustainable, but an own use quota should be allocated to the KA and common small game such as warthog and duiker can also be hunted using traditional methods. Such traditional hunting methods must be approved by the MEFT.





4.3.2 Income Generation

The aim should be to provide as many income generating opportunities as possible for park residents consistent with the park management objectives, including formal and informal employment, small and medium enterprise development, and natural resource harvesting. Enterprise development in particular should be implemented based on business principles and not as community projects. Proper feasibility studies should be carried out before any enterprise is established.

Strategic approach

Employment

Formal employment

Formal employment is a key route out of poverty for residents of the Managed Resource Use Zone. In the long term, education is the most important precondition for obtaining a formal job, but in the short term other measures can be taken to ensure that San people in particular can be employed in the Managed Resource Use Zone of the BNP. MEFT should aim to employ as many legitimate Managed Resource Use Zone residents as possible in accordance with the existing legislation and policies. The promotion of additional tourism facilities and activities within the Managed Resource Use Zone will also provide additional employment opportunities.

Piecework and casual work

Piecework and casual work are also important means to provide individuals and households with a necessary and relatively immediate cash income. Projects implemented by NGOs and the government often overlook the importance of piecework and/or casual work, but piecework and casual work provide a cash income more immediately compared to other income-generating activities. MEFT, other government Ministries and NGOs should aim to employ legitimate Managed Resource Use Zone residents for piece work or casual work as much as possible.

Income-generating activities

Income-generating activities are a crucial approach to providing individuals and households with an all-important cash income. Therefore, the government and NGOs should make specific efforts in the Managed Resource Use Zone to increase opportunities for the San community and other legitimate park residents to engage in income-generating projects and enterprises. In so doing, specific attention should be paid to:

- Prior consultation with the proposed participants;
- Prior research to ascertain whether there are markets for specific products or services;
- Ensuring a business approach to income generation so that participants understand the concepts of profit and loss, and the need for inputs in order to make money;
- Cultural aspects, i.e. projects which use the cultural knowledge and skills of the beneficiaries should be prioritised; and
- Building on existing activities such as basket making, Devil's Claw harvesting, etc.



There is a steady market for tear-drop shaped Khwe veld food collection baskets, with Omba Arts Trust in Windhoek and other buyers interested in buying all quality baskets that can be produced. For many years, income from these baskets sustained close to 30 families, but several factors have led to a dramatic reduction in basket production, including the withdrawal of NGO support for transporting baskets to the Mashi Craft outlet at Kongola. This income generation activity can be revived through again ensuring that baskets can reach the craft centre.

Thatch grass harvesting has the potential to earn income for Managed Resource Use Zone residents and the feasibility of re-introducing this to the Managed Resource Use Zone should be explored. Previously a buyer visited the park but did not continue purchases after initial visits and harvesters lost interest. The KA could play a role in negotiating a central contract with one buyer as it has done for devil's claw.

The nine lodges along the west bank of the Kavango River need vegetables, but have found gardening groups to be disorganised and unreliable - if the lodges were to become more involved in managing gardening initiatives, investing in infrastructure and working with individual famers, it could have potential. Lodges could also be asked to support small-scale commercialisation (e.g. drying vegetables such as tomatoes in poly-tunnels to preserve them). GIZ has a revolving fund for farmers that does not require collateral – the condition is that farmers agree to be mentored and that the equipment is selected by specialists to avoid waste in procurement. This scheme might be useful to replicate in the Managed Resource Use Zone.

Tourism

There is potential to develop tourism in the Managed Resource Use Zone particularly based around cultural tourism products. This would help to increase job opportunities and boost craft sales and bring other forms of income. Tracking training has afforded many young men the opportunity to formalise their traditional skills, and to turn these into an income opportunity –there have been some trial tracking activities offered to tourists, and some of the young men who have been trained have taken up employment on game farms and tourism lodges.

Several owners and managers from lodges along the west bank of the Kavango River are interested in cultural tourism products for their guests. If there was a San cultural centre in the Mutc'iku area for example, they would combine visits to the centre with game drives to the Buffalo core area. Tourists could eat local foods, buy crafts, experience the local way of life, etc. Specific products could include guided bush walks based around tracking and veld food gathering.

Such activities will need professional support to help them get established and need to be well managed with appropriate standards of hygiene and safety. MEFT and NGOs should work with experienced people who have established similar activities elsewhere in Namibia, such as the Living Museums that have been established in several communal areas including with the San people of the N̄a Jaqna and Nyae Nyae conservancies. The following tourism concessions shall involve the communities (park residents) and awarded the KA in Bwabwata National Park (see Figure 4):

1. Kavango Central (White sands) – this concession occupies the Ngoabaca campsite and the White Sands area within the Managed Resource Use Zone and is approximately 30 ha. The White sands lodge concession is located in between the town of Divundu and Popa Falls.
2. Kyaramacan Traditional Knowledge Centre and Bwabwata Golden Highway – this is a concession for the establishment of a locally initiated and driven community based information sharing centre in the Bwabwata National Park. This sharing centre will focus on transferring the Khwe indigenous knowledge and skills to park residents, neighbours, youth and visitors. The concession will also include the Bwabwata Golden Highway.
3. Hunting – this consists of the Bwabwata East Hunting Concession and the Bwabwata West Hunting Concession. The Bwabwata East Hunting Concession (255,600 hectares) is situated across both the Kwando Core Area and the Managed Resource Use Zone, while the Bwabwata West Hunting Concession (296,500 hectares) is situated across the Buffalo Core Area and the Managed Resource Use Zone.

- Omega III Tourism Facility – the goal of this facility will be to attract passing tourists who would normally drive straight past Omega III without hesitating. The facility will include a filling station, shops, a small cafeteria and a craft market.

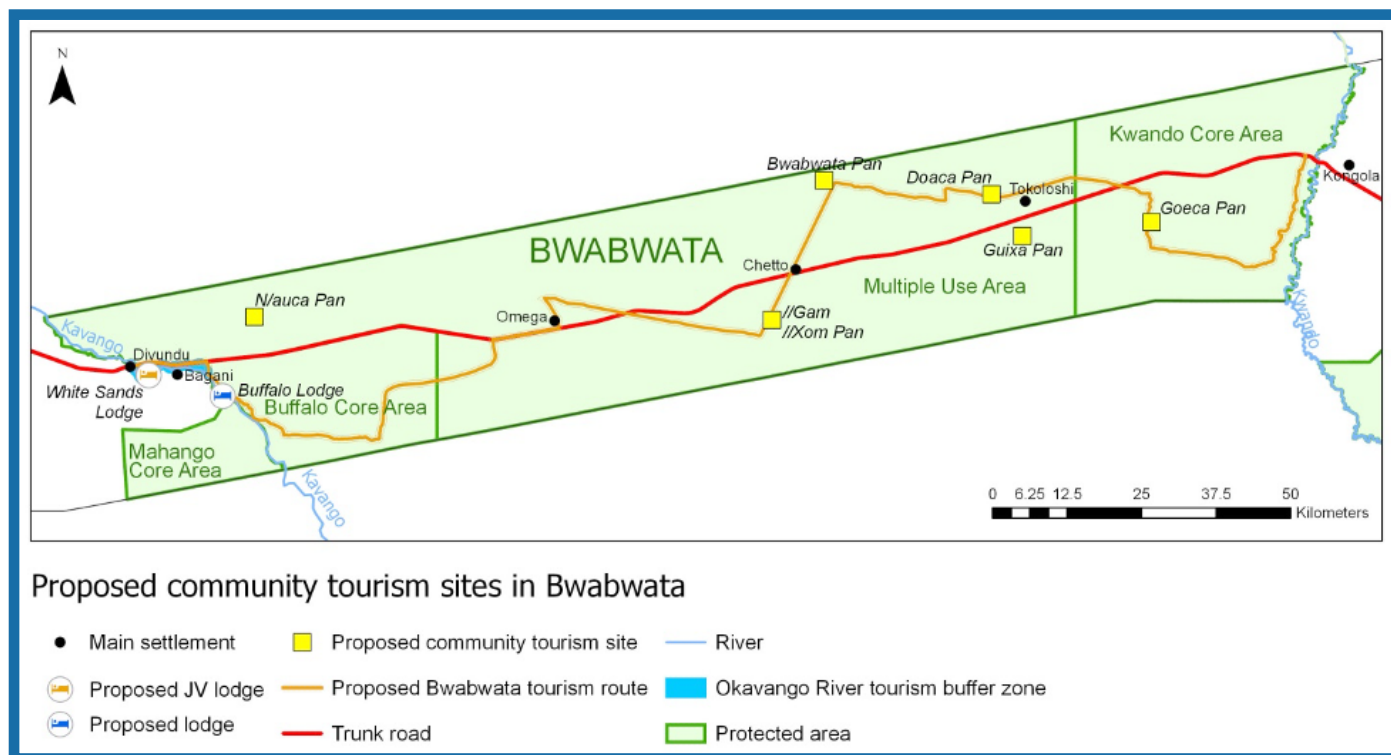


Figure 4. Some community tourism sites and activities in the BNP

4.3.3 Provision of Basic Services

Strategic approach

All residents of the park should have access to basic services that provide access to education, water, electricity and medical facilities. Government should establish a programme of infrastructure development and provision of human and financial resources to ensure these services are available to residents. The human and financial resources from government should be complemented with funding generated under the natural resources and tourism activities by the KA.

Infrastructure should be developed in accordance with the policy proposed in Section 4.5 below.

4.3.4 Alternatives to Current Land Uses That Should be Avoided

There are potential alternatives to current land use practices that may have negative impacts on biodiversity and park management.

Strategic approach

The following land uses should be avoided in the Managed Resource Use Zone of the Bwabwata National Park:

Prospecting and mining

The commercial value for mining is expected to be low and the park does not have a history of large-scale commercial exploration and mining activities. The relatively small size of the Park, and in particular the Core Areas, makes it environmentally sensitive to mining activities.

Prospecting and mining within the park should therefore comply with the relevant conservation, environmental and economic regulatory framework, but should be prevented where possible. The potential economic value of prospecting and mining for Namibia is acknowledged, but both environmental and other socio-economic costs should be taken into consideration before commencing any activities.

Large-scale commercial agriculture

Large scale commercial crop farming activities, poultry farming, intensive livestock farming, should all be avoided due to their impacts on the environment including clearing of natural vegetation, fertiliser inputs and waste production.

Manufacturing industries

Manufacturing industries should be avoided due to the negative effects on the environment including clearing of vegetation, pollution and waste production.

High volume, high impact tourism

Tourism in the BNP needs to remain low-impact in order to reduce the potential negative environmental effects. The areas most favoured by tourists are too small and the road networks insufficient to handle large volumes of tourists.

Timber harvesting

Harvesting of timber shall not be allowed in the Managed Resource Use Zone or anywhere in the Bwabwata National Park.

4.4 HUMAN WILDLIFE CONFLICT MANAGEMENT


Human wildlife conflict (HWC) is defined as any event in which animals injure, destroy or damage human life or property (including destruction of crops and livestock), and are killed, injured, captured or otherwise harmed as a result – i.e. both humans and animals suffer from the interaction with each other. The damage and destruction caused by a variety of animals to human property – and sometimes human life – is a real and significant danger to residents of the Managed Resource Use Zone. However, methods of addressing HWC need to take into account the conservation objectives of the national park.

Experience shows that it is often difficult to implement measures to prevent or reduce HWC because some species become used to the measures being used, or communities lack the capacity to maintain infrastructure such as electric fences. Further, methods that work in one country or region of a country might not work as well elsewhere. There is a need to be flexible, experiment and monitor whether particular methods are working.

The approach to HWC management in the Managed Resource Use Zone should be to work with each village, or a cluster of villages where appropriate, to develop a localised HWC management plan that is tailored to meet the circumstances of that village or cluster, is multifaceted and addresses prevention and reduction of incidents as well as mitigation. These localised HWC management plans must be in compliance with the revised National Policy on Human Wildlife Conflict Management and the Guidelines for implementation of the Policy.

Such plans could follow this basic format:

1. Introduction – setting out the problems in the village(s), the causes of the problems, any current methods being used and whether they are successful or not, any data on frequency and type of incidents, how the plan was developed (level of community involvement).
2. Overall Goal – short statement of what the village wants to achieve through managing HWC. E.g. **To reduce HWC in order to improve the livelihoods of members, while maintaining viable wildlife populations.**

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3. Objectives – providing specific aims. E.g. **To reduce crop losses due to elephants; to reduce livestock losses due to predators; to monitor success of different methods and adopt new methods if necessary.**
 4. Management Strategies – specific activities aimed at achieving the objectives. E.g. **Growing chilli to use in various methods to keep elephants out of fields; Using bee hive fences to keep elephants out of fields; Herding of livestock to protect them; Payment of offsets for crop and stock losses; Monitoring of success of individual methods.**
 5. Work plan - a detailed set of activities that need to be carried out to implement the strategies indicating who is responsible for implementing the activity and setting a target date for completion.

Such plans could follow this basic format:

- Artificial barriers such as wire (possibly electrified) or thorn bush fencing, chilli fencing, bee hive fences, trenches around fields;
- Chilli bombs made of elephant dung and chilli and lit to provide pungent smoke;
- Having small fields using CA methods close to homesteads so the fields can be more easily protected;
- Guarding fields at night and using noises such as drums to scare elephants away;
- Use of alarms and lighting to keep elephants away;
- Herding of livestock to protect them from predators;
- Kraaling livestock at night in strengthened kraals.

In addition there should be a strong focus on mitigation through implementation by the KA of the Human Wildlife Conflict Self Reliance Scheme. This must be implemented more efficiently and equitably than in the past.

Much more focused attention is required on monitoring the effectiveness of various measures and on using the results to guide the revision of specific strategies. It is important to understand why certain measures might not work. For example electric fences often prove ineffective because they are usually not maintained properly and then it is necessary to establish the reasons for this and whether maintenance can be improved.

Given that the Managed Resource Use Zone is part of a National Park, lethal removal should only be allowed where there is clear danger to human lives.

Existing agricultural schemes in the Managed Resource Use Zone, including the Prison Farm at Mushashane, have been knowingly developed in a Protected Area and should therefore be responsible for their own HWC reduction and mitigation activities at their own cost. MEFT will provide advice on appropriate measures to be taken.

4.5 INFRASTRUCTURE DEVELOPMENT

Several new settlements have been established in the Managed Resource Use Zone over the past 10 years. Often new settlements are established illegally by people moving in from outside the park. New settlements are also started when family disputes or rivalries lead to conflict and some family members start their own village. Infrastructure and services such as schools and clinics cannot be provided for every village that springs up in the Managed Resource Use Zone. The policy is that main infrastructure and services such as schools, clinics, proper sanitation and electricity from the main grid will be provided at the following six development nodes (see also Figure 4 below) according to specific needs: Mushashane, Mutc'iku, Chetto, Omega1, Omega 3, and Mashambo. These are the largest settlements in the MUA and are already attracting more people. There are approximately 1 000 people in the Mushashane-Mutc'iku cluster, about 1 500 at Omega 1, 500 at Chetto, about 1 000 at Omega 3 and around 500 at Mashambo. People wishing to be close to services and infrastructure should move to these centres.

Strategic approach

Ideally growth should not be promoted at Mashambo because it is so close to the Kwando Core Area. However, the number of people already there warrants the provision of basic services, there is already a school and there are several smaller villages nearby that would benefit from provision of basic services at Mashambo. Omega 1 and Mutc'iku are the two development nodes with the current highest level of services and related infrastructure. There should not be restrictions on the extent to which the six main development nodes develop in future, as long as the integrity of the park would not be affected by proposed infrastructure and activities. The principle should be to ensure the maximum possible level of education, health and other services to park residents in these six nodes.

All smaller settlements should be provided with water and access to solar power. The socio-economic survey conducted in 2018 indicated a high dependency on wood for fuel. Promotion of solar energy in smaller villages will help to reduce the need for use of firewood.

Health services at smaller settlements should be provided by a mobile clinic.

Proper waste management must be implemented at the development nodes and smaller villages should be assisted in developing suitable waste management systems, while recognising that people who are poor and hungry do not prioritise to spend their energy or time on waste management when they need food and income.

There is no restriction on the type of material people may use to build their houses. Brick and corrugated iron and similar materials should rather be encouraged as this will reduce the amount of wood cut for building purposes.



5. IMPLEMENTATION AND MONITORING

5.1 CATTLE

MEFT shall announce on radio and with signage in the park that as from a specified date no more cattle will be allowed to enter the park, including the western part of the Managed Resource Use Zone. Monitoring patrols should be planned to ensure people do not take in cattle across the Kavango River to avoid the check point after the bridge over the river.

Cattle should then be removed from the whole of the Managed Resource Use Zone in terms of the existing Cabinet Decision and policy of the Directorate of Veterinary Services (DVS).

Education and awareness shall be conducted in this regard, to provide information to the general public on this matter.

Table 2 provides data supplied by the Directorate of Veterinary Services (DVS) on vaccination of cattle at crushpens in the MRUZ in 2017.

Table 2 Livestock numbers in the MRUZ based on 2017 crushpen vaccination data (Source: DVS)

Crushpen name	Owners	Cattle	Goats
Shamakwi	14	359	134
Omega 1	16	496	211
Mutc'iku	22	790	203
Mushangara 1	2	56	10
Mushangara 2	4	194	27
Karenga	8	346	107
Mushashane	8	309	44
Borisha	1	61	15
Total	75	2 611	751

This represents an increase of 508 head of cattle from the 2 103 inoculated in 2011 (MEFT 2012). However, the cattle numbers in Table 2 are likely to under represent the actual numbers as not all areas of the Managed Resource Use Zone are covered and it is thought not all cattle owners would present their cattle for vaccination. The data from the DVS also include the names of cattle owners, providing a starting point for the removal of cattle from the park.

5.2 MIGRATION INTO THE PARK

As soon as control mechanisms are in place MEFT shall announce that no-one may reside in the Managed Resource Use Zone without a valid permit. Removal of cattle from the Managed Resource Use Zone should provide a major incentive for people not to move into the MRUZ and for a number of existing settlers to leave. Many of the people living in the MRUZ who moved in from outside are reported to be cattle herders for owners who live elsewhere.

MEFT shall establish a register of legitimate residents based on a population survey and registration.

Criteria for establishing who is a "legitimate" resident of the MRUZ shall be determined by the MEFT, but could be based on being born in the park or being a resident for more than 5 years. MEFT and the KA shall also jointly determine the best way for legitimate residents to be identified. These provisions shall be included in the MoA to be signed between the MEFT and the KA.

5.3 COLLABORATIVE MANAGEMENT

International research shows that conservation outcomes are likely to be more positive when communities who are resident in PAs or who are neighbours to PAs are involved in decision-making and management activities¹.

Prior to 2016, MEFT and the park residents had laid a strong foundation of cooperation in management activities such as wildlife monitoring, game counts, anti-poaching, fire management, etc.

Successful conservation in the BNP and successful implementation of the MRUZ Land Use and Development Plan requires a renewed commitment to collaborative management by the MEFT and the KA in particular. KA game guards have played an important role in stopping poaching in the park and should continue to do so. In order to strengthen the relationship between MEFT and the inhabitants of the BNP, MEFT should involve the community in decision-making and conservation programmes and improve its communication with residents. At the same time, both MEFT and the KA need to address institutional constraints to improved cooperation and integrated park management as described in the next sections.

5.3.1 Meft Structure and Decision-Making

The division of the park into two regions makes management for MEFT complicated as Bwabwata West is managed by MEFT from Rundu and Bwabwata East from Katima Mulilo. MEFT has personnel stationed at Buffalo and Kwando Core Areas, and in Omega 1. The main focus of MEFT activity is in the core areas. The two MEFT regional stations appear to take different approaches to illegal migration and movement of cattle into the park. Residents report that staff members from Bwabwata West do little to prevent people moving in from outside with their cattle, while staff members from Bwabwata East reportedly act quickly to remove illegal settlers and their cattle once their presence in the park has been reported.

Rather than divide the park management according to regions, it would be far more efficient to establish a core park management cadre under a senior park manager responsible for the whole park as is the case with the Etosha National park which also straddles more than one region. This would also enable a more coherent and consistent approach to management issues and activities. The senior park manager (at least Control Warden level) should be stationed at Omega 1 with wardens stationed in and responsible for the core areas as is currently the case. A warden position should be created for the Managed Resource Use Zone.

Given the importance of the MRUZ for wildlife and the need for collaborative management with park residents, MEFT should place more personnel in the MRUZ tasked with working closely with the park residents, and with coordinating the activities of other ministries and NGOs working in the MRUZ.

5.3.2 Kyaramacan Association

As indicated above, the KA plays an important role in conservation in the BNP. MEFT and the KA is working together to manage natural resources inside the Park and this should be improved further. Examples of joint activities include game counts, crime prevention, vehicle and foot patrols, plant monitoring, and fire management. The KA uses income generated from hunting and tourism concessions to employ 64 community staff to implement these activities. MEFT recognizes that without this active partnership the integrity of BNP would be compromised, and would likely result in loss of wildlife and destruction of other natural resources.

Elected representatives do not understand their roles and do not always have the capacity to manage resources (especially income). Funds have gone missing and a complaint from KA members and stakeholders is that insufficient funds are budgeted for benefit distribution. There are allegations of fraud, that residents make claims for livestock and crop losses but no offset payments are made, and that some villages don't receive benefits such as meat from the trophy hunting.

¹See Andrade and Rhodes (2012) and Oldekop et al (2015) and Annex 5.

A concerted effort is required by MEFT and NGOs, to build the capacity of the KA as a credible partner in collaborative management of the BNP, and in particular the MRUZ, as follows:

- Support to improved governance (accountability and transparency in decision-making and in financial management, and monitoring of financial management);
- Develop and implement a “Benefit Distribution Plan” that focuses on developmental projects other than cash handouts to individuals;
- Establishment of a clear development strategy for the KA to guide decision-making and prioritisation of spending on benefits for park residents;
- Promotion of greater unity and cooperation within the KA;
- Improved operational management of the KA;
- Revival of the role of the community resource monitors as monitors of the status of veld foods and other natural resources;

5.3.3 BNP Advisory Committee

MEFT has established an Advisory Committee for the BNP with the objective to provide continuous recommendations and advice on all technical, operational and policy issues to MEFT and its stakeholders. The full mandate of the BAC and its composition are provided in Annex 2.

Although the BAC has an advisory function only, it can be an important mechanism for involving all stakeholders, for coordination of activities, and for MEFT to demonstrate leadership within the park.

As indicated below, the BAC should be the channel for all development proposals and plans for services and infrastructure for the MRUZ.

5.3.4 MOA between MEFT and BNP residents

The current legislation governing the BNP, the Nature Conservation Ordinance, 1975 (Ord. 4 of 1975), does not make provision for communities to legally reside in a park or for some form of collaborative management arrangement between MEFT and resident communities. However, MEFT should ensure the rights of bona fide Park residents are recognised in any amendments to the Nature Conservation Ordinance or any repealing legislation.

The Wildlife and Protected Areas Management Bill makes provision for the Minister to “enter into agreements with communities residing in a protected area for development, management or access to the use of natural resources”. This Bill also enables the Minister to consider giving resident communities exemption from the provisions of the Bill which restricts entry into and residence in protected areas and prohibits certain acts in protected areas.

In accordance with the Wildlife and Protected Areas Management Bill, MEFT should enter into a Memorandum of Agreement (MoA) with the KA as the representative of BNP residents which should cover the following:

- a. The right of bona fide residents to reside in the park, and to move freely into, out of and within the MRUZ of the Park at any time of day or night provided all safeguards are put in place to avoid attacks by wild animals, to receive guests, hold meetings, join any social movement or political group, operate businesses, and to seek and hold employment with any authorized employer in the Park.*
- b. The right of bona fide residents to basic services such as education, water, power, adequate dwellings, and sanitation.*
- c. The right to access and sustainably use natural resources, for livelihood, traditional and commercial purposes, subject to quotas where applicable, such as but not limited to subsistence hunting of certain wildlife, gathering of veld foods, grass, reeds, wood, and producing and selling craft in the MRUZ;*
- d. The rules and procedures for sustainable use of natural resource and establishment of quotas where applicable;*

- e. The right to practice agricultural activities and to keep permitted livestock within the MRUZ;
- f. The right to share income equitably with MEFT from the consumptive and non-consumptive use of natural resources in the Park;
- g. Conservation responsibilities and obligations of residents;
- h. Responsibilities and obligations of the KA and of MEFT;
- i. Collaborative management activities between the MEFT and provide for the establishment of an integrated development plan for the MRUZ based on the LUDP.
- j. Include the zoning and land uses of these zones as provided in the LUDP.
- k. Identification of specific parts of the core areas where people from specific villages may harvest veld foods and medicinal plants under controlled conditions.
- l. Criteria for being recognized as a legitimate resident of the MRUZ and the means of identification of legitimate residents.

5.4 CONTROL MEASURES

MEFT should establish entry gates with control points at strategic locations to control entry to the park. All drivers of vehicles and pedestrians should sign in and state their purpose of entry and destination.

No cattle should be allowed through the checkpoints unless they are clearly in transit through the park. There should be communication and coordination between the entry gates in order to properly monitor movement of people and livestock.

All boundaries of the park and of core areas, should be clearly demarcated with cut lines and appropriate signage.

All government departments should be informed that their personnel are residing in the park illegally if they do not have a valid permit. Permits for government officials or NGO personnel residing in the MRUZ should be issued by the MEFT after receiving a letter of request from the person's parent Ministry or organisation. The permit will indicate that the person is only permitted to carry out the work of the Ministry/organization concerned, may not bring in any livestock and may not start a business. Government/NGO officials visiting the park for work purposes should also apply for a permit from MEFT, which where appropriate, could be for multiple entries, depending on the nature of their work and frequency of visits.

Visitors to legitimate residents and government officials stationed in the MRUZ should be allowed to visit with a permit from MEFT. Family members of residents should be allowed to visit indefinitely in the MRUZ. Only the immediate family of government officials should be allowed to reside in the park. Other family members should have to obtain visiting permits valid for a maximum of one month, unless there are extenuating circumstances (e.g. a family member providing care on medical grounds).

Businesses in the MRUZ should be operated according to a MEFT permit and must demonstrate compliance with all sectoral legislation (e.g. licence to sell alcohol) and should be subject to inspection by MEFT.

If there are no likely legal repercussions, existing businesses operated by government/NGO officials should be closed. Alternatively, any government/NGO employee living in the park for work purposes should apply to the MEFT to continue operating that business and must demonstrate that all legal provisions attached to that business have been met – e.g. liquor licences. Otherwise the business must be closed.

Provision of all new services and infrastructure should be approved by MEFT. A proposal must be tabled at the BNP Advisory Committee, checked against the provisions of the LUDP and for the potential impact on natural resources and biodiversity conservation. The Advisory Committee will then make a recommendation to the Minister for approval. Sectoral development plans must be submitted to the Advisory Committee Annually. No new large scale commercial agricultural developments should be allowed.

Any development proposals should be tabled at the BNP Advisory Committee and should be approved by MEFT before being implemented.

Park residents should be allowed to undertake subsistence livelihood activities inside the Park (restricted to the MRUZ), without permits from MEFT, but in a coordinated and endorsed manner. Examples include collection of veld foods, firewood, and collection of building material for traditional homesteads.

Both MEFT personnel and KA community game guards should monitor that the provisions of the LUDP are being complied with on the ground. The BNP Advisory Committee should ensure that there is full cooperation and coordination between the various Ministries/NGO operating in the BNP.

5.5 ROLES AND RESPONSIBILITIES

The following are the roles and responsibilities of the government agencies and other organisations working in the BNP:

MEFT:

MEFT is the statutory body responsible for management of the park. As such, it should ensure the coordination of the activities of other government agencies and other organisations. Individuals from other government agencies and NGOs should operate in the park through permits issued by MEFT.

BNP Advisory Committee

The BNP Advisory Committee provides the main channel through which coordination of all agencies and organisations working in the park takes place. All development proposals must be endorsed by the BNP Advisory Committee and submitted as recommendations to the Minister of Environment, Forestry and Tourism for final approval. The advisory committee must ensure that development proposals are in accordance with the park management plan, the Land Use and Development Plan for the MRUZ and are subject to an environmental impact assessment process in accordance with national legislation.

Regional Council

The Regional Council is responsible for the preparation of development proposals by government agencies and NGOs which will be submitted to the BNP Advisory Committee and for overseeing their implementation once finally approved by the Minister of Environment, Forestry and Tourism. The Regional Council should ensure that such development proposals and activities do not overlap, duplicate each other and that they are according to development best practice.

Line Ministries

Line ministries are responsible for carrying out activities within their mandate that provide services to the residents of the park. However their activities should not take place in isolation. Planned activities should be coordinated through the Regional Council and the BNP Advisory Committee, and should conform to the park management plan and the LUP for the MRUZ. Where necessary, MEFT need to approve certain activities.

NGOs

NGOs are responsible for technical and advisory support to the KA. NGOs should continue to build on their strong track record of close collaboration with MEFT to strengthen community engagement, and support to KA with natural resource management, organisational strengthening and business development. This support should expand to include agricultural (horticulture and CA) training and extension services, with oversight and support from MAWLR. NGOs working in the health and education sectors are expected to work closely with their parent ministries. All NGOs operating in the BNP should have approval of the MEFT. NGOs should provide such technical and advisory support in accordance with the MOA between the MEFT and the KA, and the Nature Conservation Ordinance, 1975 (Ord. 4 of 1975), as amended.

KA

The role of the Kyaramacan Association should be to represent the interests of legitimate park residents, promote their general welfare, and assist in the conservation and sustainable use of natural resources. The KA and MEFT will develop collaborative management activities to ensure the objectives of the park management plan and any associated development plans are met.

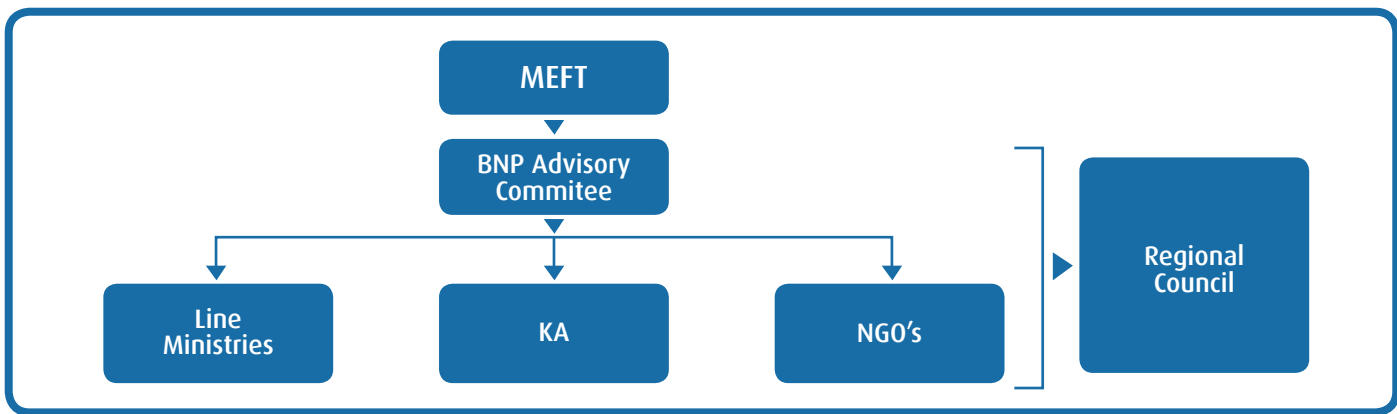


Figure 5. Cooperation and coordination in the MRUZ

5.6 IMPLEMENTATION PLAN

A detailed implementation plan for this Land Use and Development Plan is provided in Annex 3.



6. BIBLIOGRAPHY

Andrade, G. S. M., and Rhodes, J. R. 2012. Protected areas and local communities: an inevitable partnership toward successful conservation strategies? *Ecology and Society* 17(4): 14. <http://dx.doi.org/10.5751/ES-05216-170414>.

Brown, C. J., and Jones, B. T. B. 1994. Results of a Socio-ecological Survey of the West Caprivi Strip, Namibia: A Strategic Community-based Environment and Development Plan. Directorate of Environmental Affairs, Ministry of Wildlife, Conservation and Tourism. Windhoek.

Dain-Owens, S., Kemp, L., and Lavelle, J. 2010. An Assessment of Plant Resource Use and its Role in Food Security for Communities Living within Bwabwata National Park, West Caprivi. Integrated Rural Development and Nature Conservation. Windhoek.

Jones, B. T. B. and Dieckmann, U. 2014. Bwabwata National Park. In: Dieckmann, U., Thiem, M., Dirkx, E., and Hays, J. (eds). "Scraping the Pot": San in Namibia Two Decades after Independence. Legal Assistance Centre and Desert Research Foundation. Windhoek.

MET. 2013 a. National Policy on Protected Areas' Neighbours and Resident Communities. Ministry of Environment and Tourism. Windhoek.

MET. 2013b. Bwabwata National Park Management Plan. Ministry of Environment and Tourism. Windhoek.

MET. 2012. Bwabwata Technical Committee: Recommendations to the Minister regarding the management & development of Bwabwata National Park. Ministry of Environment and Tourism. Windhoek.

MET. 2009. Tourism Development Plan Bwabwata, Mudumu & Mamili National Parks. Ministry of Environment and Tourism. Windhoek.

MET. 2009b. National Policy on Human-Wildlife Conflict Management. Ministry of Environment and Tourism. Windhoek.

MET. 2007. Policy on Tourism and Wildlife Concessions on State Land. Ministry of Environment and Tourism. Windhoek.

Oldekop, J. A., Holmes, G., Harris, W. E., and Evans, K. L. 2015. A global assessment of the social and conservation outcomes of protected areas. *Conservation Biology*, Volume 30, No. 1, 133–141. Wiley Periodicals, Inc. DOI: 10.1111/cobi.12568.

Annex 1. Actions on specific issues related to the management and development of the Bwabwata National Park

ISSUE	ACTION
<p>Recognition of Park residents</p>	<ul style="list-style-type: none"> • MEFT should ensure the rights of bona fide Park residents are recognised in any amendments to the Nature Conservation Ordinance or any repealing legislation; and • In the absence of enabling legislation, MEFT and the Kyaramacan Associated (KA) should conclude an agreement that formally acknowledges the rights of Park residents in accordance with national policies and Park objectives (for example access rights, settlement rights, natural resource utilisation rights and other livelihood rights).
<p>Migration</p>	<ul style="list-style-type: none"> • As is the case with all parks in Namibia, MEFT must authorise all entry into the Park, other than for visitors transiting along the proclaimed B8 highway. This requirement must be communicated to all stakeholders; and • MEFT, in coordination with other stakeholders, should develop a system to monitor and regulate migration into BNP.
<p>Human settlement & infrastructure</p>	<ul style="list-style-type: none"> • It should be communicated to all stakeholders that it is the responsibility of MEFT to approve the establishment of settlements and development of infrastructure inside the Park; • No new settlements or infrastructure should be permitted inside BNP without the prior written permission of MEFT; • MEFT, in coordination with other stakeholders, should ensure that the boundaries for all settlements and infrastructure are clearly demarcated; and • MEFT, in coordination with relevant stakeholders, should ensure that a settlement planning system for BNP is prepared so that settlement is managed in line with best practice and integrates with national development goals and programmes.
<p>Livestock</p>	<ul style="list-style-type: none"> • The Cabinet Decision on issues pertaining to livestock inside the north east parks remains a valid instruction and MEFT (with help from the Directorate of Veterinary Services - DVS) should seek ways to implement it as a matter of urgency; • Cattle in the Mutc'iku block be permitted to remain inside the Park subject to veterinary restrictions, such as prohibition moving west of the Kavango River and east of the newly constructed veterinary cordon fence; • Following a disease outbreak in 1996, cattle east of Omega 1 were destroyed while cattle numbers at Omega 1, which are mostly owned by a small number of government officials, shop-keepers and other non-residents of the Park, have been allowed to increase to over 900; • Owners of cattle at Omega 1 (i.e. those inside the Park east of the veterinary cordon) must remove their cattle from the Park in accordance with veterinary requirements. There are different options available to these owners, and it is recommended that MEFT, DVS and other relevant stakeholders meet the affected people as possible to discuss and agree upon these cattle removal options; • Subject to statutory veterinary restrictions, bona fide Park residents be allowed to keep domestic animals (i.e. small stock, donkeys, poultry and other animals except cattle) at designated places inside the MRUZ; and • MEFT and DVS should jointly develop a system to monitor the impacts of domestic animals, so that the Park and veterinary objectives are not compromised



<p>Livelihood & commercial activities</p>	<p>It is recommended that bona fide Park residents be allowed to undertake subsistence livelihood activities inside the Park, without permits from MEFT; however these should be restricted to the MRUZ (examples include small-scale subsistence agriculture i.e. small-stock farming and small-scale cropping, collection of veldt foods, fishing, firewood collection, collection of building material for traditional homesteads). These activities should be clarified in agreements between MEFT, KA and other relevant stakeholders;</p> <p>The following commercial activities be required to obtain prior written permission from MEFT:</p> <ul style="list-style-type: none"> • Agricultural businesses (e.g. large-scale cropping and small-stock farming) in the MRUZ; • Large-scale / commercial natural resource harvesting in the MRUZ; • Tourism businesses, including trophy hunting in the MRUZ or Core Areas (require a concession from MEFT); and • Shops in the MRUZ. • In addition to the MEFT permit or concession, all commercial activities shall require adherence to the statutory requirements for their specific industry.
<p>Management plans</p>	<ul style="list-style-type: none"> • MEFT should finalise, approve and circulate the Park management plan to Park managers and all relevant stakeholders; and • MEFT, in consultation with the KA and other relevant stakeholders should prepare a complete set of operational systems and tools for the MRUZ to guide the management of this area in line with the approved management plan.
<p>Deproclamation</p>	<ul style="list-style-type: none"> • Omega 1: Deproclamation and fencing of Omega 1 is not recommended because it is financially and practically unviable. Not only will this action require a large capital outlay by the State; it will also require significant human and financial resources to maintain. Furthermore, fencing of this area will restrict migration of elephant, buffalo and other wildlife, thus having a negative trans-boundary environmental impact. The action will also negatively affect and isolate a marginalised community within the Park, which has expressed their concerns about living inside a fenced area (Rousset, 2003)² ; and • Mutc'iku: This area is already fenced to veterinary standards (See figure 2) and DVS has permitted cattle to remain inside. It is therefore not recommended that this area be deproclaimed, but rather recommended that it remain inside the Park and be zoned to allow for cattle in accordance with DVS requirements.
<p>Zoning</p>	<ul style="list-style-type: none"> • MEFT should continue to implement the zoning plan in the Core Areas; and • MEFT, in consultation with other line ministries, the KA, and other relevant stakeholders should implement the zoning plan in the MRUZ.
<p>Stakeholder engagement</p>	<ul style="list-style-type: none"> • Upon completion of its terms of reference, the Bwabwata Technical Committee should be replaced by a Park Advisory Committee for the purpose of ensuring on-going coordination, collaboration and participation of stakeholders; • MEFT should ensure that the role and duties of the Park Advisory Committee are reflected in the Park management plan; and • If it becomes necessary through the implementation of the Park management plan, MEFT should enter into agreements with stakeholders to confirm their plans, roles and responsibilities inside the Park.

² Rousset K (2003) Bwabwata National Park plans: Perspectives of the residents of Caprivi Game Park. IRDNC, Katima Mulilo, Namibia





Tourism & wildlife concessions	<ul style="list-style-type: none">• MEFT should continue to implement concessions inside BNP in terms of the National Policy on Tourism & Wildlife Concessions on State Land (2007), Cabinet Decision 18th/20.07.99/004, and the aforementioned tourism development plan; and• As new information becomes available or as market conditions change, MEFT in consultation with relevant stakeholders, should review and update the tourism development plan to include newly identified opportunities and remove those that are considered obsolete or unviable.
KAZA TFCA	<ul style="list-style-type: none">• MEFT, KA and other stakeholders should implement the Park management plans in recognition that their role is critical in the context of the Kavango Zambezi Transfrontier Conservation Area (KAZA);• MEFT, KA and other stakeholders should continue their support of KAZA's development, including active participation on the National Steering Committee and various advisory groups. In this regard they should assess their human resource development needs and provide training and exposure in relevant fields and practices;• MEFT, KA and other stakeholders should promote the concept of KAZA to Park residents and neighbours as well as other members of the public. They should furthermore encourage the implementation of activities that add value to KAZA; and• MEFT, KA and other stakeholders should promote trans-boundary forums across BNP's boundaries, and should ensure that authority to participate in KAZA activities is devolved to their relevant staff.



Annex 2. Role of the BNP Advisory Committee.

MEFT has established an Advisory Committee for the Park. The Objective of the Bwabwata Advisory Committee (BAC) is to provide continuous recommendations and advice on all technical, operational and policy issues to the Ministry of Environment, Forestry and Tourism and its stakeholders (MEFT undated).

The mandate of the BAC is as follows:

1. Proactively embark on planning at local and regional level to mitigate conflicts and maximise synergies between land uses.
2. Ensure that regional authorities are fully aware of the economic impacts of the park, and of the negative impacts that inappropriate planning will have on conservation and its ability to contribute to the regional economy.
3. Ensure that key elements of the park management plan are accommodated in all Regional planning.
4. Ensure that MEFT cooperate with relevant authorities in the regional planning process so that conservation of biodiversity is recognised as vital use of land and a component of the regional landscape.
5. Ensure the existence of a respectful and efficient working relationship between MEFT with stakeholders especially resident and neighbouring communities.
6. Ensure that land use planning outside the park is influenced in such a way that it is aligned and fully integrated with the zonation of the park and conservancies.
7. Ensure that MEFT management keep abreast of all regional government initiatives, and ensure that park plans are brought to the attention of the relevant authorities.
8. Make recommendations and follow up on reviews or changes relevant to legislation, development requirements, research, funding, and other management related issues.
9. Advise the Minister regarding the best approach to zonation and specific benefit opportunities for park residents and neighbours in line with an agreed park management plan.
10. Advise the MEFT on best implementation practices of the tourism and hunting concessions in the park.
11. Advise and assist in promoting the touristic development of the park in connection of the KAZA tourism promotion.
12. Advise and promote cross-border cooperation with Angola, Botswana and Zambia.

The BAC consists of representatives from the following member organisations:

- Ministry of Environment, Forestry and Tourism
- Ministry of Fisheries and Marine Resources
- Ministry of Agriculture, Water and Land Reform
- Ministry of Home Affairs, Immigration, Safety and Security (Namibian Police Force and Namibia Correctional Services)
- Ministry of Works and Transport
- Ministry of Health and Social Services
- Zambezi Regional Council
- Kavango East Regional Council
- The Namibia Defence Force
- Roads Authority
- Namibia Wildlife Resorts
- Neighbouring Conservancies
- Kyaramacan Association
- Non Governmental Organisations
- Neighbouring Private Tourism Sector
- Park Trophy and Tourism Concession Holders
- Namibia Development Corporation

Annex 3. Detailed implementation Plan

OUTCOME	ACTION	RESPONSIBLE PARTY	INDICATIVE BUDGET (N\$)	TIMING		
				Year 1-2	Year 3-4	Year 5-10
1) Establish and implement coordinated programme in the park to improve food production, provision of basic services and increased cash income with the overall goal of diversifying land uses in the MRUZ to improve livelihoods						
1.1) Food production						
Collaborative strategy in place for improved food production	GRN officials and supporting NGOs to visit each village to consult residents and develop joint strategy for food production (including vegetable gardens, fruit trees, veld foods, livestock and dryland cropping) in each village.	MEFT, MAWLR	75,000			
KA and NGO role for food production clarified and budgeted	GRN officials work with KA and NGOs to clarify their roles and responsibilities in food production.	MEFT, MAWLR	22,000			
Peer-to-peer extension programme established	Extension personnel to (a) identify motivated individuals who already have a field, garden or livestock and train them further through workshops and follow-up visits and (b) ensure that they visit lead farmers at least every two weeks; Lead farmers to train their peers in new skills.	MEFT, MAWLR	569,000 per annum			
MAWLR agricultural development centre at Omega 3 staffed with one or more extension officers	MEFT to request MAWLR to allocate one or more extension officers in Omega 3.	MEFT	468,000 per annum			
Agricultural development centre established in Omega	MEFT to request MAWLR to develop a centre or use existing NDC farm facilities and allocate one or more extension officers in Omega.	MEFT, MAWLR	1,200,000 (estimate for building or renovation of existing facilities)			
High-value veld food areas protected from disturbance due to other land uses	KA Community Resource Monitors to monitor key veld food collection areas in MRUZ.	KA	-			



Cultivation of veld foods improves food security	Explore the cultivation of veld food as a means of increasing food security; Integrate veld foods into vegetable gardens and around homesteads.	MEFT	120,000 (support services from third party)			
Small-scale vegetable gardening established at household level	Facilitate the development of one garden per household - the garden size should be no bigger than 10x10m (100m ²).	MAWLR, NGOs, KA	250,400 per annum			
Vegetable gardens extended with larger gardens	Provide successful gardeners with extension services and training to expand their gardens.	MAWLR, NGOs, KA	170,400 per annum			
School gardens established	Approach schools, and where teachers are motivated and committed, work with them to establish gardens not exceeding 15x15m (225m ²).	MAWLR, Ministry of Education, Arts and Culture, NGOs, KA	150,000 (materials and support services)			
Harmonized approach leads to increased adoption of CA and higher yields	Facilitate aligned approach between, MAWLR and MEFT to promote CA, agroforestry and small fields that utilise intercropping; Provide on-the-ground support to dryland cropping by identifying and giving extension support to lead farmers.	MEFT, MAWLR	285,400 per annum			
Ripping/furrowing services available to park residents at affordable price	Request MAWLR to provide ripping/furrowing services for residents at a price negotiated with the people; Train tractor drivers in CA and how to rip/furrow in a slow and careful manner. Note: In villages where MAWLR cannot provide ripping/furrowing services, train residents in the hand hoe basin method of CA.	MEFT	10,000 for tractor training (ripping subsidized by MAWLR)			
Seeds distributed	Request MAWLR and KA to distribute seed long before the planting season (mahangu, maize, cow peas, bambara nuts, sorghum and pumpkins). Slowly phase in small fees for seeds (e.g. N\$5 in the first 2 years, N\$ 10 for the next 2 years etc. until the market price of seeds has been reached).	MAWLR, KA	550,000 (seeds and distribution by third party during year 1)			
Former NDC farm operational and providing a training sites for park residents	Develop agreement between MEFT, MAWLR and KA to identify farmer who will use CA and agroforestry techniques in former NDC farm and use farm as demonstration and training site for park residents.	MEFT, MAWR, KA	40,000 (drafting of agreement by third party)			





Agroforestry well-established and becomes common practice in park	Work with each family to plant mix of indigenous and exotic fruit trees, some vegetable production and cereal cropping; Provide trees and train farmers to plant nitrogen-fixing and food trees 20m apart in fields, in soil collected under Acacia trees and mixed with manure.	MAWLR, NGOs, KA	44,000 per annum (purchase of subsidized trees from DoF, extension can be provided alongside other agric support)			
Fruit trees growing in homesteads	Propagate fruit trees and distribute them to individuals that have shown dedication to tending the trees; Train residents how to propagate these trees themselves; Assist the KA to establish a tree nursery and programme to promote planting of indigenous and exotic fruit trees.	MAWLR, KA	124,000 per annum			
Park residents trained in chicken, goat and equine husbandry and planned grazing/ holistic rangeland management	Train selected and committed park residents on chicken, goat and equine husbandry, as well as planned grazing.	MAWLR, NGOs	336,000 per annum			
Apiculture supported	Promote and support existing beekeepers, and invite them to workshops where they can talk to other residents about keeping bees.	MAWLR	15,000 per workshop per annum			
Equitable meat distribution taking place	Work with KA to ensure meat from hunted animals is fairly distributed.	KA, MEFT	-			
SUBTOTAL				4,467,200		
1.2 Income Generation						
More employment, especially for San, in the MRUZ	Undertake measures to ensure that as many San people as possible be employed formally and informally in accordance with the labour laws and existing policy.	MEFT	-			
Income generation of park residents improved	Develop and implement strategy to increase opportunities for the San and other legitimate park residents to engage in income-generating projects and enterprises.	MEFT, NGOs	30,000 (facilitation of strategy)			





Khwe tear-shaped basket production revived	Develop systems to collect and deliver baskets to Mashu Crafts and/or other outlets.	KA, NGOs	24,000 per annum for third party support services			
Feasibility study for thatch grass collection in park conducted	Carry out feasibility study of the viability of thatch grass collection, and if found to have potential, facilitate an agreement with a reputable buyer and develop local systems for harvesting, collection and payment.	NGOs, KA	111,000 (feasibility study and third party to set up systems and contract with buyer)			
System established for lodges to support vegetable farming, and become a market for the produce	Involve lodges to manage gardening initiatives, invest in infrastructure and work with individual farmers, as well as support small-scale commercialization (e.g. drying vegetables such as tomatoes in poly-tunnels to preserve them).	Lodges, KA, NGOs	-			
Employment opportunities secured for youth trained as trackers	Promote tracker training as a means of preserving cultural heritage and improving marketable skills, and assist trained trackers to find employment in the tourism industry.	KA, NGOs, lodges	160,000 (training by third party)			
Cultural tourism products developed	Invite lodges along the west bank of the Kavango River to establish cultural tourism products in BNP (e.g. San cultural centre in the Mutc'iku area which could combine visits to the centre with game drives to the Buffalo core area, tasting local foods, buying crafts, experiencing the local way of life, and guided bush walks based around tracking and veld food gathering).	Lodges, NGOs, KA	-			
Concessions developed	Award new concessions.	MEFT, KA	TBD – dependent on tourism plan			
SUBTOTAL				436,000		
2) Mitigate Human Wildlife Conflict (HWC)						
HWC management plans in place for each settlement	Work with each village or cluster of villages where appropriate, to develop localized HWC management plans (in compliance with the revised National Policy on Human Wildlife Conflict Management) tailored to meet the circumstances of that village or cluster, that addresses prevention,	MEFT, KA	120,000 (facilitation of HWC plans by third party)			





	reduction of incidents and mitigation.					
HWC mitigation measures implemented leading to reduced HWC	Develop and implement a work plan indicating methods to re-duce HWC, indicating who is responsible for implementing the activity and setting a target date for completion.	MEFT, KA, NGOs	720,000 per annum (implementation of HWC strategies by third party)			
Lessons learned applied to improve HWC measures	Monitor the effectiveness of various measures and use the results to guide the revision of specific strategies.	MEFT, KA, NGOs	80,000 (review by third party)			
SUBTOTAL				920,000		
3) Infrastructure development						
Strategy developed to ensure provision of basic services to all park residents	Develop a programme of infrastructure development and provision of human and financial resources to ensure that all residents of the park have access to water, electricity, education and medical facilities.	MEFT, Regional Council and line ministries	100,000 to develop strategy and costing			
Infrastructure development and services established at six development nodes	Monitor and ensure that main infrastructure and services such as schools, clinics, proper sanitation and electricity from the main grid will be provided at the following six development nodes according to specific needs: Mushashane, Mutc'iku, Chetto, Omega1, Omega 3, and Mashambo.	MEFT, other line ministries, Regional Council	TBD based on strategy			
Energy and water infrastructure installed in all smaller settlements	Install water and energy systems in all smaller settlements.	MEFT, other line ministries, Regional Council, KA	TBD based on strategy			
Mobile clinic provides regular health services to smaller villages.	Work with the Ministry of Health to ensure that all settlements that do not have a permanent clinic are visited regularly by a mobile clinic.	MEFT, Ministry of Health, Regional Council	TBD based on strategy			
Waste management systems established and maintained at all settlements	Set up waste management systems at the six development nodes and smaller settlements.	MEFT, other line ministries, Regional Council	TBD based on strategy			
SUBTOTAL				100,000		





4) Zonation of the MRUZ						
Buffalo Core Area extended	Extend the western boundary of the Buffalo Core Area along the buffalo veterinary fence northwards to the Angola border and the eastern boundary of the core area in a straight line to the Angolan border.	MEFT	-			
SUBTOTAL				-		
5) Implementation and monitoring of the Bwabwata NP MRUZ						
5.1 Cattle						
Intention to remove cattle communicated with all park residents	Announce on radio and with signage in the park that as from a specified date no more cattle will be allowed to enter the park, including the western part of the MRUZ.	MEFT	20,000 signage			
Cattle ban implemented and monitored	Secure funds to purchase cattle, obtain DVS data on cattle owners, remove cattle from the entire MRUZ, conduct monitoring patrols to ensure people do not take in cattle across the Kavango River to avoid the check point. Inform police, army and veterinary officials to implement the cattle ban.	MEFT, NGOs, line ministries	TBD – dependent on cattle numbers and price			
SUBTOTAL				20,000		
5.2 Migration into the park						
Register of park residents developed and regularly updated	Based on criteria developed between KA and MEFT to establish what constitutes a 'legal resident', establish a register of legitimate residents based on a population survey.	MEFT, KA	50,000			
SUBTOTAL				50,000		
5.3 Collaborative management						
Park management plan strengthened to indicate areas of collaborative management with park residents and how this can be implemented	Through a participatory process with park residents, strengthen the park management plan to give clear guidelines for joint activities in the management plan, spell out collaborative activities and review park objectives.	MEFT, KA	50,000			





Collaborative management activities conducted between MEFT and KA lead to improved collaboration and communication	Resume joint management activities; Involve the community in decision-making and conservation programmes and improve communication with residents.	MEFT, KA,	TBD – dependent on joint activities			
More effective park management structures in place	Establish core park management cadre under a senior park manager (at least Control Warden level) responsible for the whole park and stationed at Omega 1 with wardens stationed in and responsible for core areas, and a warden position created for the MRUZ.	MEFT	TBD			
KA has improved governance and greater capacity for joint management	<p>Build KA’s capacity as a partner in joint management of the BNP (in particular the MRUZ), as follows:</p> <ul style="list-style-type: none"> • Support improved governance (accountability and transparency in decision-making and financial management, monitoring of financial management); • Develop and implement “Benefit Distribution Plan” • Establish clear development strategy for KA to guide decision-making and prioritisation of spending on benefits for park residents; • Promote greater unity and cooperation within KA; • Improve operational management of KA; • Revive role of the community resource monitors as monitors of veld foods and other natural resources • Consider dividing the KA into KA West and KA East to create more manageable sub-units, improve accountability and enable hunting income to go to these sub-units (the hunting contracts could be divided between KA East and KA West based on the areas where they hunt). 	KA, NGOs, MEFT	1,500,000 per annum			





Bwabwata Advisory Committee operational and effective	Channel all development proposals, and plans for services and infrastructure for the MRUZ through the Bwabwata Advisory Committee.	MEFT, line ministries, NGOs, KA	-			
Revised legislation recognizes de jure rights of BNP park residents	Ensure that any amendments to the Nature Conservation Ordinance of 1975 makes provision for communities to legally reside in a park or for a joint management arrangement between MEFT and resident communities.	MEFT	-			
Memorandum of Understanding (MOA) entered into between MEFT and the KA	Facilitate adoption of MOA which should cover all items listed in section 5.3.4 of the BNP LUDP	MEFT, KA	-			
SUBTOTAL				1,580,000		
5.4 Control Measures						
Entry gates established to control entry into park	Build and staff entry gates with control points at strategic locations to control park entry (including facilities for drivers of vehicles and pedestrians to sign in, state their purpose of entry and destination); develop communication and coordination system between entry gates to properly monitor movement of people and livestock.	MEFT	3,000,000			
Signage and cutlines demarcate all park boundaries	Demarcate boundaries of the park and of core areas with cutlines and appropriate signage.	MEFT	200,000			
Permit system for all GRN and NGO staff in park established and implemented	Inform GRN departments that their personnel require valid permit to reside in the park; Issue permits for GRN and NGO personnel residing in the MRUZ (by the MEFT permit office in Windhoek after receiving a letter of request from the person's parent ministry or organization).	MEFT	TB			
Permit system for businesses in the MRUZ enforced	Develop a MEFT permit system to ensure that businesses in the MRUZ are compliant with all sectoral legislation (e.g. licence to sell alcohol) and can be subject to inspection by MEFT, close illegal existing	MEFT	TBD			





	businesses (mostly shebeens) operated by government officials.					
All new services and infrastructure approved by MEFT before implementation	Ensure that all new services and infrastructure be approved by MEFT after being tabled as a proposal at the BNP Advisory Committee, and checked against the provisions of the LUDP, and for potential impact on natural resources and biodiversity conservation; Submit Sectoral Development Plans to the Advisory Committee annually.	Regional Council, line ministries, MEFT	TBD			
SUBTOTAL				3,200,000		
TOTAL				11,174,250		







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