United Nations Development Programme
Country: Botswana
PROJECT DOCUMENT[1]

Project Title:	Using SLM to improve the integrity of the Makgadikgadi ecosystem and to secure the livelihoods of rangeland-dependent communities
UNDAF Outcomes: By 2016 the rural poor, especially women, are deriving greater benefits from environment and natural ecosystems **UNDP Strategic Plan Environment and Sustainable Development Primary Outcome:** Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded **UNDP Strategic Plan Secondary Outcome:** Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change	
Expected Country Programme Outcome(s): Strengthened capacity and improved policy and institutional framework for environmental management and sustainable development at the district (Boteti sub-district) and ecosystem-levels (Makgadikgadi wetland system); and Enhanced capacity of communities in southern Sua Pan (Mmea, Mokubilo, Mmatshumo and Mosu) for natural resources and ecosystem management and benefit distribution	
Expected CPAP Output(s): Evidence-based responsive policies, legislation, programmes and projects formulated by government to accelerate progress towards Vision 2016 goals.	
Implementing Partner: BirdLife Botswana, supported by the Department of Forestry and Range Resources and the Department of Environmental Affairs under the Ministry of Environment, Wildlife and Tourism	

[1]For UNDP supported GEF funded projects as this includes GEF-specific requirements

Brief Description

A. Prevalent land and livestock management processes in Botswana's Makgadikgadi ecosystem are likely to compromise the continued flow of ecosystem goods and services from the savannah ecosystem that are necessary to sustain the national economy, livelihoods and the rich fauna and flora diversity. Local communities need to participate meaningfully in mainstreaming SLM principles into rangeland management and governance in order to secure the ecosystems goods and services necessary for current and future development and maintenance of biodiversity. However, the effectiveness of their participation is currently hindered by critical barriers, chief among them, inadequate knowledge and skills for adoption of SLM in arable farming, livestock management and livelihood support systems (primarily for the hitherto under-utilised veld products); lack of integrated localized land-use plans and inadequate user-right privileges for resident natural resource users. These barriers are preventing the government and the local communities to achieve the long-term solutions desired for the rangelands.

B. The project aims to remove these barriers by supporting communities to mainstream SLM principles into the Sub-district-wide land-use planning, and at a few pilot sites into both livestock production (through strengthening Farmer's Associations and providing through them technical backstopping to enable farmers to improve livestock productivity whilst enhancing rangeland conditions) and arable farming (through conservation agriculture). This will be achieved through two components.

C. Component 1 will put in place systems and capacities for applying improved range management principles over 1,900,000 hectares of rangelands. Activities will be targeted at the entire Makgadikgadi Framework Management Planning (MFMP) area, but with other more detailed support for land use planning focusing on the Boteti sub-district. Replication of the successful pilots could have an impact on an additional 1,440,000 hectares (notably in the adjoining Tutume sub-district planning area). Component 2 will facilitate the conditions necessary for development and successful implementation of local integrated land use plans in pilot villages. Component 2 will empower local institutions to improve resource governance and stakeholder participation in regional dialogues on the importance of mainstreaming SLM into rangeland management for local development. Overall, the project will improve capacity for local resource management and governance, removing barriers to small-scale, non-beef enterprises (including veld product processing, development and marketing, and community-based tourism that utilizes threatened trees of conservation and cultural significance), and conservation agriculture to enhance arable production catalyzed through GEF resources.

D. The total budget for the project is USD 7,587,832, out of which GEF contributes USD792, 832, and a co-finance of 6,795,000, out of which UNDP contributes USD 225,000, and national partners contribute the balance of USD 6,570,000. The three year project will be implemented by BirdLife Botswana, supported by the Department of Forestry and Range Resources and the Department of Environmental Affairs under the Ministry of Environment, Wildlife and Tourism.

SIGNATURE PAGE

Country: Botswana

UNDAF Outcome (s)/Indicator (s): By 2016, the rural poor, especially women, enjoy greater benefits from the environment and natural ecosystems
CPAP Outcome (s)/Indicator (s): Strengthened national capacity and improved policy and institutional framework for environmental management and sustainable development and Enhanced capacity of communities for natural resources and ecosystem, management and benefit distribution
CPAP Output (s)/Indicator (s): No. of community-based organizations with capacity to develop and implement plans in natural resources and ecosystem management and benefit distribution
Implementing Partner: BirdLife Botswana, supported by the Department of Forestry and Range Resources and the Department of Environmental Affairs under the Ministry of Environment, Wildlife and Tourism

Programme Period:	2010-2014
Atlas Award ID:	00081415
Atlas Project ID:	00090691
PIMS #	5359
Start date:	June 2014
End Date:	December 2017
Management Arrangements	NGO Execution
PAC Meeting Date	2 July 2014

Total resources required (US$)	
Total allocated resources (grants) (US$)	**7,587,832.00**
GEF	**792,832.00**
UNDP	225,000
Other National Partners	6,570,000.00
Total	6,795,000.00

Agreed by (Government):

Name Signature Date

Agreed by (UNDP):

Name Signature Date

Table of Contents

List of acronyms

APR	Annual Performance Report
BCA	Botswana College of Agriculture
BLB	BirdLife Botswana
BNSPR	Botswana National Strategy for Poverty Reduction
CA	Conservation Agriculture
CBNRM	Community Based Natural Resource Management
CDR	Combined Delivery Report
CHA	Controlled Hunting Areas
CPAP	Country Programme Action Plan
DAP	Department of Animal Production (of the Ministry of Agriculture)
DAR	Department of Agricultural Research
DCP	Department of Crop Production
DEA	Department of Environmental Affairs (of the Ministry of Wildlife, Environment and Tourism)
DFRR	Department of Forestry and Range Resources (of the Ministry of Wildlife, Environment and Tourism)
DLUPU	District Land Use Planning Unit
DOD	District Officer – Development
DVS	Department of Veterinary Services
DWNP	Department of Wildlife and National Parks (of the Ministry of Wildlife, Environment and Tourism)
EIA	Environmental Impact Assessment
EU	European Union
FACE	Fund Authorization and Certificate of Expenditures
GEF	Global Environment Facility
HACT	Harmonized Approach to Cash Transfers
HQ	Headquarters
HR	Human Resources
ID	Identification
LD	Land Degradation (focal area of the GEF)
LD-PMAT	Land Degradation (focal area) – Portfolio Monitoring and Assessment Tool (of the GEF)
MEWT	Ministry of Environment, Wildlife and Tourism
MFMP	Makgadikgadi Framework Management Plan
MWS	Makgadikgadi Wetlands System
MOMS	Management Oriented Monitoring Systems
NAP	National Action Plan (for Combating Land Degradation)
NEX	National Execution (modality of UNDP)
NGO	Non-Government Organization
NPAD	National Policy on Agricultural Development
NPC	National Project Coordinator
NR	Natural Resource
NRM	Natural Resource Management
PAC	Project Appraisal Committee (Meeting of UNDP)
PIF	Project Identification Form (of the GEF)
PIMS	Project Information Management System (of UNDP)
PIR	Project Implementation Reviews
PMU	Project Management Unit
PPG	Project Preparation Grant
PSC	Project Steering Committee
SADC	Southern Africa Development Community
SAREP	Southern Africa Regional Environment Programme (of USAID)
SLM	Sustainable Land Management
TAC	Technical Advisory Committee
TGLP	Tribal Grazing Land Policy
UNCCD	United Nations Convention to Combat Desertification
PRAIS	Performance Review and Assessment of Implementation (portal of the UNCCD)
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme – Country Office
UNDP-GEF	United Nations Development Programme – Global Environment Facility Unit
US	United States
USAID	United States Agency for International Development
WMA	Wildlife Management Areas

1. SITUATION ANALYSIS

Environmental context

1. Lying in the semi-arid interior of Southern Africa, Botswana's climate is typified by a mean annual rainfall varying from less than 200 millimetres per annum in the Southwest to 650 millimetres per annum in the Northeast with an inter-annual variability of about 40%. Approximately 80% of the country is covered with Kalahari sand soils and savannah ecosystems that support both commercial and communal livestock systems, as well as National Park and Wildlife Management Areas. The vegetation of the region is influenced by the highly variable rainfall occurring mostly in the summer months (October through March), with a drought recurring roughly every 7 years. Most rainfall is in the form of thunderstorms, depositing between 15 to 90 millimetres of rain within a few hours. Together with the widely varying temperatures, these seasonal storms have a marked regeneration effect on the vegetation, and highly influence the species composition. During the winter months (May through August) there is little or no rain and no surface water to sustain vegetation. The mean maximum winter temperature is between 27°C and 30°C and the mean minimum temperature is between 9°C and 12°C. In June and July, temperatures can drop below freezing, but in the summer months temperatures may exceed 40°C.

2. The Makgadikgadi ecosystem lies towards northeast Botswana, and the planning area of the Makgadikgadi Framework Management Plan (MFMP)[2] (which document constitutes the overarching ecosystem-level planning guide for this project) covers an area of about 36, 452 km^2 (3, 645, 200 hectares) of richly endowed rangelands and wetlands; the MFMP boundary, delineated through a consultative process over several years, is meant to include 'the core pan and its villages', also basing on contour lines and physical boundaries such as roads and veterinary fences. This area is much smaller than the Makgadikgadi Wetlands System (MWS), which is delineated by the watershed boundary of the river catchments, including the Nata River catchment in Zimbabwe where the majority of the surface water into the salt pans emanates. This project will focus on the Makgadikgadi Framework Management Plan (MFMP) rather than the Makgadikgadi Wetlands System (MWS). Using the World Wildlife Fund (WWF) Eco-regions classification system[3], which is used in the Botswana National Biodiversity Strategy and Action Plan and other national environmental planning documents, the MFMP area largely falls within the Zambezian halophytics ecoregion, whilst some of the eastern edge falls within the Southern Africa bushveld. The rest of the area is bordered by and transitions into the Kalahari Acacia-Baikiaea woodlands; thus at broad ecological scales, there is some diversity in the ecological ecosystems within the MFMP area. At localised scales, at least six main vegetation types are recognised: (1) saline grasslands (on bare open salt pans and scattered sand dunes); (2) shrubbed grasslands (on saline sands, scattered salt pans and river delta); (3) mixed mopane (on saline sands, sand dunes, deeper sandy soils over duripans and low shallow clay/sand soils over calcrete); (4) mixed acacia (on river banks, floodplains and low-lying fossil drainage); (5) mixed combretum (on low shallow lacustrine soils over calcrete, scattered small pans and fossil drainage lines) and (6) mixed terminalia (on old lake sand terraces and deeper sand soils over duripan), translating into a mosaic of ecological systems.

3. Largely as a result of the diversity and mosaic of habitat types, the MFMP area has global biological significance, as it supports the second largest flamingo population in Africa, and Botswana's largest zebra and wildebeest migration route. The Makgadikgadi Pans are also the largest area of saltpans in the world. Specifically, the site supports many threatened species, including large populations of at least ten globally threatened birds (IUCN Red Listed species, most of which are dependent on sustainably managed rangelands)[4]. Out of the 43 plant species on Botswana's Red Data List[5], two are found in the MFMP area, *Hoodia currorill sbsp lugardili* (Vulnerable) and *Panicum coloratum* (Data Deficient), which is endemic to the area. Other plants of conservation concern and tourist attraction value include *Sesamothamnus lugardii*, *Adansonia digitata*, *Aloe litoralis*, and *Salvadora persica.* They all have restricted geographic distributions in

[2] Department of Environmental Affairs and Center for Applied Research, 2010, Makgadikgadi Framework Management Plan, Government of Botswana, Gaborone.

[3] Using the WWF Eco-region classification, Botswana has seven distinct eco-regions (see Annex 1 for their spatial distribution), namely: (1) Kalahari Acacia-Baikiaea woodlands; (2) Southern Africa bushveld; (3) Zambezian and Mopane woodlands; (4) Zambezian Baikiaea woodlands; (5) Zambezian flooded grasslands; (6) Kalahari xeric savanna, and (7) Zambezian halophytics.

[4] Globally threatened birds in the MFMP area include: Grey Crowned-crane *Balearica regulorum*; Wattled Crane *Bugeranus carunculatus;* Southern Ground-hornbill *Bucorvus leadbeateri;* Slaty Egret *Egretta vinaceigula;* White-backed Vulture *Gyps africanus;* Cape Vulture *Gyps coprotheres*; Hooded Vulture *Necrosyrtes monachus*; Lappet-faced Vulture *Torgos tracheliotos;* White-headed Vulture *Trigonoceps occipitalis* and Secretarybird *Sagittarius serpentarius.*

[5] Setshogo, M.P. and Hargreaves, B. 2002. Botswana. In: J.S. Golding (ed.), Southern African Plant Red Data Lists. Southern African Botanical Diversity Network Report No.14: 16-20. SABONET, Pretoria, South Africa.

Southern Africa – with some e.g. *Adansonia digitata* found in very high densities in the MFMP area, and thus many tourists visit the area to see these unique trees. Sua Pans' phytoplankton community is similar to some few other large shallow saline lakes in the region (e.g. Etosha Pan in Namibia and Lake Chilwa in Malawi), with high and variable salinity and pH. Cyanobacteria species *Anabaena*, *Oscillatoria*, and *Arthrospira*, and the diatom species *Navicula* and *Nitzschia* are dominant[6]; these phytoplankton provide an important base for the wetland food chain and a food for some of the threatened bird species e.g. Lesser Flamingo, and are possibly impacted by unsustainable land use practises in the neighbouring drylands.

4. Due to a combination of a long history of over-hunting and over-grazing, compared to other conservation areas in the country there is relatively few medium and large-sized wildlife in the MFMP area (with the exception of elephants, which are re-establishing in especially south-west Makgadikgadi). The following are mammalian species, protected in Botswana (Government of Botswana 2002) on the basis of their vulnerability or rarity, that are found in the MFMP: Aardwolf (*Proteles cristatus*), Honey Badger (*Mellivora capesis*), Antbear (*Orycteropus afer*), Giraffe (*Giraffa camelopardalis*). In addition to these species, Wild Dog (*Lyncaon pictus*) and Cheetah (*Acinonyx jubatus*) are protected in accordance with the African Convention, 1968, Class A, which by mutual consent among African nations are species protected from hunting throughout Africa. Furthermore, African Elephant (*Loxodonta africana)*, Leopard (*Panthera pardus)*, Cheetah (*Acinonyx jubatus*), and Brown Hyaena (*Hyaena brunnea*), also reported in the area, are protected under the Convention on International Trade in Engendered Species (CITES). Seventy-two species of amphibians and reptiles have been recorded just in the Nata Sanctuary, including Leopard Tortoises (*Geochelone pardalis*) – the largest tortoises on the African continent. The Python is also protected on the basis of vulnerability.

5. When flooded, Sua Pan has large populations of invertebrates, particularly crustaceans, e.g. Fairy Shrimps. The dominant species of crustaceans include *Branchinella spinosa*, *Moina belli*, *Lovenula africana* and *Limnocythere tudoranceai*. They are very important food for birds, especially Greater Flamingos. Two of the dominant shrimp species on Sua pan, *B. spinosa* and *L. africana*, have not been found elsewhere in southern Africa, while others, *M. belli* and *L. tudoranceai* have been found in a few temporary waters in Namibia, and the ostracod *Sclerocypris exserta makarikarensis* is endemic to the Makgadikgadi Pans (McCulloch 2003). Fish species are seen when brought into Sua Pan by the Nata River. The most important fish are Barbel (*Clarius qariepinus*), with a Tilapia or Cichilid species, and a Barbus (minnow) species also occurring. They are very tolerant to saline water and some, particularly the barbel, are reported to aestivate in the sand and clay beds of the dry Nata River in order to survive the dry season. All these species of conservation interest are impacted by land degradation in the savannah rangelands, while some also impact or influence land degradation and consequently influence the ecosystem services that are derived by the people who reside within the MFMP.

Socioeconomic context

6. Despite significant economic growth based largely on diamonds, 47% of Botswana's population still lives under the United Nation's two US dollars per day poverty line. Pastoral agriculture represents the chief source of livelihood for more than 40% of the nation's 1.8 million residents. Indeed, livestock represents an important source of status and well-being for the vast majority of Batswana, making the savannah rangelands a critical resource. However, degradation of the savannah ecosystem has emerged as a serious threat to the country's biodiversity and livestock-based economy. Reduced resilience of the rangeland ecosystem is increasing the vulnerability of pastoral communities to environmental change. This is particularly the case in North-eastern Botswana including the Boteti Sub-District Region where the Makgadikgadi pans lies.

7. According to the population census of 2011, there are a total of 32 settlements (both gazetted and non-gazetted) with a total population of approximately 57,118, within the MFMP area. Population density is low, approximately 1.5 persons per square kilometer, compared to the national average of 3 persons per square kilometer. The population is ethnically diverse. Ethnic groups in the Sub-district include Basarwa, Bakalanga, Batawana, Bayei, Bananjwa, Bangwato and Baherero. These groups are scattered across the district with each found predominately in specific settlements. The area of focus recommended for the proposed project is dominated by Basarwa, who themselves own few or no livestock.

8. Land tenure and land use in the MFMP area is somewhat different to the rest of the country with approximately 43% of the land area being state land due to the existence of conservation areas.

[6] McCulloch, G.P. 2003. 'The ecology of Sua Pan and its flamingo populations'. Submitted as a PhD thesis to the University of Dublin, Trinity College, Ireland.

Pastoral/arable and residential land uses take approximately 57% of the surface area of the Sub-region (see Table 1 below). Wetland systems, mainly the Makgadikgadi salt pans, take up a significant area, nearly 25% of the MFMP area. A rapid land use analysis indicates that over the years (especially since the designation of protected areas and Wildlife Management Areas), there has been a decline of pastoral/arable/residential land uses from almost 100 percent to 57 percent. This significantly reduces land available for grazing, arable production and gathering, and calls for innovative land management in order to ensure sustainability of rangeland use.

Table 1: Land use categorization within the Makgadikgadi Framework Management Plan area(Source: Makgadikgadi Framework Management Plan (2010))

Land tenure	Land use	Area in km²	% of land area
Communal/ Tribal Land	Pastoral/arable/residential	21,029	57
State Land	National Parks	15,581.5	43
	Game Reserves		
	Wildlife Management Areas		
Total		**36,610.5**	**100**

9. The economy of Makgadikgadi hinges on the region's limited but highly productive rangelands that are dominated by woodlands, bush savannah and grasses. The main economic sectors are agriculture (crops and livestock), mining, tourism and retail.

10. Livestock: The region's rangelands support a large number of livestock, mainly cattle, goats, donkeys and horses. Livestock rearing takes place under the communal/traditional pastoral systems. Communal livestock rearing is practiced on communal/tribal lands and is synonymous to subsistence agriculture. No ranches were demarcated under either Tribal Grazing Land Policy (TGLP, 1975) or the Agricultural Development Programme (1991), hence there are no commercial ranches in the MFMP area. A project strategy to reduce land degradation would have to target improvements to the traditional pastoral system.

11. Crop production: Most households practice subsistence crop production that is rain-fed. In 2010, 71 percent of the households in the MFMP stated arable farming as their main source of livelihood. The area has no commercial crop production. There is high reliance on Government assistance through the provision of farm implements, seeds and technical advice.

12. Mining: Two major mining activities are the Orapa-Letlhakane diamond mines operated by Debswana and the Sua Pan Soda Ash & Salt mining by Botswana Ash. This area is rich in minerals hence smaller mines are coming up to mine diamonds and other minerals. Unfortunately local people lack the skills required to secure formal employment in the mining sector; consequently, very few are employed in the sector.

13. Tourism: The MFMP is one of the tourist destinations in the country. The main attractions are the Makgadikgadi and Nxai Game Reserves and the salt pans. Tourism activities include game drives into Wildlife Management Areas, Protected Areas, camping, photography, filming, and research. The MFMP is, however, mainly a gateway to the northern tourism attractions of the Okavango Delta, Tsodilo Hills, Moremi and Chobe Game Reserves.

14. Retail: There are limited retail entities in the Sub-district to service the tourism sector – mainly lodges, mobile safaris and hotels. This sector also services the local domestic market besides the tourism sector.

THREATS TO THE INTEGRITY OF THE MFMP AREA

15. Despite the importance of both livestock and wildlife-based tourism to the economy, both of which rely on a healthy savannah, the integrity of the savannah ecosystem in the district has been declining steadily over several decades. This is having an impact on the ability of the savannah to continue supplying agro-ecosystem goods and services for sustaining the livelihoods of the Makgadikgadi Wetland Systems, people and the economy of Botswana. As stated in the National Action Program (2006), range degradation is mostly due to depletion of palatable grass species and in some cases severe soil erosion due to poor vegetative cover.

16. The productivity of the savannah ecosystem is at its best when supporting a healthy balance of grass and woody species. This mix evolved over millennia, influenced by ecological interactions between a set of

biotic and abiotic conditions involving a mix of browsing and grazing herbivores, small and large herbivores (and other microbes), soil conditions, timing of fires and rainfall, and their positive and negative feedback pathways.

17. The natural interaction of these factors has been largely disrupted by livestock farmers, who have changed land management practices without taking into consideration the effects of the changes on the basic characteristics of the ecosystem. As a result, rangeland conditions have been deteriorating and there is widespread bush encroachment, wherein grassland with a relatively low percentage cover of woody species is rapidly colonized by trees or shrubs, drastically increasing the percentage cover of woody vegetation. In the Makgadikgadi (and much of Botswana), the key driver of these changes is the overstocking of livestock, and consequent overgrazing.

18. Overgrazing: In the 1970s, the Government of Botswana recognized the seriousness of the threat of overgrazing to the national economy, and introduced the Tribal Grazing Land Policy (TGLP). The objective was (i) to increase grazing control, improve range management, and increase productivity by granting exclusive usufruct rights in some areas which were expected to be fenced and managed actively; and (ii) to safeguard the interests of those who owned few or no cattle. To achieve the two objectives, tribal grazing areas were zoned into three categories of land conferring three different interests in land: (i) Commercial Grazing Areas allocated under common law lease to commercial ranchers with large herds of cattle (400 or more); (ii) Communal areas where the land rights would remain as before; and (iii) reserved areas meant for those who were unable to get allocation in the commercial areas, including the future generation. This policy sought to reduce grazing pressure on communal lands, by moving most of the livestock to commercial grazing areas, under which livestock management was supposed to be in line with principles of range management, including observation of stocking rates in line with carrying capacities, and active manipulation of the vegetation for optimum productivity. This was expected to reduce herds and grazing pressure in communal areas, which were meant for farmers with small herds.

19. As reported by Fringpong[7] and many others, the effectiveness of the policy has been derailed by wide-scale non-compliance. Many ranchers are simply having the best of both worlds. They own ranches but have not given up the rights to the communal areas. They, therefore, rotate between the communal areas and their own ranches instead of confining their cattle to the ranches, as required by the policy. The communal areas did not experience the expected reduction in grazing pressure, and hence the farmers with small herds have not been protected from the large-scale farmers. Indeed, overgrazing has continued unabated in the communal lands and the commercial ranches.

20. Some rangelands have become unsuitable for livestock rearing due to the occurrence of poisonous plants, such as *Dichapetalum cymosum*, *Pavetta harborii* and *Urginea sanguinea*. This issue, that reduces suitable rangelands even further, has affected about 80% of the land in the district. Livestock tend to eat these plants in the early summer because they produce green leafy material ahead of most palatable plants, and when livestock are forage-deprived. The poisonous agent in the plant affects the heart and nervous system and is released once the affected animal drinks water.

21. Arable farming and unsustainable harvest of veld products: Additional pressure on the ecosystem comes from arable farming and unsustainable harvesting of veld (grasslands) products by the growing population. Agriculture is complemented by the collection of veld products (such as reeds, thatching grass, wild fruits, medicinal plants etc.), basket-making, fishing and community-based tourism. Similar to the livestock production sector, these livelihood activities are contributing to ecosystem degradation due to the fact that they are being undertaken without due consideration for sustainability.

POLICY AND LEGISLATIVE CONTEXT FOR SLM

22. The most significant policy developments in Botswana that have impacted communal rangelands include the Tribal Grazing Lands Policy (TGLP, 1975) and the National Policy on Agricultural Development (NPAD, 1991). These policies professed to reduce grazing pressures and increase productivity through privatizing the commons, as the basic assumption was that communal rangelands were effectively operating as an open-access resource and that this was leading to degradation. Thinking on range management has since evolved to encompass the concept of non-equilibrium dynamics that are at play in

[7] Frimpong, K. (undated) in Pula: Botswana Journal of African Studies Vol. 9 No.1; Mathuba B. M: Botswana Land Policy: MINISTRY OF LANDS AND HOUSING; Paper presented at an International Workshop on Land Policies in Southern Africa Berlin, Germany – May 26 – 27, 2003.

arid and semi-arid environments. There is a growing body of knowledge that (i) discredits previously held notions about communal resources being equated with mismanagement, (ii) emphasizes the need to recognize the multiple uses of rangelands (hunting, gathering, and livestock keeping (including small stock) for milk and draught power (and not just beef)), and (iii) recognizes the vital importance of mobility and flexibility for efficient livestock keeping in non-equilibrium environments.[8] All of this points to the need for local communities to be involved in rangeland governance.

23. As part of preparing this project document, a rapid inventory and analysis was conducted of the relevant NRM policies and legal instruments to assess the degree to which they enable and support sustainable rangeland governance with active involvement by communities. A stakeholder workshop was conducted to confirm the relevance of policies and legal instruments chosen for the study. The main finding was that the situation is somewhat paradoxical insofar as the policy and legislative environment can be said to be saturated yet failing to effectively deliver. Several good polices or policy provisions fail to be implemented, especially those that require or advocate for cross-sectoral integration. Several policy recommendations call for the creation of committees, boards, councils etc. Some are single-sector focused such as the Land Board, while others are multi-sector like the National Conservation Strategy. SLM requires multi-sectoral institutions and actions.

24. The results of the study, summarized in the table below, highlight that there is a common vision across all these policies and laws – that of sustainable management. However, stakeholders stated that management efforts are carried out in isolation by different sectors. Natural resource management agencies admitted that there is limited or inadequate communication and participation by other sectors in their work. This has led to resource management and monitoring gaps, duplication of effort as well as clashing policies. Hence, coordination and even consolidation is not only desirable but also possible. The National Conservation Strategy provides the best vehicle for sustainable land resources management. However this policy instrument, while still guiding the work of the Department of Environmental Affairs, is no longer being implemented in full. It is also outdated and will need to be reviewed and updated to deal with current environmental resources (including land) management issues.

Table 2: Analysis of the policy and legislative environment

Instrument	Year	Objective	Observations on whether instrument is enabling and supportive of SLM
Tribal Land Act	1968 Revised 1991 Amended 1993	Communal land use planning, allocation and management	Act provides for the establishment of tribal land boards, to take over administration and management of tribal land from the Chiefs (Dikgosi). While other stakeholders such as District Council may be consulted, Land Board is the final decision maker and implementer of communal land management decisions. There are no specific clauses or provisions for SLM. This presents weak support for SLM as it does not open up land management for input from other stakeholders.
Forest Act	1968 1980 2005	To provide for the regulation and protection of forests and forest products in Botswana by establishing forest reserves	Act establishes a Forestry unit in Ministry of Agriculture as sole manager of forest reserves. There are no specific clauses or provisions for SLM or participation by other stakeholders.
Wildlife Conservation Policy (under review)	1986	Sustainable wildlife use, community involvement and rural development	The policy establishes Controlled Hunting Areas (CHAs) to allow private and community wildlife utilization; precursor to co-management of wildlife which includes CBNRM and private concessions. Users are allowed to participate in decision making through development of management plans which are subject to approval and controls by the Department of Wildlife and National Parks (DWNP) through Wildlife Management Areas (WMA) regulations. This provides medium strength support for SLM in that while the DWNP has the upper hand in decision making other stakeholders are

[8] Cullis, A. and C. Watson (2005) Winners and losers: privatising the commons in Botswana, Adrian Cullis and Cathy Watson

Instrument	Year	Objective	Observations on whether instrument is enabling and supportive of SLM
			allowed to participate.
Wildlife Conservation and National Parks Act	1992	The conservation and management of the wildlife of Botswana including control and management of national parks and game reserves	The Act establishes WMAs, and local advisory committees. It provides room for co-management and SLM by providing for establishment of local advisory committees (communities, private sector, NGOs) to contribute to parks and game reserves management (e.g. address poaching, harvesting of veld products, and selling of crafts inside parks). However these committees are only advisory, hence the strength of support for SLM and the associated co-management principles remain medium.
National Conservation Strategy	1990	To integrate sectoral natural resources effort and stakeholder interest to achieve sustainable resources use and management	While outdated this strategy is perhaps the closest to the principles of co-management and multi-stakeholder action that is essential for SLM. It provides for a national conservation strategy advisory body with broad membership, a coordinating unit and environmental liaison officers in other Ministries. The strategy provides for co-management and SLM as it recommends representation of most stakeholders in the advisory Board. Particular mention is made of local authorities, the Chiefs (Dikgosi), parastatals, NGOs, private sector, business community and special interest groups. While the advisory position and potential size of the Board are of concern, the strategy provides strong support for co-management and hence a multi-stakeholder foundation for SLM.
Tourism Policy (under review)	1990	To establish tourism as the engine of economic growth and diversification	Establishes tourism licensing Board and National Advisory Council on Tourism, both by statute. In particular, the National Advisory Council provides an opportunity for co-management as it is composed of multiple stakeholders. However, the management orientation is strongly sectoral in nature. The policy is under review and has potential for supporting SLM.
National Ecotourism Strategy	2002	Promote conservation, educate tourism stakeholders on environmental conservation, reduce negative impacts on environment and culture, improve tourism experience, increase involvement and benefits by locals	The strategy has no specific clauses or provisions for SLM. All tourism managing authorities singularly implement the strategy but there is no monitoring body. There is an appreciable level of stakeholder interaction created under this policy and it has potential to support SLM.
Community Based Natural Resource Management (CBNRM) Policy	2007	To diversify the rural economy, address the decline in agriculture, promote community conservation and benefit from wildlife	Establishes the Technical Advisory Committee (TAC) to provide regulation and support to participating communities. TAC membership is wholly government. The policy has a strong wildlife (single sector) focus. May not be able to support multiple livelihood strategy that is essential for SLM. The CBNRM Secretariat (DWNP) is struggling to coordinate the TAC activities as this function is not a priority for the participating institutions hence not rendering strong support for SLM to take place.
Herbage	1978	To prevent and control bush	The Act provides for herbage preservation

Instrument	Year	Objective	Observations on whether instrument is enabling and supportive of SLM
Preservation Act		and other fires; legal framework for the management of fire in Botswana	committees across scale. However, neither the herbage preservation committee members nor their roles are clearly specified in the act. However it does offer significant potential for co-management and thus amounts to medium strength support for SLM.
Agricultural Resources Conservation Act	1974	Conservation and improvement of the agricultural resources of Botswana	The Act provides for formation of a Board which is a corporate body and conservation committees for decentralization. It offers potential for co-management and hence SLM support. However the act does not specify the members of the Board and the committees. Selection of these is left to the Minister.
Tribal Grazing Land Policy (TGLP)	1975	Grazing control, better range management and increased livestock productivity; main features are fencing and exclusive rights	The policy has no specific clause on co-management. The policy gives sole responsibility to Land Boards that consult the Ministry of Agriculture on suitable areas. Thus, support for multi-sectoral approaches to SLM is very weak.
National Policy on Agricultural Development (NPAD)	1991	Community ranches added to the TGLP proposals	Sole responsibility for land management still remains with Land Board, the Department of Animal Production (only involved in livestock development issues such as breeding) and Department of Forestry and Range Management (mainly dealing with range conservation through fire suppression).
Makgadikagadi Framework Management Plan (MFMP)	2010	Integrated natural resource management in the Makgadikgadi Sub-region	This is inherently a co-management instrument and is the product of a regional/multi-district integrated environmental management team. The instrument has characteristics of co-management in both its development and implementation. Implementation strategy is based on a multi-sectoral steering committee. Civil society participation is strengthening with the entrance and participation of BirdLife Botswana. Thus, support for co-management and multi-sectoral approaches to SLM is considered to be strong.
Management Plan for Southern Sua Pan	2012	Provides a planning tool to implement the MFMP in the Southern Sua area following co-management principles.	Proposes and supports development environmental management initiatives that foster partnerships between resource user communities and other more empowered institutions.

Source: Assessment of the capacity of different institutions to support implementation of sustainable land management project activities as part of preparation of a Global environment Fund (GEF) full sized project proposal entitled: Mainstreaming sustainable land management (SLM) in rangeland areas of Ngamiland productive landscapes for improving livelihoods. Dr. Lapologang Magole. April 2013 and Rapid Appraisal for Makgadikgadi SLM. Dr. Lapologang Magole. February 2014.

INSTITUTIONAL CONTEXT FOR SLM

25. Botswana has a two-tier government system – central and district (local). The central government is responsible for developing and overseeing implementation of national-level policy and legislation. Agricultural matters (both arable and livestock) fall under the Ministry of Agriculture (MoA), especially the Department of Veterinary Services, the Department of Animal Production, and the Department of Crop Production. The Ministry of Environment, Wildlife and Tourism (MEWT) is the government body primarily responsible for regulating the tourism, wildlife, fisheries and veld products sectors. The Department of Environmental Affairs (DEA) of MEWT coordinates Botswana's National Conservation Strategy, and is also responsible for enforcing EIA legislation, while the Department of Tourism, Department of Wildlife and National Parks (DWNP, incorporating the Fisheries Division), and Department of Forestry and Range Resources (DFRR) administer the fields for which they are named.

26. District (Local) government is responsible for local-level policy administration and service provision (under the Ministry of Local Government). Also at District-level is the Tribal Administration which is responsible for administration of customary law, and functions through the *Kgotla*, a forum for village-level discussion and participation. The District Council is an elected body with assigned responsibilities for the provision of social services (e.g. health, education). The Land Board is the primary agency or authority responsible for land resources management on tribal lands.

27. A rapid institutional analysis study to assess mandates and institutional capacities for SLM was carried out to make appropriate recommendations for the current SLM initiative. Institutions studied included the Land Board, Boteti Sub-District Council (Physical planning unit) and relevant sections of the Ministry of Wildlife, Environment and Tourism (DEA, DWNP and DFRR), the Ministry of Minerals, Energy and Water Resources (at central government level) as well as existing land management institutions at community and civil society levels. The table below summarizes information on the responsibilities and capacities of key land resource management agencies, at the central and district (local) government levels, in Botswana.

Table 3: Key land resource management agencies

Institution	Responsibilities and capacities related to land resources
Letlhakane Sub- Land Board	The Letlhakane Sub-Land Board is responsible for administrating, allocating and managing tribal land in the Sub-District within the Ngwato Tribal territory. The Sub-Board makes strategic decisions, while the Secretariat makes administrative decisions. There are also committees that play different decision-making roles. The Board's actions are driven by policies, laws, directives, and other land management tools developed especially by the Ngwato Land Board. There is a communication strategy at the Ministry level. At the District and sub-district level, the institution implements a communication system which involves *Kgotla* meetings, publicity material, stakeholder workshops, media tours, open day and breakfast meetings.
Department Of Animal Production	The Department is mandated with supporting farmers for livestock development through implementation of artificial insemination and other government assistance programmes for the development of livestock. There is a hierarchical decision-making system which involves the Director and heads of stations. Some disease control strategies impede on production strategies as these require livestock movement, while disease control requires restriction on livestock movement. A co-management arrangement is required to reconcile the two. Disease control is the responsibility of the Department of Veterinary Services.
Department of Forestry and Range Resources	Has mandate to conserve and manage land resources (including veld products) and other flora through research and monitoring, fire management and regulation. Operationally, most decisions are made at headquarters. Provisions are there for National and District decision-making bodies but are not always implemented. The ministry-wide and departmental communication strategies are there but not well implemented. The Department implements an outdated fire act which could use stakeholder input to align with new thinking and understanding of fire as a range management tool.
Department of Crop Production	The Department is mandated to promote increased agricultural production and food security through soil conservation and farmer support with implementation of such innovations as irrigation and pest control. The institution is hierarchical with headquarters making most decisions and consulting other staff/regions if necessary. There is no arrangement to deliberately involve stakeholders in institutional business; however, there is a known communication process to inform or determine information. This does not support SLM as it does not cater for dialogue and meaningful stakeholder involvement. This is particularly important for this Department which designs and implements farmer support programmes.
Department of Wildlife and National Parks	The Department of Wildlife and National Parks is mandated to conserve the fish and wildlife of Botswana in consultation with local, regional and international stakeholders. Decision-making is guided by this mandate and departmental strategic plans. The department has committees for different areas of their mandate. Members of committees range from other Departments to community members and private entrepreneurs. The department has experience in co-management as it has been largely responsible for implementation of the CBNRM programme.
Department of Environmental Affairs	DEA coordinates Botswana's National Conservation Strategy, and is also responsible for enforcing environmental legislation. Decision-making is guided by its mandate and obligations as laid out in relevant national laws and policies, as well as international treaties and agreements. Operational decisions are made by local technical team managers or district coordinators, while other decisions may require to be referred to headquarters. Locally the Department is guided by the MFMP in its environmental resources

Institution	Responsibilities and capacities related to land resources
	management mandate. The plan has set up a multi-stakeholder steering and wetlands committees to guide its implementation. This is supportive of the co-management principle of SLM.
Department of Tourism	The Department of Tourism is responsible for development and implementation of policies, strategies and programmes to ensure sustainable tourism development. The Department does not have an office at the Sub-district. This makes it difficult to participate in Sub-District planning. As an operational system internal committees are used to make decisions, which may be confirmed or overturned by the Director or the Botswana Tourism Organization. A communication strategy is under development.
(Sub)District Land Use Planning Unit (DLUPU)	This Committee is part of the local government operational system. It drafts or in this case implements District Land Use Plans (DLUPs), assesses and directs natural resources development initiatives. DLUPU is an integrated institution that, however, only accommodates government departments reducing its sphere as a co-management institution.
Southern Sua Farmers association (SSFA) And Letlhakane Farmers Association (LFA)	SSFA is currently being constituted. Project will need support to develop a constitution and register. LFA currently inactive, project will resuscitate and provide technical backstopping.
Environmental NGO (BirdLife Botswana)	BirdLife Botswana is a local conservation NGO registered with the Registrar of Societies (No. CR6390) that has been operational since 1980. BirdLife's strategic objective is to conserve birds and important bird habitats, by creating awareness, carrying out research and promoting beneficial relationships between birds and people. This is achieved through protecting globally threatened bird and wildlife species, sites/Important Bird Areas[9], and creating opportunities for communities living near bird-rich areas to earn a meaningful income from sustainable use of wildlife, such as through bird tourism. The affiliation to BirdLife International provides ample opportunities to tap into experiences of like-minded NGOs in at least 125 other countries, including around 30 in Africa where BirdLife has representation.
The Boteti Sub-District Council – Physical Planning	This is a local authority that undertakes physical planning of land use within settlements and surrounding land use zoning. It has various boards and committees to make decisions. These are made of members largely from other Council departments and the Council itself. Communication is almost entirely limited to the Land Board with whom they consult on land issues.

Source: Assessment of the capacity of different institutions to support implementation of sustainable land management project activities as part of preparation of a Global environment Fund (GEF) full sized project proposal entitled: Mainstreaming sustainable land management (SLM) in rangeland areas of Ngamiland productive landscapes for improving livelihoods. Dr. Lapologang Magole. April 2013 and Rapid Appraisal for Makgadikgadi SLM. February 2014.

BASELINE PROGRAMS

28. There are at least three programs that constitute the baseline upon which this project will build. Ongoing most relevant initiatives that form part of the baseline of projects include the USAID-funded Southern Africa Regional Environment Programme (SAREP), National Strategy on Sustainable Development (NSSD), and Wealth Accounting and Valuation of Ecosystem Services (WAVES). All these programs benefit national-level objectives, while at the district-level, the most notable concurrent initiatives include: the Makgadikgadi Framework Management Plan implementation; the Kavango-Zambezi (KAZA) Transfrontier Conservation Area (TFCA); and, various government-led (e.g. Dept of Tourism/Botswana Tourism Organisation's construction of ablution blocks near Lake Xau, and Boteti sub-council's support to livestock management at HIMA farms owed by the same Community Based Organisation), NGO-led initiatives (e.g. Action for Economic Empowerment Trust's support to economic training at Mosu) and, private sector-led projects (e.g. Debswana's support to Gaing-O Trust to provide drinking water to a community camp site at Lekhubu Island). Additionally, the GEF/SGP has an ongoing project funding to Gaing–O Trust on infrastructural development at the Lekhubu Island, including ablution blocks. Moreover, the District Technical Advisory Committee (TAC) and other forums e.g. – the DLUPU and DWNP's Management Oriented Monitoring System (MOMS) will provide addition baseline support.

[9] Important Bird Areas (IBAs) have been identified using agreed global criteria, and in any country the network of IBAs represents the minimum set of sites that are essential to ensure the survival of birds in that country. There are 12 IBAs in Botswana: Chobe National Park, Linyanti Swamp, Okavango Delta, Lake Ngami, Central Kalahari Game Reserve, Mannyelanong Hill, Tswapong Hills, Bokaa Dam, Phakalane Sewage Lagoons, Pitsane grasslands, Kgalagadi Transfrontier Park, and Makgadikgadi Pan (the project site).

There are no GEF MSPs or FSPs proposed or ongoing in the project site, and collectively baseline costs approximate US$5M.

29. Specific mention needs to be made of the Makgadikgadi Framework Management Plan, which will provide the overarching governance, planning and coordination tool within which this current project will operate. MFMP is developed around integrated planning, monitoring and management of natural resources in the Makgadikgadi Wetland System. The overall aim of the MFMP is to improve people's livelihoods through wise use of the wetland natural resources. Two of the most important MFMP principles that this project will operationalize are (1) to encourage holistic planning as opposed to sectorial planning, and (2) Instigate developments that benefit rural livelihoods and the environment (*MFMP 2010, vol 1. page 13).* To ensure effective and efficient use of project resources and its integration to local plans and initiatives, this project will have a committee at the MFMP-level that will engage with different stakeholders from the wetland system (this committee, with the addition of a few strategic sectors - notably farmers, will be the current project's Advisory Committee, see *Project Implementation arrangement* section). Stakeholders will include the private sector, farmer's committees, farmer's associations, Community based organisations, government departments, and communities in the area. At the site-level the project will take advantage of the already established Community Based Organisations, including the Gaing-O community Trust representing the community of Mmatshumo and the Gumakutshaa Conservation Trust representing the communities of Mmeya, Mokubilo and Mosu. The MFMP encourages implementation where shared responsibility is observed from all stakeholders including community members. This project will capacitate mainly farmers in rangelands on resource management, monitoring, and planning. To secure sustainability beyond the project the project, it will strengthen the recently formed Makgadikgadi Wetlands Management Committee to engage and take advantage of indigenous knowledge from communities in the pilot site.

LONG-TERM SOLUTION AND BARRIERS TO ACHIEVING THE SOLUTION

30. Despite the baseline programs described above, rangeland degradation continues in the MFMP area. If the current land and livestock management processes continue, they will compromise all efforts at securing the continued flow of ecosystem goods and services from the savannah ecosystem that are necessary to sustain the national economy, livelihoods and the rich fauna and flora diversity.

31. The long-term solution to reverse the degradation of rangelands in the Makgadikgadi is to mainstream SLM principles into the livestock production sector, specifically in areas where rangeland degradation is most intense. Critically, local communities need to participate meaningfully in rangeland governance. The local-level institutions should be empowered with knowledge, financial, and capital resources to support farmers in managing their current livelihood portfolio and diversify it in the future. There are, however, a number of barriers to implementing this solution, as described below.

32. Barrier 1: Inadequate knowledge and skills for adoption of SLM in livestock management and livelihood support systems, in line with clear principles of range management. Managed well, the savannah ecosystems can be highly productive. But because they have developed under a very unique set of circumstances, mismanagement quickly upsets the balance between grasses and woody vegetation, weakening the foundation for a thriving livestock industry and other natural resource-based livelihoods. While discussion still rages amongst ecologists on the process of bush encroachment and its control, there is general agreement on what has led to deterioration of the condition of the savannah ecosystem, certainly in Makgadikgadi, namely the changing grazing and fire regimes, the combination of foragers[10], and the duration of rest periods. Perennial grasses for instance are known to have evolved under conditions of severe grazing followed by periods of long rest. However, they can become weakened by extremes in either direction, namely by overgrazing or over-resting. The most palatable grasses, especially those closest to the water point, then become overgrazed, while the less palatable species, especially those further from the water point, become over-rested, both resulting in lowered grass vigour (McNaughton, 1979). Although knowledge on how to effectively manage savannah ecosystems is increasing, very little of the currently available knowledge is being utilized to manage the livestock and livelihood support systems in Makgadikgadi. This is mainly due to low levels of skills amongst the land and resource managers, and weak technical expertise in the appropriate ministries.

[10] The combination of animals that graze, for example cows and donkeys, are on the increase and wildlife is on the decline in rangelands around cattle posts. This changes the pattern and composition of grazing as animals do not have similar gazing methods and preferences for grazing/ browsing.

33. Barrier 2: Policy and market distortions have provided disincentives for adopting SLM and sustainable range management principles in the livestock production sector. The tribal land use zoning system and the beef marketing policies have had the greatest influence on livestock production systems. The Tribal Grazing Land Policy (TGLP), which was the instrument adopted by the government in the 1970s to reduce rangeland degradation, has not been effective. A synthesis of the reviews provided by Frimpong[11] reported that while the foundation of the policy still remains sound today, implementation has faltered due to weak enforcement. The success of the policy was hinged on the hope that those granted leases for ranches would comply with the requirement for the granting of the lease. Among other things, they were expected to give up their rights to the communal land and to confine their entire production on the ranches. They were therefore expected to move their cattle from the communal areas into the ranches. In addition they were expected to manage their ranches in line with principles of range management; including observation of stocking rates/carrying capacities, and active manipulation of the vegetation for optimum productivity. This was expected to reduce the herds of cattle and grazing pressure in the communal areas, which was meant for farmers with small herds of cattle.

34. Enforcement of the policy, however, has been weak because it does not empower the Land Board to tap into the existing technical and other rangeland management knowledge necessary to enforce proper range management strategies. Enforcement can be achieved through collaboration with other stakeholders such as the Department of Forestry and Range Resources with their technical knowledge, and communities with their indigenous knowledge. While Land Boards had the power to allocate and administer land, they did not have the power, capacities, or skills to enforce compliance with the basic driver of the policy namely that of ensuring that livestock management was in line with the principles of range management.

STRATEGY

RATIONALE AND SUMMARY OF GEF ALTERNATIVE

35. The Government of Botswana is requesting GEF incremental assistance to remove these barriers to the above-described long term solution to addressing rangeland degradation in Makgadikgadi. The project objective is to mainstream SLM in rangeland areas of the Makgadikgadi Sub-region productive landscapes for improved livelihoods. The project has been designed to realize this by addressing the two barriers outlined above.

36. The alternative scenario funded by GEF and co-financing resources is expected to result in key modifications to the baseline scenario that will generate global environmental benefits (sustainable land management). A comparison of the baseline project with GEF-project scenarios and associated global benefits are presented in the table below:

Table 4: Comparison of baseline with GEF alternative and associated global benefits

Baseline Situation	Alternative to be put in place by the project	Selected benefits
Livestock management practices are not in line with SLM or improved range management principles and ignore range carrying capacities and stocking principles.	1 local land use plan will be produced for the Southern Sua Pan Region. Development of the local land use plan will be led by the Letlhakane Sub-Land Board and DLUPU with the active participation of communities, other government and non-government stakeholders. The multi-stakeholder forum to be established by the project under Output 1.1 will provide the mechanism for eliciting participation of these different stakeholders in the formulation of the land use plans. Piloting of improved range management system which incorporates indigenous knowledge on communal rangelands, and promotion of a multiple livelihood system through sustainable harvesting, processing	Rangeland restoration and sustainable use in line with SLM principles: Improvements in vegetative cover over 100 000 ha of rangelands (with the potential for replication to 1.9 million ha within the MFMP area, and another 1.44 million ha in the adjoining Tutume sub-district) Improvements in livestock productivity (to 0.95 calf per cow per annum, up by at least 3%) Increase to 0.66 ton/ ha in the expected per annum total tons of crops to be produced from the piloting of conservation agriculture, 50% increase

[11] Frimpong, K. (undated) in Pula: Botswana Journal of African Studies Vol. 9 No.1

Baseline Situation	Alternative to be put in place by the project	Selected benefits
	and marketing of veld products. Tree conservation and non-consumptive use (e.g. camping sites) will be supported. A process of identification and documentation of candidate trees will precede the establishment of community camp sites. Local natural resource management/ community-based management institutions such as community trusts, farmers' committees, village development committees, and *Bogosi* (traditional leadership) will be empowered, through a clear mandate and financial and technical resources, to lead the design and implementation of range management principles envisioned in SLM at the local level	Increase by 33% in amount of money earned (US$) by (i) individual farmers (through conservation agriculture and improved livestock management) and harvesters (through value-addition to veld products, and increased yields when the resources become better protected from rangeland degradation), and (ii) by the community collectively (e.g. through ecotourism, community-coordinated veld products harvesters); presently earn US$444/household/yr, but should earn $591/household/yr at EOP. In addition, reduced pressure on biodiversity, in the Makgadikgadi wetland system which is part of the Kavango-Zambezi Trans frontier Conservation Area (an initiative of the 5 riparian states of the Okavango and Zambezi river systems) and breeding sites for flamingos which are migratory birds of international importance. The conservation of the Makgadikgadi ecosystem contributes directly to regional cooperation and joint management which is a key principle of SADC. Grassland birds will be used as a proxy for other wildlife taxa, End of Project target being a 5% increase in the Biodiversity Intactness Index for grassland birds
Weak institutions (especially local level) for participation in planning and implementation of rangeland resources.	Multi-stakeholder mechanism established to lead district-level dialogue on mainstreaming SLM considerations in implementation of critical national and regional policies, plans and strategies. This includes policies on livestock production and marketing, and agricultural land use (Tribal Grazing Land Policy, National Policy on Agricultural Development). Particular emphasis will be placed on ensuring community participation in this forum as this has been identified as a weakness in resource governance. There exists already a wetlands management committee which requires adaptation to suit the purpose. For example it lacks representation of organized farmers' groups/associations. Support the establishment and initial operation of the Southern Sua Pan area farmer's association through development of constitution and facilitate legal registration. Carryout integrated rangeland studies to improve planning capacity of regional institutions and support the development of the local participatory integrated land use plans as well as development of multi-scale rangeland monitoring tools. These should cover economic, environmental, and social aspects of rangeland and result in both technical range monitoring tools as well as a community tool based on MOMS which is implemented in neighbouring communities.	Community level institutions participate in planning and implementation of rangeland management initiatives; key indicators of success would include for instance a 50% decline in incidences of fires, and a 50% decline in the spatial extent of areas burnt annually, and at least two functional and effective farmers associations at the end of the project. Rangeland resources condition and use monitoring tool setup and operational at community level; key indicators of success include annual reports on the status of rangelands. The capacity of key land management institutions for SLM at the sub-district will be increased to 75% (from a baseline of 50%, on the basis of the Capacity Development Scorecard, see Annex 4)

Baseline Situation	Alternative to be put in place by the project	Selected benefits
Overharvesting and degradation of veld (bush) resources due to influx of outsiders as commercialization intensifies	Sustainable veld products harvesting and conservation within the CBNRM context. This will include capacity support (training and finance) to the Gumakutshaa Conservation Trust (jurisdiction covers Mosu, Mokubilo and Mmea) which has just completed legal registration, and the existing Gaing-O Trust (Mokubilo) to mobilise community sustainable harvesting, processing and marketing of veld products. There will also be documentation, integration and mainstreaming of indigenous community harvesting methods.	Sustainability of veld resources will be ensured by setting up a management and regulation system that involves local institutions. Improved livelihoods of farmers (baseline to be determined during range assessment studies); target is to have at least 120 farmers involved in improved herd management, increase by 3% income from sustainable veld products harvesting and have at least 120 farmers practice conservation agriculture (CA, baseline is zero), with those using CA realising at least a 50% increase in yield

FIT WITH THE GEF FOCAL AREA STRATEGY AND STRATEGIC PROGRAMME

37. The proposed project will contribute to Objective 3 of the Land Degradation Focal Area (Reduce pressures on natural resources from competing land uses in the wider landscape), and to all outcomes of this Objective, namely *Outcome 3.1* (Enhanced cross-sector enabling environment for integrated landscape management), *Outcome 3.2* (Integrated landscape management practices adopted by local communities) and *Outcome 3.3* (Increased investments in integrated landscape management; however, although the project will aim to leverage more investments for SLM, the implementing agency will focus on the first two outcomes (LD 3.1. and 3.2), so as not to overpromise and overly stretch the limited resources.

38. The alternative scenario for which the funding is being requested from the GEF and co-financing resources is expected to result in key modifications to the baseline scenario that will generate global, national, and local environmental and socio-economic benefits through sustainable land management. The project objective is to mainstream SLM in rangeland areas of the Makgadikgadi Sub-region productive landscapes to deliver on ecosystems benefits to both livelihoods and biodiversity. The GEF increment is presented in section 3 (table 1). To achieve the project objective, and address the barriers discussed earlier, the project's interventions have been organized into two outcomes, each with several outputs, as summarized below (see the results framework under Annex A for more details).

Outcome 1: Sustainable land and livestock management in over 1,900,000 hectares improves range condition and flow of ecosystem services to support livelihoods of local communities and biodiversity in Southern Sua Pan Region

39. Under this outcome, the project will put in place systems and capacities for applying SLM principles over 1,900,000 hectares of rangelands, to deliver the following achievements: i) Effective rangelands management adopted in over 1,900,000 hectares, reducing land degradation from livestock overstocking and enhancing ecosystem functions (water cycling, soil protection and biodiversity status); and ii) uncontrolled fires better managed and fire-affected area and fire-frequency both reduced by at least 50% in year 2 and year 3.

40. Activities will be piloted in a selected area within Makgadikgadi (see Annex 2 for details on pilot area). Replication of the successful pilots could have an impact on an additional 1,440,000 hectares in the neighbouring Tutume sub-district. Up-scaling of the lessons of the project over similar savannah areas affected by rangeland degradation will be facilitated through the extension services of the Department of Veterinary Services (DVS), Department of Crop Production (DCP), Department of Forestry and Range Resources (DFRR), and Department of Animal Production (DAP). The outcomes will be delivered via the following outputs and sub-outputs.

Output 1.1: Local level participatory land use plans developed for the pilot area to support sustainable utilization of range resources

41. The project will build on the current district-level master plan that outlines zoning of land use at a broad level, but lacks detailed guidance on land use at a local level. This output will focus on developing a detailed land use plan for the pilot site (Southern Sua Pan area).

42. The first step will be to undertake integrated range assessment studies for this area. The assessment will cover social, cultural, economic, and ecological aspects to give a complete baseline picture of the state of the range and other resources, as well as the levels of use and the dynamics shaping interaction between these resources and people in specific contexts. The assessments will provide more information on the challenges and opportunities present in the four Southern Sua Pan villages with a view to informing the design and methodologies for the interventions proposed. The range assessment will also take into consideration the potential impacts of climate change on trends in rangeland condition, particularly the issue of the apparent thriving of invasive species.

43. The preparation of the assessments will be led by expert consultants (individuals, company or institute of higher learning) working together with the competent authorities within government (i.e. the relevant government departments, in particular DFRR, DCP, DAP, DVS) and non-state agencies (in particular CBOs, farmers, natural resource users, traditional and political leadership, NGOs and private sector), with a view to determining sustainable utilization of the range, particularly for livestock grazing purposes. Consultations will be undertaken with the participation of members of the community living in the study site and representatives of civil society organizations, and where possible research organizations to ensure that inputs from all stakeholders are taken into account.

44. On the basis of these assessments, the local land use plan will be developed for the pilot area. The land use plan will guide decisions on livestock management (including sales) and the sustainable utilization of other range resources. They will be informed by up-to-date knowledge on range conditions, carrying capacities and effects of the changing climate on soil erosion and invasive species. Through the range assessment, and as appropriate, sustainable stocking rates for cattle will be determined for the area and mechanisms for adhering to this will be pursued through a participatory, multi-stakeholder approach which takes into account the indigenous knowledge of the local communities. Implementation and management of stocking rates will be pursued in the communal area by employing innovative range management strategies which are based on a combination of technical solutions, movement of livestock, and other appropriate indigenous pastoral management systems as well as improvements in marketing to reduce overstocking.

45. Development of the land use plan will be led by the Letlhakane Sub-Land Board and Sub-DLUPU with the active participation of communities, other government and non-government stakeholders. The multi-stakeholder forum to be established by the project under Output 1.1 will provide the mechanism for eliciting participation of these different stakeholders in the formulation of the land use plans. A consultative process is essential to address land use conflicts because the participatory land use planning process is anticipated to serve as a vehicle for conflict resolution and exploring sustainable approaches to rangeland utilization, particularly for livestock farming. This will be provided by implementing the systematic local land use planning tool which is known by its product, Participatory Integrated Land Use Management Plans (PILUMPs). Stakeholders will work together to identify areas of land use conflict and incorporate strategies to optimize competing land use practices through zoning using a participatory land use planning process adopted from the WWF and adapted for use in Botswana by the Southern Africa Regional Environment Programme (SAREP) operating in Ngamiland.

46. The development of the land use plans will be supported by capacity building workshops to enhance skills and capacities for land use planning to sustain the project's results in the long run. The process of producing PILUMPs provides for both training and product (land use plan) development. It comprises a series of participatory consultative meetings which are initially for collecting baseline data about the area by planners and the participating communities. These, as is stated above, will be integrated range assessments. Systematic participatory rural appraisal tools will be applied to collect this data. Another series of training workshops will follow to train the trainers, who often are the community leaders, on plan development, which includes local institutional capacity assessments, trends of key environmental, economic and social factors, problem identification and prioritisation and resource mobilisation. The next series of workshops open up the process for the wider community to participate in decision making on land zoning and implementation tasks allocation for different stakeholders. While the Letlhakane Sub-Land Board and Sub-DLUPU will lead this process as competent authorities, a qualified expert will be engaged to facilitate the participatory planning process.

47. Land-use planning results will be communicated to relevant sub-district and district administrations and for management units of nearby protected areas; this is because although the technical staff from the Letlhakane Sub-Land Board and Sub-DLUPU would have been directly involved in the development of the local land use plans, there may be some upper stream activities or implications that require the inputs

or decisions of the district leadership, and consequently the project will make a deliberate effort to inform them of these strategic decisions that require their attention . The lessons learned from the land use planning exercise will be assessed and summarized as an aid in future replication of this land use planning exercise. The land use plan will inform the activities to be undertaken in output 1.3 (rangeland monitoring).

Output 1.2: Improved range management and mixed livelihood systems are piloted in line with the land use plans

48. This output will focus on improving the range management systems in communal rangelands in line with the recommendations of the land use plans formulated under output 1.1. Although the fine details will be guided by the land use plan, it is expected that this will involve a participatory process of bringing together traditional rangeland management systems and contemporary ones based on technical knowledge.

49. Local institutions (Farmers Associations and Community Trust) will be provided with skills through training and practical demonstration to ensure that the improved range management system can be implemented and supported. Results and lessons learned from this pilot will be presented at sub-district, district, and national levels, as well as in print materials and online for wider outreach.

50. Although the finer details of what the project will pilot in communal areas where the cattlepost livestock system is followed will be determined by the range assessments, a pastoral system based on a combination of herding, kraaling and livestock movement will form the basis. In addition, practical projects aimed at enhancing the community livelihoods portfolio with alternative ones will be piloted. A gender analysis will underpin development and implementation of the alternative livelihoods to ensure that critical issues related to access and control of land resources as they relate to women and other disadvantaged groups are identified and addressed. Communities will be supported with training and other resources to develop a multiple livelihood production system, involving improved cattlepost pastoral systems, sustainable veld products harvesting, and conservation agriculture (See Annex 3 for more details on proposed alternative livelihoods.) Local institutions (including women's self-help groups) will be empowered through training and resource provision to ensure that the improved pastoral system and multiple livelihoods can be effectively implemented on pilot communal rangeland areas.

51. Improvements to the cattlepost pastoral system will be led by DAP and the local farmers' association. The system has champions, and trials with communities in similar conditions in Zimbabwe are already taking place and will provide benchmarking. Volunteer farmers will be sought to participate in the project by herding their livestock as a pack and managing the range in an agreed manner. Benchmarking, technical knowledge, and indigenous knowledge will all be combined to develop a management strategy for the range and the herd, to be implemented and monitored by the farmers and researchers throughout the project.

52. Training on Conservation Agriculture (CA) is already on-going for some communities in Ngamiland District through the SAREP project. These will provide benchmarking and expertise to train communities in Southern Sua Pan villages. The Botswana College of Agriculture (BCA), Department of Agricultural Research (DAR) and Department of Crop Production (DCP) will provide community mobilisation, training and technical support. They will work closely with the village Farmers' Committees. BotAsh, has also committed to provide technical backstopping to the community trust, to enable them harvest and market salt licks (to farmers within southern Sua Pan and beyond), which should both increase livelihood income opportunities, and help curb illegal and unrelated harvesting of salt, especially by people from outside southern Sua Pan.

Output 1.3 Fire management strategy is developed and implemented in southern Sua Pan in line with the provisions of the land use plans

53. Under this output the project will pilot the effective use of fire as a savannah vegetation management tool to reduce uncontrolled fires, improve quality of grazing and increase rangeland carrying capacity by reducing the frequency of fires from yearly to once every 3 years. This will be piloted in the southern Sua Pan, which, although not a hotspot in the district for annual fires, does occasionally burn; in their case, the potential risks posed by uncontrolled fire is exacerbated by the fact that the nearest fire station is in Palapye or Francistown, over 200 km away. A fire management strategy has never been developed for the site, but is identified as a priority in the Southern Sua Pan Management Plan (2012).

54. The project will help establish a multi-stakeholder Southern Sua Pan Fire Management Committee and develop its capacity to review the existing national Fire Management Strategy, and adapt to site-level, then implement. This will be based on a co-management approach. The Fire Management Committee will be facilitated to implement the fire strategy. This will include training on methodologies for managing and controlling fire and capacitated to better respond to fire outbreaks. They will also be trained to monitor fire incidences using Management Oriented Monitoring Systems (MOMS). The Department of Forestry and Range Resources (DFRR) fire rangers will facilitate the community training and facilitate increased participation of community members in fire control and management. A participatory approach to review, updating and enhancement of the existing national fire management strategy will be used to create an atmosphere of co-learning where indigenous fire management knowledge will be incorporated alongside technical knowledge. Results and lessons learned from this pilot will be presented at sub-district, district, and national levels, as well as in print materials and online for wider outreach.

Output 1.4 Water conservation, water harvesting and water re-cycling by BotAsh and farmers in southern Sua

55. Due to its nature the Botswana Ash Plant consumes a lot of lot of water, which is used for the washing of the products during processing. The mine also extracts underground water concentrated in Sodium Chloride (brine), which is put on evaporation ponds for the salt to crystallise. This has a negative impact on the ground water capacity (see Annex 2). Consequently, through this output the PMU in partnership with BotAsh, will find innovative ways to conserve underground water, which is used for watering the neighbouring Sowa town, and for maintaining the neighbouring rangelands. By the end of the project, we expect a reduction of at least 10% on ground water usage. Water consumption will be analyzed every month to see the progress of the strategy. The following will be suggested in order to meet the target: (i) System Side Management (To detect and minimize water losses within the system, a comprehensive leak detection survey of the water system will be completed every year, BotAsh funded), (ii) Consumption Side Management (avenues to cut water consumption will be investigated and put to practice, BotAsh funded), (iii) Educational outreach initiative (this is where the BotAsh staff and general public will be educated about the various ways of water conservation and the importance of water conservation, GEF funded), and (iv) on the basis of their lessons and experiences, BotAsh will then impart their skills and expertise with farmers from the neighbouring communities (BotAsh and GEF funded).

56. Thus, BotAsh will use its resources to quantify their water usage and pilot innovative technologies to cut their water usage, while also committing their own resources to support especially farmers in southern Sua Pan in water management, in line with recommendations from outputs 1.1 and 1.2; on the other hand the GEF allocation will be used mostly for knowledge management and information sharing activities, so that BotAsh's water conservation programme does not remain an activity internal to the company, but benefits farmers in the sub-district, and through information dissemination, the general public inside and outside Botswana. Consequently, through enhanced working partnerships between a private company, local communities, NGOs and government, this output will effectively pilot an innovative financing mechanisms for SLM, wherein BotAsh would through participating in this project directly invest in SLM schemes in the Boteti district, the first time such direct investment would be in the sub-district, and hopefully a model for up-scaling to other parts of the country and internationally.

Outcome 2: Effective resource governance frameworks for SLM and equitable resource access

57. Under this outcome, the project will facilitate the conditions necessary for development and successful implementation of the local integrated land use plans and replication of the pilot activities developed under Outcome 1. These conditions relate to improved capacity for local resource governance catalyzed through GEF resources.

Output 2.1: A regional multi-stakeholder forum for facilitating a dialogue on SLM and mainstreaming SLM into regional and national policy programs and processes is 'created' and empowered.

58. The project will support the formation of a regional multi-stakeholder SLM forum (at the Makgadikgadi Sub-region level) to lead dialogue on mainstreaming SLM considerations in planning and implementation of critical national and regional policies, plans and strategies. This includes policies on livestock production and marketing, and agricultural land use (Tribal Grazing Land Policy, National Policy on

Agricultural Development). Experiences from the project's pilot interventions (Outcome 1) will be used to inform the policy framework for SLM, particularly regarding rangelands and livestock.

59. Currently, there exists a multi-sectoral institution (i.e. multiple government sectors) at the Sub-region level namely the Makgadikgadi Framework Management Plan – Implementation Committee (MFMP-IC). The key institutions of Letlhakane Sub-Land Board, DEA (secretariat) and DFRR are members. While members of this committee are key for SLM it does not representation from key sectors, such as farmers' associations and committees. It also does not have a land use planning mandate. It can therefore act as a supporting institution. The Makgadikgadi Wetlands Committee offers a better forum to be supported for implementing SLM. This committee has two advantages in that it includes community stakeholders as well as the private sector, although it will need to improve farmers' representation; it also involves most of the typical DLUPU members. This is important as DLUPU already has a land use planning and environmental advisory mandate. The project will therefore aim to pilot an expanded multi-stakeholder forum that builds on the existing multi-sectoral ones. Membership of the forum will include representatives from government, NGOs, water and land user groups such as Farmers' Associations, community trusts, community leaders, private sector (e.g. mining and tourism), etc. Creativity is required to harness the land use planning mandate of DLUPU and benefit from the wide stakeholder representation characteristic of the wetlands committee.

60. Particular emphasis will be placed on ensuring community participation in this forum as this has been identified as a weakness in resource governance in Botswana. Local natural resource management/community based management institutions will be developed and capacitated (development of two Farmers' Associations through the direct support of this project) to facilitate effective participation of communities in the dialogue to ensure that local-level issues are reflected in the proposed rangeland management strategy under this project and future district and national initiatives. In this regard, local natural resource management/community-based management institutions such as community trusts, farmers' committees, village development committees, and *Bogosi* will be empowered, through a clear mandate and financial and technical resources. In addition to leading the policy discussions, the institutions will use the capacity to lead the design and implementation of range management principles envisioned in SLM at the local level.

61. The project will therefore mobilize the local institutions around the concept of SLM. The PMU together with leading government institutions (DEA and DFRR) and engaged community development mobilization experts will hold participatory training workshops with local institutions to introduce the SLM concept and project, and relate it to indigenous knowledge and management systems. Several other training workshops will focus on skills development in areas of proposed SLM project activities. Financial, capital and extension support will be made available for the local institutions to attend meetings and participate in activities. They will also be supported with skills development and extension support to hold their own meetings to organize their contribution and that of their communities. Local institutions will also be supported with skills development in conflict resolution. This will be provided with the input of local leaders to ensure that it is built upon the traditional/ local conflict resolution approaches. While the project will provide and/or mobilize this support initially, modalities of sustenance of this support through Government and NGOs will be built into the project such that it continues beyond the life of the project.

62. The capacity of civil society to lobby and advocate for SLM will be developed by having a budget allocation for their activities through Government and NGO support, and supporting NGOs' access to donor funding. Support to and involvement of these civil society institutions is important because with appropriate training and resources they are well-placed to assume responsibility for some extension services.

63. The proposed plan for the creation of the multi-stakeholder forum includes: (i) determination of a preliminary list of potential participants from Government, NGOs, water and land user groups such as Farmers' Associations, and private sector; (ii) organization of area visits and meetings for consultations on the role, status and importance of the forum, as well as local expectations; (iii) dissemination of basic information materials on the role of the Makgadikgadi SLM forum to potential participants; (iv) consultations on and selection of forum members; (v) preparation and implementation of the initial meeting for establishing the forum; (vi) follow-up discussions of founding documents of the forum with members; (vii) first full meeting of the forum; (viii) development and approval of the strategy and work plan for influencing key policies; and (ix) continuing training and technical assistance related to SLM for forum members during the project.

64. It is expected that the forum will function through different sub-groups/committees. For example, there will be a sub-committee on livestock production and improvement, which will ensure that all players are actively engaged in policy discussions, effectively serving as a support group/network. There will also be an agriculture production group which will be based on existing farmers' committees. The pilot site will have a land use planning sub-committee to oversee the production of the local integrated land use plans through the PILUMPs process (Output 1.1). All committees will report to the regional multi-stakeholder committee.

65. The forum will lead the process of generating recommendations to mainstream SLM into the productive sector policies including the Tribal Grazing Land Policy (TGLP), The Tourism Policy (under review), Forest Act, Wildlife Conservation and National Parks Act, and the Botswana Beef and Trade Policy. Led by the PMU, the Ministry of Land and Housing together with the Department of Environmental Affairs (MEWT) and the Department of Forestry and Range Resources (DFRR), and with technical support from local CSO groups, the forum will actively seek opportunities to participate in national discussions on policy reform, as well as initiate such discussions where appropriate.

Output 2.2 Decision-making support tool for Letlhakane sub-land board and Physical Planning Unit (Boteti sub-district council)

66. The Letlhakane sub-land board jurisdiction covers the villages of Khwee, Kedia, Mokoboxane, Mopipi, Mmatshumo and Mosu. The principal role of the organisation is to administer, allocate and manage customary land, *viz:* arable land, residential plots, receiving applications for boreholes and commercial ventures, and making recommendations to the main Ngwato Land Board for final decision. Efficiency in this mandate is dependent on adequate data and integrated land use planning in rangelands, which is currently insufficient. Currently there is an overarching land use plan which however is too broad-scale to adequately address and be relevant to local level issues. This has been a problem for not only planners and land administrators but also farmers in rangelands, who basically do not have a guiding tool. This output will therefore improve the capacity of both the Letlhakane Sub-Land board and the Physical Planning Unit (under the Boteti District Council) to facilitate effective rangeland planning of areas within their jurisdiction. The project will facilitate and equip planners and land administrators to effectively address land use planning matters and improve their engagement with other stakeholders, including farmers in communal areas.

67. The project will facilitate a production of rangeland management and monitoring manual for planners and users in the Boteti Sub-district. Additionally, this project will support adaptation of a GIS-based decision-support tool, akin to one being piloted by SAREP in Ngamiland (and consequently lessons from SAREP will be proactively sought). Apart from procuring for the land board hardware and software required for this product (and also assisting with compilation of the associated shapefiles), training on the use of this tool will be provided. Once competency and datasets have been compiled, the project will support production of hardcopy publications and a GIS-based product identifying priority/preferred land use options that minimise conflicts across this planning area. Apart from these deliverables, capacity indicators for key land use decision making and extension support institutions [Land board, Sub-District Land Use planning Unit (DLUPU), Departments of Forestry and Range Resources] will be increased by at least 30%, as measured by the capacity score card (see Annex 4) to bring their average capacity score to at least 70%.

Output 2.3: System for monitoring of range condition and productivity is in place

68. The objective of the monitoring system will be to serve as a decision-support tool for farmers to help them in planning and implementing SLM strategies, as well as re-evaluating these strategies based on results and impacts. The monitoring system will essentially be designed as a community level, management-oriented monitoring system (MOMS). It will be developed in a participatory manner. Independent MOMS experts, DFRR and DAP will support the establishment of the monitoring system by providing support in setting-up the system, including ensuring that data are compatible with models that are to be used for analysis and defining among others (i) what data need to be collected; (ii) how data are to be collected; (iii) who will collect the data and (iv) frequency of data collection.

69. Data from the integrated range assessments carried out under Output 1.1 will provide the baseline against which to compare changes. Monitoring will be based on observations of key areas (monitoring plots) and

key attributes. Monitoring plots and attributes are to be selected and finalized during the inception phase but are likely to include aspects of direct relevance and interest to local communities (for example, livestock productivity; animal sightings for wildlife endowment for ecotourism; local rainfall for arable production planning; problem animal issues to understand crop damage and livestock predation; veld products to monitor and manage their harvesting; early warning of disease and drought so that farmers can modify their decisions on livestock off-take, breeding, and sale, as well as population trends of 'common birds' and their habitats, which index, analysed per species and per communities [e.g. seed-eaters vs. carnivores; migratory vs. resident birds etc.] will serve as proxy for a biodiversity intactness tracking score). Additionally, conventional rangeland assessment attributes (for example, total system carbon; rangeland biodiversity; grass composition and cover as well as tree composition and density; land cover measured by Normalised Difference Vegetation Index; invasive plants etc) will be measured, depending on capabilities and data-needs of the project partners. In developing the monitoring system, consistency with UNCCD impact indicators will also be ensured to support national reporting to the Convention. Results and lessons learned from the pilots via the M&E system will be presented at sub-district, district, and national levels, as well as in print materials and online for wider outreach. The project will contribute lessons on good practices in SLM to the PRAIS portal of the United Nations Convention to Combat Desertification (UNCCD), under the rubric of "best practices". It will also support the country's reporting to the UNCCD by enriching the data uploaded on PRAIS.

INCREMENTAL COST REASONING

70. The Government of Botswana is requesting GEF incremental assistance to remove the barriers currently hindering the government and the communities concerned from achieving the long term solution to addressing rangeland degradation in Makgadikgadi. As described in the foregoing section, the alternative scenario funded by GEF and co-financing resources is expected to result in key modifications to the baseline scenario that will generate global environmental benefits via sustainable land management. A comparison of the baseline project with GEF-project scenarios and associated global benefits are presented in Table 4.

STAKEHOLDER ANALYSIS

71. The natural resource sector of Makgadikgadi has multiple stakeholders. During the project development phase, a stakeholder workshop was held to identify stakeholders as primary, secondary, and tertiary, according to livelihood dependence on natural resources. In addition, stakeholder interest and influence were also assessed. Table 5 summarizes these findings, as well as articulates the role and responsibilities of different stakeholders in project implementation.

Table 5: Stakeholders and their role in the project

Stakeholder	Interest in SLM	Degree of interest	Level of influence	Comments	Participation in project implementation
1. Subsistence farmers-pastoralists	Grazing and livestock development	High	Low	The survival of their livestock and their livelihood is directly dependent on land, but they have low influence on decision making	Will participate in the land use planning process through membership in land use planning committee/multi-stakeholder forum. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will participate in the livestock improvement systems. Will participate in the regional consultation forum (via representation by committees). Participate in piloting monitoring of an innovative pastoral system based on a combination of herding, kraaling and livestock movement.
2. Subsistence farmer-Arable	Ploughing land	High	Low	Their livelihoods depend on land but they have minimum role in decision making	Will participate in the land use planning process through membership in land use planning committee. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will participate in the regional consultation forum (via representation by committees). Participate in Conservation Agriculture (CA) pilots.
3. Community Trusts	Range resources for subsistence	High	Low	Their livelihood depends on the land but they have no decision making power	Will provide the community-level governance structures to organise all community members with an interest in rangeland management and conservation. For those in southern Sua Pan, this would be the primary vehicle through which community mobilisation and engagement is realised.
4. Other resource users in the community –*phane*, grass, fuel wood gatherers, etc.	Range resources for subsistence	High	Low	Their livelihood depends on the land but they have no decision making power	Will participate in the land use planning process through membership in land use planning committee, or indirectly through Trust membership. Will participate in assessment, planning and piloting community-level harvesting, value addition and marketing of veld products. Will participate in the regional consultation forum. Will also participate in design and implementation of management oriented monitoring system (MOMS).
5. Farmers' Committee (exist in several villages)	Range resources for subsistence, farmer education	High	Low	Often not empowered by law or policy to make decisions. Have no money or knowledge to contribute to decision making.	Will participate in the land use planning process through membership in land use planning committee. Will participate in the regional consultation forum. Will participate in conservation agriculture pilots.
6. Farmers' Association (process to form this ongoing in project site; will be given impetus through this project)	Access to the rangeland	High	High	Have financial power to for example employ lawyers to speak on their behalf; may also have members in influential positions.	Will participate in the land use planning process through membership in land use planning committee. Will participate in range assessment and innovation feasibility studies, piloting and monitoring. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will participate in the regional consultation forum (representing farmers and herders) hence influence policies processes.
7. Department of Forestry and Range Resources (DFRR)	Management of forest and range resources	High	High	Are empowered by an act of Parliament to manage range resources	Together with the project management unit will set up the project multi-stakeholder forum and facilitate its capacity development and empowerment. Will participate in the land use planning process as a member of DLUPU and the project multi-

Stakeholder	Interest in SLM	Degree of interest	Level of influence	Comments	Participation in project implementation
					sectoral stakeholder forum. Will participate in range assessment and innovation feasibility studies, piloting and monitoring. Will lead the establishment of a multi stakeholder southern Sua Pan Fire Management committee and develop its capacity to support the development, implementation and review of the southern Sua Pan Fire Management Strategy. Will also participate in design and implementation of management oriented monitoring system (MOMS) and others suitable for use in ranches. Will lead and facilitate assessment, planning and piloting community level harvesting, value addition and marketing of veld products. Report on project findings to UNCCD, PRAIS and related mechanisms.
8. Boteti District Land Use Planning Unit (DLUPU)	Land resources use and management planning	High	Medium	While it is a recognized land use planning institution it does not have an empowering mode of operation. It functions as a loose institution with a non-binding participation arrangement.	Will lead the land use planning process as part of the project multi-stakeholder forum. Will also participate in design and implementation of management oriented monitoring system (MOMS).
7. Letlhakane sub-Land Board	Land custodian; allocation, administration and management	High	High	Have the legal mandate to manage land	Will participate in the land use planning process as a land authority and secretariat of DLUPU and as part of the project multi-stakeholder forum. Participate in pilots of community-managed campsites, as communities would need to have land-use rights for the areas where campsites are constructed. Will also participate in design and implementation of management oriented monitoring system (MOMS).
8. Department of Environmental Affairs	Coordination of all environmental and natural resource management	High	High	Legally mandated to overlook all environmental management, and Environmental Assessment Act	Secretariat to the MFMP Project Steering Committee, and the Wetlands Committee. Together with the project management unit will set up the project multi-stakeholder forum and facilitate its capacity development and empowerment. Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum. Will also participate in design and implementation of management oriented monitoring system (MOMS).
9. Department of Wildlife and National Parks	Wildlife resources management	High	High	Legally backed by the Wildlife and National Parks Act	Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will participate in the project multi-stakeholder forum.
10. Department of Tourism/ Botswana Tourism Organization	Tourism development	High	Medium	Not land mangers but backed by economic development vision which rates tourism high.	Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum. Participate in and provide technical backstopping to community-managed tourism enterprises. Will also participate in design and implementation of management oriented monitoring system (MOMS).
11. Department of Water Affairs	Water management	Medium	Medium	Mandate does not include land management.	Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum.

Stakeholder	Interest in SLM	Degree of interest	Level of influence	Comments	Participation in project implementation
12. Department of Roads	Access to land for road development	Low	Low	The interest is low because responsibility is exclusive to main roads and is dependent to other sectors, marketing infrastructure	Will participate in the land use planning process as a member of the project multi-stakeholder forum.
13. District Administration (District Officer Development)	Rural Development	High	High	Interest is high because rural economy is dependent on implementation of programs and policies; have the backing of implementation of District Development Plans, and village development plans	Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum.
14. Tribal Administration	Improved community livelihoods	High	Medium	Interest is high because they care about community welfare, but they do not have legal backing on land use. Often superficially involved.	Will participate in the land use planning process as a member of the project multi-stakeholder forum. Will co-lead with the local resource users institutions assessment, planning and piloting community non-timber products harvesting, value addition and marketing. Will participate in the southern Sua Pan Fire Management Committee to support the drafting and implementation of the southern Sua Pan Fire Management Strategy to be developed through this project. Will also participate in design and implementation of management oriented monitoring system (MOMS).
15. Police Services	Law enforcement	Low	Low	Police service not yet keen on environmental resources management. But have backing of all laws including penal code.	Will participate in the land use planning process through membership in land use planning committee/multi-stakeholder forum.
16. Boteti-Economic Planning work with DOD and physical planner	Coordinate all district projects, especially socio-economic ones	High	High	Main local authority	Will participate in the land use planning process through membership in DLUPU and the project multi-stakeholder forum. Participate in community based tourism enterprises, to secure political and leadership support for these projects. Will participate in the project multi-stakeholder forum.
17. Boteti-Physical Planning-Land use from Agric. and land use zoning	Planning lay out in gazetted areas	High	High	Main local authority for land use planning	Will participate in the land use planning process through membership in DLUPU and the project multi-stakeholder forum.
18. Social and Community Development	Improved Livelihoods	High	Low	Their interest is in improving livelihoods such as giving the destitute livestock, but they are usually left out of land use planning	Will participate in the land use planning process as a member of the project multi-sectoral stakeholder forum. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will co-lead and facilitate assessment, planning and piloting community non-timber products harvesting, value addition and marketing.
19. Department of Veterinary Services	Animal Health	High	High	High influence in that the beef industry is of high interest to the	Will participate in the land use planning process through membership in DLUPU and the project multi-stakeholder forum.

Stakeholder	Interest in SLM	Degree of interest	Level of influence	Comments	Participation in project implementation
				national economy and determined by international markets.	Will provide technical backstopping for the fledgling farmers' associations
20. Department of Animal Production	Livestock development	High	Low	Focused on the animals themselves and less on the range	Will participate in the land use planning process through membership in DLUPU and the project multi-stakeholder forum. Will participate in range assessment and innovation feasibility studies, piloting and monitoring. Will participate in livestock productivity enhancement trials and analysis. Will participate in the formation and capacity development of the southern Sua Pan Fire Management Committee to support the drafting and implementation of the southern Sua Pan Fire Management Strategy as outlined in the Management Plan. Will also participate in design and implementation of management oriented monitoring system (MOMS and others suitable for use in ranches) Will provide technical backstopping for the fledgling farmers' associations
21 Department of Crop production	Improved agricultural production	High	High	Is legally mandated and empowered to facilitate improved agricultural production	Will participate in the land use planning process as a member of DLUPU and the project multi-stakeholder forum. Participate in conservation agriculture pilots. Will also participate in design and implementation of management oriented monitoring system (MOMS). Will provide technical backstopping for the fledgling farmers' associations.
21. Department of Agricultural Research and other Academics	Range and livestock development research	High	Low/Medium	High interest because their core business is research on range land. Influence is low because they can only recommend action; sometimes medium as they have access to Government, especially Ministry of Agriculture	Will participate in the land use planning process as a member of the project multi-stakeholder forum. Will participate in livestock productivity enhancement and analysis. Will participate in range assessment and innovation feasibility studies, piloting and monitoring. Participate in the research part of piloting of innovative pastoral system based on a combination of herding, kraaling and livestock movement and conservation agriculture. Will provide technical backstopping for the fledgling farmers' associations
22. Commercial mining companies	Mining of precious minerals	Low	High	High economic power allows them to get priority during land allocations	Will fund some aspects of this project (e.g. BotAsh will pilot water conservation and recycling, for themselves and some farmers; Debswana will fund alternative livelihood options, such as community-based tourism). Some of them are already working on post-mine closure sustainability, also linking to diversification of rural livelihoods, and how to best de-commission of mines whilst ensuring rangelands are rehabilitated to productive states.
23. Subsistence miners, including sand harvesters	Mining of sand, soils, salt etc., either for domestic use or sale	High	Low	Largely illegal, because none given permit in this region; although sand harvesters have surface rights but not mining licences	Will be engaged in drafting of local level mapping of resources, and jointly with the Trust, agree and implement measures that will ensure their harvesting of resources is regulated and legitimate.
24. Experts	Livestock development and	Low	Medium/high	Usually contracted to give advice, so likely to influence action	Will participate in livestock productivity enhancement studies. Will participate in range assessment and innovation feasibility studies, piloting and

Stakeholder	Interest in SLM	Degree of interest	Level of influence	Comments	Participation in project implementation
	range development				development of the monitoring tool.
25. Private sector (Tour operators)	Land for tourism and conservation	High	High	Have economic power to buy land or influence decision making. Have national development priority backing.	Will participate in the land use planning process as a member of the project multi-stakeholder forum. Will participate in livestock productivity enhancement, including through financing or direct investment. Will also participate in design and implementation of MOMS.
26. NGOs, .g., BirdLife Botswana	Conservation	High	Medium	Civil society not empowered to be involved in land management. But may have access to knowledge and information to access decision making process. However, BirdLife Botswana has been working within the MFMP (e.g. sits on several MFMP Working Groups, Steering Committee and Wetland Committee) and has facilitated community development in Southern Sua Pan, including leading a GEF MSP project that amongst others developed a management plan for Southern Sua Pan and registered the community trust operational in the area.	Will house and lead the Project Management Unit and thus be responsible for day-to-day project implementation and coordination, as well reporting and adherence to project targets and deliverable. Will participate in the land use planning process as a member of the project multi-stakeholder forum. Participate in promoting community based tourism initiatives. Will facilitate assessment, planning and piloting community non-timber products harvesting, value addition and marketing. Will also participate in design and implementation of management oriented monitoring system (MOMS).
Development partners/donors (e.g. JICA, KAZA TFCA, UNDP, WWF etc.)	Conservation and livelihood enhancement	High	High	Interest in development, including all of Botswana; and their mandate includes SLM and sustainable development in general	Will provide co-funding for many of the project activities. Will assist with lobbying for policy and regulatory reforms as may be required.
Political leadership	Livelihood enhancement	High	High	Interested in sustainable development, and upliftment of rural communities	Especially those from the project area will be empowered to enable them champion policy and regulatory reforms as may be required.
Media	Interested in newsworthy items	Low	Low	Interested in sustainable development and rural livelihood improvement, so project will need to emphasise livelihood implications whenever communicating with/engaging them	Information dissemination.

SOCIO-ECONOMIC BENEFITS INCLUDING GENDER DIMENSIONS

72. This project will contribute to securing livelihoods and food security in the short-term as well as increasing prosperity for the rural poor in the long-term. Revitalizing local institutions for range resources management and governance will increase social capital and improve empowerment of the local communities.

73. Women play a critical role in livestock husbandry (particularly small stock) and natural resources management in Makgadikgadi, both as beneficiaries but often as victims of the effects of reduced productivity and environmental change (damage). In recognition of this fact, a gender analysis will underpin development and implementation of the alternative livelihoods promoted by the project, to ensure that critical issues related to access and control of land and other natural resources as they relate to women are identified and addressed. The aim is to promote a more effective targeting of initiatives, and provide disaggregated data for monitoring, in line with the UNDP gender marker. Thus, a number of project activities to be implemented under both Outcome 1 and 2 are expected to directly and indirectly contribute towards improving the condition of women. This would be through enhancing their capacity to participate in decision-making processes, and engaging in land use activities that increase the flow of benefits from land use, have the potential to improve their economic situation. For instance, the pilot activities to generate income from the sale of veld products will deliberately target women beneficiaries.

74. In addition, the project will actively empower women and other excluded groups, particularly those at high risk of suffering from the effects of rangeland degradation and climate change vulnerabilities. This will be achieved through social mobilization utilizing Women Self Help Groups (SHGs) and other such community based structures. These groups will benefit particularly from skills development (education/ training), and access to financial resources and markets for sustainably produced/harvested veld products.

COST-EFFECTIVENESS

75. GEF funding in the proposed sustainable land management project for Botswana is designed to be catalytic insofar as it builds upon on-going government efforts to improve land use, and on past and current international development efforts to pilot more sustainable practices. In order to realize the project objective of mainstreaming SLM in rangeland areas of Makgadikgadi in the most cost-effective manner, project design has been based on the following principles.

    i. The project will pilot existing best SLM practices and streamline the process of applying them at a wider scale. In most cases the adoption of the selected best practices will meet the interests of land users, and the project will apply a cost-sharing requirement whenever this is feasible. For example many animal husbandry practices based on indigenous knowledge have been lost. These practices had the advantage of being suited to the local environment and would yield even better range management if combined with current technical knowledge. The project pilots will aim to find the best management combination to manage investment cost and preserve or even enhance the range.

    ii. In order to facilitate further replication of best practices in the most cost-effective manner, the project will focus on providing technical advice, developing decision-support tools, and building the capacity of existing technical extension services (notably extension services of the Department of Veterinary Services, Department of Crop Production, Department of Forestry and Range Resources, and Department of Animal Production). The project will, thus, encourage resource allocation by land users and competent authorities in sustainable land use, and only needs to cover a limited proportion of direct investments required to demonstrate and propagate the selected best practices. This will lead to better allocation of GEF and non-GEF resources.

    iii. Regular communication and coordination with other donor agencies working on similar interventions will be established to ensure that there are few overlaps of activities and full advantage of beneficial synergies are taken on board. For example, in developing the project's pilot activities on conservation agriculture, the project will liaise with other similar initiatives in the country and region (mainly Ngamiland District and Namibia) to examine successful approaches and lessons.

iv. In terms of policies that impact rangeland use and management, Botswana's policy and legislative environment can be said to be saturated yet failing to effectively deliver. The key missing element is lack of multi-stakeholder involvement in the implementation of policies, which is critical for sustainable land management. Most importantly, community participation in resource governance is particularly weak. The most cost-effective way of ensuring that the existing policy environment is supportive of SLM, is to provide for multi-stakeholder dialogue and engagement. The project will focus on providing such a forum to lead district-level dialogue on mainstreaming SLM considerations in implementation of critical national and regional policies, plans and strategies. Furthermore, practical experience gained through the pilot activities of the project will inform this policy dialogue.

OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES

76. There are a number of projects addressing key natural resource management challenges in the Makgadikgadi. These projects provide opportunities for complementarities and building of synergies with the proposed project. The Department of Wildlife and National Parks, in partnership with the World Bank, is implementing a project to address wildlife/human conflicts by promoting co-existence (The Human-Wildlife-Coexistence Management Project in Northern Botswana). One of the project sites are villages bordering the Makgadikgadi National Park, specifically Moreomaoto and Khumaga. The project intends to develop and pilot strategies of human co-existence with wildlife and mitigating the effects of problem animals. One of the key intervention areas of the project is to improve livelihoods of the communities who live in wildlife areas. This SLM project will coordinate activities with this Human-Wildlife Coexistence Management project, especially activities related to enabling community participation in MFMP governance structures, to ensure that successful approaches for managing conflict are integrated into MFMP activities.

77. The USAID-funded SAREP, which aims to assist the countries of Botswana, Namibia and Angola to effectively manage the resources of the Okavango River Basin, has expressed an interest to extent their support to the Makgadikgadi, because the Ntwetwe Pan (part of the Makgadikgadi Pan) and the Boteti River rely on outflows from the Okavango Delta. SAREP will facilitate the implementation of the Ngamiland Integrated Land Use Plan, and also assist in the formulation of a Strategic Environment Assessment for Ngamiland which will take into account aspects of SLM; these upstream SLM initiatives will have a bearing on SLM in the Makgadikgadi. Moreover, SAREP has developed and is testing decision-support systems and tools to facilitate decision-making in land management, akin to a decision-supporting system that this project will develop for the Letlhakane sub-land board. This proposed project will coordinate closely with SAREP in order to share information, knowledge and approaches.

78. A GEF-funded project with the main objective of mainstreaming SLM principles into the livestock production sector in Ngamiland district, specifically in areas adjacent to the Okavango Delta, has recently been approved and began implementation in early 2014. This project seeks to enhance local communities' participation in rangeland governance, whilst tackling inadequate knowledge and skills for adoption of SLM in livestock management and livelihood support systems, and policy and market distortions that provide disincentives for adopting SLM and sustainable range management principles in the livestock production sector in Ngamiland. The complementarities of the Ngamiland project (which focuses on aspects not covered by the current projects, such as stocking rates in commercial and privately-owned ranches, facilitating new and alternative markets for zones with Foot-and-Mouth Disease, and removing barriers to small-scale, non-beef, livestock product-based enterprises) and the current project (which emphasises facilitation of the establishment of local-level resource management structures in communal areas, and active community involvement in Makgadikgadi-wide governance structures etc.) allow for ample opportunities for lessons and information-sharing in these two adjoining districts. Sustainable Land Management initiatives proposed under this initiative will utilize and learn from the systems and processes initiated by the Ngamiland SLM project.

79. Makgadikgadi is part of the geographic area within Botswana that forms part of the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA), which spans part of Botswana, Zimbabwe, Zambia, Angola and Namibia. A key objective of the establishment of the KAZA TFCA is the conservation of biodiversity

with species conservation benefiting significantly through the creation of a continuum by linking together fragmented habitat patches. While SLM is not a thematic area within the KAZA TFCA, this current project will nonetheless benefit from the KAZA process, as for instance, within the KAZA TFCA Integrated Development Plan 2013–2017, there are some projects that should contribute towards improved rangeland management within Makgadikgadi (e.g. support to implementation of the fire management strategy for Makgadikgadi National Park; support for the development and implementation of a Management Plan for Lake Xau; development of a tourism diversification strategy for Northern Botswana; and development and implementation of the invasive species management strategy etc.). Opportunities for synergy between this project and the KAZA TFCA initiatives will be explored throughout the project-life.

80. At a national and other levels, there are other ongoing initiatives such as development of the National Strategy for Sustainable Development (NSSD), the UNEP-UNDP Poverty Environment Initiative (PEI), the World Bank-funded Wealth Accounting and Valuation of Ecosystem Services (WAVES) project, the GEF-funded *Improved Management Effectiveness of the Chobe-Kwando-Linyanti Matrix of Protected Areas*, and proposals by some mining companies, such as Debswana, with regards to how mining operations could contribute to sustainable livelihoods during the post-mining (rehabilitation) periods, which whilst not explicitly working on SLM, will nonetheless among others pilot integrated economic and land use planning and leverage changes in land use planning, financial and management systems to secure wider economic and environmental benefits. The tools, lessons and experiences from these initiatives will benefit the current project.

PROJECT CONSISTENCY WITH NATIONAL PRIORITIES AND PLANS

81. This project is in line with major planning documents in Botswana, notably Millennium Development Goals (MDGs), the Vision 2016 document, the National Strategy for Poverty Reduction (BNSPR, 2003), and the National Action Programme (NAP) to Combat Desertification (2006). These macro-policy frameworks seek to provide Botswana with tools to meet national aspirations for an educated, informed, and prosperous society with sustainable livelihoods and development. In the global context, the project meets the MDGs, especially Goal 7, target 7a. The project's livelihoods targets also contribute towards MDG target 1a. Botswana's long-term vision (Vision 2016) aspires for among others "a prosperous and innovative nation" and that by 2016 "*there will be a fully integrated approach to conservation and development, and communities will be involved in the use and preservation of their natural assets*", in line with this project. Moreover, within the current National Development Plan (NDP 10), the Livestock Development chapter recognizes that the livestock sub-sector is characterised by low productivity, manifesting itself in low off-take rates, low cold dress mass and low calving percentages; NDP 10 recognizes that part of the problem is communal grazing systems that constrain farmers from undertaking livestock improvement activities, such as controlled breeding and supplementary feeding.

82. The National Strategy for Poverty Reduction (2003) acknowledges Botswana is faced with environmental challenges, including land degradation. The programmes pursued through the National Strategy for Poverty Reduction (BNSPR) include the advancement of sustainable livelihoods through employment creation; support to rain-fed crop production; increasing smallstock production; strengthening the Community Based Natural Resources Management programme; creating employment opportunities in the tourism industry; and building capacity for small and medium citizen businesses. To address the challenge of land degradation, the National Action Programme (NAP) to Combat Desertification (2006) proposes "coordination and participation by all stakeholders in combating desertification and degradation", the same integrated approach espoused by this project; specifically, Section 3.3 supports capacity building of local communities to combat desertification, while Section 9.5 calls for the promotion of participatory land-use planning. This NAP was formulated to facilitate the implementation of the UNCCD program in the country. The objectives of the NAP are, amongst others, facilitating sustainable use and management of natural resources, development of mechanisms for mobilizing and channelling financial resources to combating desertification, poverty alleviation and community empowerment, *inter alia* by promoting, viable and sustainable alternative livelihood projects, strengthening capacity for research, information collection, analysis and utilization.

83. Moreover, the project is in line with many UN-supported processes e.g. UNDAF has a goal that seeks to "support the Government of Botswana to achieve sustainable economic growth and development by the year 2016, by ensuring that renewable resources are used at a rate that is in balance with their regeneration capacity and wildlife is managed for the sustainable benefit of the local communities and in the interests of the environment as a whole", while the UNDP/UNEP-led Poverty and Environment Initiative has among its five outputs "Application of integrated approaches, tools, methodologies and assessments for mainstreaming environment in policies and plans for promoting growth and poverty reduction enhanced", to which this project contributes. In line with the global processes, this project fosters synergetic benefits with the UNFCCC and the CBD e.g. the draft Second National Communication to the UNFCCC acknowledges that land degradation in Botswana is mainly caused by a combination of human and natural/climatic factors, and that solutions to land degradation are cross-sectoral. Similarly, the 4th Botswana national report to the CBD (2009) states that general habitat destruction and reduction and barriers to movement are the main threats to Botswana's wildlife species (section 1.2.2.3), and as a possible solution (section 2.3.3) recommends "projects for improving rangeland management through community participation and monitoring". Likewise, this project contributes to many of the 11 NBSAP objectives, notably objective 3 (Efficient and sustainable utilization of all components of biodiversity through appropriate land and resource use practices and management), as well as training gaps identified in the NCSA.

84. At the district level, the project is in line with the MFMP. The MFMP's overall aim is "*to improve people's livelihoods through wise-use of the wetland's natural resources*", and so this plan helps identify and coordinate priority development, management and conservation activities that need to be undertaken in the Makgadikgadi to realize the aforementioned overall aim. The MFMP components include: ecology and hydrogeology, wildlife resources, livelihood assessment, resource and economic valuation, tourism and heritage development, policy environment assessment, scenario development and analysis, and land use assessment and evaluation. This current project addresses many of these components. More details on this project's linkages with the MFMP are provided in Annex 2. Project outputs will help shape some of the national and sub-national planning documents currently under development - e.g. Botswana's Climate Change Policy, Strategy and Action Plan, the National Strategy on Sustainable Development etc.

85. PROJECT RESULTS FRAMEWORK

This project will contribute to achieving the following Country Programme Outcome as defined in the CPAP: Strengthened national capacity and improved policy and institutional framework for environmental management and sustainable development; and Enhanced capacity of communities for natural resources and ecosystem, management and benefit distribution
Country Programme Outcome Indicators: No. of community-based organizations with capacity to develop and implement plans in natural resources and ecosystem management and benefit distribution
Primary applicable Environment and Sustainable Development Key Result Area: Mainstreaming Environment and Energy
Applicable GEF Strategic Objective and Program: LD-3: Reduce pressures on natural resources from competing land uses in the wider landscape
Applicable GEF Expected Outcomes: Outcome 3.1 (Enhanced cross-sector enabling environment for integrated landscape management) and **Outcome 3.2** (Integrated landscape management practices adopted by local communities).
Applicable GEF Outcome Indicators: Indicator 3.1 (Policies support integration of agriculture, rangeland, forest, and other land uses) and **Indicator 3.2** (Application of integrated natural resource management (INRM) practices in wider landscapes).

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of verification	Risks
Objective[12]: To mainstream SLM in rangeland areas of the Makgadikgadi for improved livelihoods	Hectares of rangeland that are under improved management	Zero	1,900,000 hectares by project end. (In addition, it is expected that project lessons can be replicated to an additional 1,440,000 hectares post-project, notably in the Tutume sub-district planning area)	Project PIR, Independent Evaluation, periodic field surveys/field visits	Slugging of the current buy-in from planning institutions and Government. There is a possibility of conflicts arising from perceptions of interference and differences on approaches to how the issues could be addressed, especially between government institutions and civil society organizations. The benefits generated by the project may be offset by the impacts of climate change, which might exacerbate the usual droughts.
Outcome 1[13]: Effective resource governance frameworks for SLM and equitable resource access	No. of functional farmer's associations	Zero	2 by the end of the project, covering all of Boteti-sub-district and all of the southern Sua Plan planning area (2,160,000 ha)	Data from district office of Ministry of Agriculture	
	No. of farmers practicing improved and effective herd management	Zero	100 farmers enrolled for participation in the project, through the farmers associations	Data from district office of Ministry of Agriculture	
	No of integrated district-wide plans with spatially-explicit (GIS-based) maps of where particular sectors (tourism, settlements, agriculture) could best be allocated land parcels in a manner that minimises conflicts amongst these sectors	Zero	An integrated plan covering all of the Boteti sub-district planning area developed and approved with involvement of all stakeholders	Plan available owned, and implemented by Letlhakane sub-land board and other stakeholders	
	Capacity of key land management institutions for SLM	50% (see Annex 4)	Raise to 75% and improving by the end of the project	Capacity Development Scorecard (see Annex 4) ; project M&E data	
	No. of annual status reports with needed information on the condition of rangelands in the Boteti sub-district	Zero	Three annual status reports on the condition of rangelands, largely based on MOMS dataset and used for tracking yearly	Annual reports published	

[12] Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

[13] All outcomes monitored annually in the APR/PIR. It is highly recommended not to have more than 4 outcomes.

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of verification	Risks
			change in rangeland conditions		
	Multi-stakeholder forum for mainstreaming SLM issues in national and regional policies, plans and strategies	Existing multi-sectoral institution is limited to multiple government sectors only	Active participation from government, NGOs, water and land user groups, community trusts, community leaders, private sector by project end	Meeting minutes on both the MFMP Implementation Committee (for national-level targets) and Makgadikgadi Wetlands Management Committee (site-level targets)	
	No. of annual status reports on the status of 'common birds' in rangelands of the Boteti sub-district, as a proxy for the Biodiversity Intactness Index	Zero	Three annual status reports on population trends of 'common birds' and the habitats on which they depend, largely based on MOMS dataset	Annual reports published	
Outcome 2: Effective range management to improve range condition and flow of ecosystem services to support livelihoods of local communities in Southern Sua Pan Region	No. of integrated community Participatory Land Use and Management Plans	Zero	Four produced for southern Sua Pan villages, one for each of the villages of Mosu, Mmatshumo, Mokubilo and Mmea; and an overarching summary document covering all of southern Sua Pan. Plans would be approved and with ongoing implementation by End of Project	Participatory Land Use and Management Plans available	Reluctant participation by local communities due to fear that the project will compromise their livelihoods by introducing strict management systems. To insert more, refer to Risk analysis (Annex
	No. of farmers[14] with improved livelihoods	Tbd during range assessments which will cover farmer livelihoods as well, but national average is around US$850	Increase by 50% farm generated income of farmers involved in improved herd management and CA, to at least $1,275 by project end	Baseline and monitoring data collected by project	
	Off-take rate for cattle	Tbd during range assessments under the economic section. However, baseline assumes calving rate (the proportion of cows bearing a live calf (% per yr), estimated at 92%, based on average rainfall of 450 mm/yr, and using formulae in table 2 of Abel, 1997, Ecological Economics 23: 113-133	Tbd after range assessments. However, using estimate from Abel (1997), used for the baseline, project will endeavour to increase this target by 3% to almost 95%	Data from district office of Ministry of Agriculture	
	Area of southern Sua Pan rangeland with improved grass and herbaceous species cover	Tbd during range assessments but because an estimated 40% is degraded, it suggests 60% is probably in reasonable condition (i.e. 150,000 ha, being 60% of 250,000 ha of	At least 25% across southern Sua Pan rangelands (i.e. an additional 37, 500 ha to the baseline) rehabilitated by project end, for End of Project of at least 187,500 ha in Southern Sua	Field and remotely sensed data collected during the project	

[14] *Farmers to be disaggregated according to gender, age group and small stock keeping*

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of verification	Risks
		rangelands in southern Sua Pan)	to have good quality grass and herbaceous vegetation cover		
	No. of farmers practicing conservation agriculture	Zero	At least 40 every year (10 in each of the villages: Mosu, Mmatshumo, Mokubilo and Mmea), trained and given extension support i.e. 120 at EOP.	Department of Crops data	
	Increased arable production as a consequence of adopting conservation agriculture	0.33 tonnes/ha (current yields)	0.66 tonnes/ha (i.e. project will double the yield for those farmers that adopt conservation agriculture)	Department of Crops data	
	No. of farmers practicing improved and effective herd management	Zero	120 farmers enrolled for participation in the project (10 from each village initially and 10 more added per each of the 4 villages by project end)	Department of Animal Production data	
	Revenue from non-timber forest products, including soils and salt	Tbd; however across all of MFMP this is approximately $444/household/annum.	End of Project targets is to increase revenue by 33% to $591/household/annum within the project site. Independent and project/site-specific estimates to be determined during exercise to map the resources and develop feasibility studies for setting up processing and marketing plant	Project reports on pilot activity	
	Extent of uncontrolled fires	An estimated 16,392 ha affected by uncontrolled fire. ~9% of central district burnt in 2012, and assuming this burn rate in Southern Sua Pan's Mopane/sandveld (180,000 ha), approximately 16,393 ha is used as a baseline	Fire-affected area reduced by 50% in year two and three (i.e. at worst only 8,196 ha burnt)	DFRR data	
	Incidence of fires	Baseline is 32 fires for the period 2001–2010, an average 3 fires/year	Fire incidences cut by 50% to less than 1.6 fires/yr at End of project	DFRR data	

Note: A more detailed description and rating of project risks is provided in Annex 5.

Award ID:	00081415
Award Title:	PIMS 5359: SLM Makgadikgadi
Business Unit:	BWA10
Project Title:	Using SLM to improve the integrity of the Makgadikgadi ecosystem and to secure the livelihoods of rangeland dependent communities
Atlas Project ID:	00090691
PIMS number:	**5359**
Implementing Partner:	**BirdLife Botswana** supported by Ministry of Environment, Wildlife and Tourism

GEF Component (Outcome) /Atlas Activity/ outputs	Impl. Partner	Fund ID	ATLAS Code	Atlas Budget Description	2014 (US$)	2015 (US$)	2016 (US$)	TOTAL (US$)	Note
1.1 Local level land use plans developed for each pilot	Birdlife Bots	62000	71400	Contractual Services – companies	20,000	20,000	10,000	50,000	1
	Birdlife Bots	62000	75700	Training	20,000	20,000	10,000	50,000	2
	Birdlife Bots	62000	71600	Travel	5,000	3,000	3,000	11,000	3
	Birdlife Bots	62000	72300	Materials and Goods	10,000	10,000	5,000	25,000	4
	Birdlife Bots	62000	72510	Publications	1,000	1,000	5,000	7,000	5
GEF Output sub-total					**56,000**	**54,000**	**33,000**	**143,000**	
Output 1.2: Improved range management and mixed livelihood systems are piloted in line with the land use plans	Birdlife Bots	62000	71400	Contractual Services – Company	25,000	20,000	15,000	60,000	6
	Birdlife Bots	62000	75700	Training	20,000	10,000	5,000	35,000	7
	Birdlife Bots	62000	71600	Travel	15,000	15,000	10,000	40,000	8
	Birdlife Bots	62000	72300	Materials and Goods	25,000	25,000	20,000	70,000	9
	Birdlife Bots	62000	74200	Audio Visual & Print Prod	5,125	10,000	5,000	20,125	10
GEF Output sub-total					**90,125**	**80,000**	**55,000**	**225,125**	
Output 1.2: Improved range management and mixed livelihood systems are piloted in line with the land use plans	Birdlife Bots	04000	72300	Materials and Goods	100,000	80,000	39,125	219,125	
UNDP Output Sub Total					100,000	8,0000	39,125	219,125	
GEF Output Subtotal					**146,125**	**134,000**	**88,000**	**368,125**	
1.3 Fire management strategy developed and implemented	Birdlife Bots	62000	71600	Travel	10,000	5,000	5,000	20,000	11
	Birdlife Bots	62000	75700	Training	10,000	10,000	5,000	25,000	12
	Birdlife Bots	62000	72300	Materials and Goods	5,000	5,500	5,000	15,500	13

GEF Component (Outcome) /Atlas Activity/ outputs	Impl. Partner	Fund ID	ATLAS Code	Atlas Budget Description	2014 (US$)	2015 (US$)	2016 (US$)	TOTAL (US$)	Note
GEF Output sub-total					25,000	20,500	15,000	60,500	
1.4: Water conservation, harvesting & re-cycling by BotAsh farmers	Birdlife Bots	62000	72300	Materials and Goods	8,000	4,000	4,000	16,000	14
	Birdlife Bots	62000	71600	Travel	5,000	5,000	2,375	12,375	15
GEF Output sub-total					13,000	9,000	6,375	28,375	
GEF Outcome total					184,125	163,500	109,375	457,000	
UNDP Outcome Total					100,000	80,000	39,125	219,125	
Outcome 1 Combined Subtotal					**284,125**	**243,500**	**148,500**	**676,125**	
Outcome 2: Effective resource governance frameworks for SLM and equitable resource access									
Output 2.1 A regional multi-stakeholder forum facilitating a dialogue	Birdlife Bots	62000	72100	Contractual Services-Companies	10,000	10,000	5,000	25,000	16
	Birdlife Bots	62000	75700	Training	20,000	10,000	10,000	40,000	17
	Birdlife Bots	62000	71600	Travel	5,000	5,000	4,970	14,970	18
Output sub-total					35,000	25,000	19,970	79,970	
Output 2.2. Decision making support tool for Letlhakane sub-land board and Physical planning unit (Boteti sub-district council)	Birdlife Bots	62000	72100	Contractual Services-Companies	10,000	10,000	5,000	25,000	19
	Birdlife Bots	62000	75700	Training	10,000	10,000	5,000	25,000	20
	Birdlife Bots	62000	71600	Travel	5,000	5,000	1,000	11,000	21
	Birdlife Bots	62000	74200	Audio Visual & Print Prod Costs	5,000	4,000	5,000	14,000	22
Output sub-total					30,000	29,000	16,000	75,000	
Output 2.3: System for monitoring of range condition and productivity is in place	Birdlife Bots	62000	75700	Training	19,814	10,000	10,000	39,814	23
	Birdlife	62000	71600	Travel	5,000	5,000	5,000	15,000	24

GEF Component (Outcome) /Atlas Activity/ outputs	Impl. Partner	Fund ID	ATLAS Code	Atlas Budget Description	2014 (US$)	2015 (US$)	2016 (US$)	TOTAL (US$)	Note
	Bots								
	Birdlife Bots	62000	71400	Contractual Services – Individual	9,000	9,000	5,000	23,000	25
	Birdlife Bots	62000	74100	Professional		30,000		30,000	26
	Birdlife Bots	62000	74200	Audio Visual & Print Prod Costs	5,000	5,000	1,000	11,000	27
	Birdlife Bots	62000	72305	Materials and Goods (agric and Forestry)	10,000	10,000	4,294	24,294	28
Output sub Total					48,814	69,000	25,294	143,108	
Outcome 2 Subtotal					**113,814**	**123,000**	**61,264**	**29,8078**	
Project Management	Birdlife Bots	62000	71400	Contractual Services – Individual	8,000	8,000	8,000	24,000	29
	Birdlife Bots	62000	71600	travel	1740	1,000	1,000	3,740	30
	Birdlife Bots	62000	72200	Equipment and Furniture	5000	4,014	1,000	10,014	31
GEF Sub Total					14,740	13,014	10,000	37,754	
	Birdlife Bots	04000	72500	Office rent & supplies	1,500	1,500	1,500	4,500	32
	Birdlife Bots	04000	72400	Communication & Audio Visual Equip	500	500	375	1,375	33
Sub Total UNDP					2,000	2,000	1,875	5,875	
Combined Project Management Outcome Sub Total					16,740	15,014	11,875	43,629	
GEF Grand Total					**312,679**	**299,514**	**180,639**	**792,832**	
UNDP Grand Total					102,000	82,000	41,000	225,000	
Combined Grand Total					**414,679**	**381,514**	**221,639**	**1,017,832**	

Table 5: Budget and workplan (showing GEF contribution of USD 792,832 and UNDP cash co-finance of USD 225,000, a total of USD 1,017,832)

Budget notes

Note	Explanation
1-5	This output will support the development of 4 Integrated Land Use Plans for Mmatshumo, Mosu, Mobukilo and Mmea, the four villages within the Southern Sua Pan region. The development of the land use plans will be led by the PMU, with strong collaboration with Letlhakane sub-Land Board and Boteti DLUPU, and with the active participation of communities, other government and non-government stakeholders including DFRR, DCP, DAP, DVS. The budget will be used as follows: Under budget note 1, the funds will be used to contract a technical institution (e.g. consulting firm, the Okavango Resource Institute etc.) to provide technical support to the PMU, government institutes and Letlhakane sub-Land Board, which will jointly facilitate the formulation of the land use plans. The technical support will be in undertaking integrated range assessments (social, cultural, economic, and ecological, levels of use, determining carrying/stocking capacities, etc.). This information will be used to inform the land use plans (all 4 to be produced within the first 2 years of the project, estimated at $12,000 per plan). The contracted institution will also provide technical support in the actual design of the integrated land use plans; Under note 2, *Training*, the funds will be used to pay for the cost of training events, at which communities will be trained on subjects relevant to the design and implementation of integrated land use plans. Under note 3, *Travel* – the funds will be used to support travel related to fieldwork by the PMU, Letlhakane sub-Land Board and DLUPU as well as other government and non-government stakeholders including DFRR, DCP, DAP, DVS. Costs include fuel, vehicle maintenance and DSAs; Under note 4, the budget will be used to purchase materials needed for land use planning, for both the PMU and especially the Letlhakane sub-Land Board and the Physical planning unit (Boteti sub-district council). This will include cost of maps, equipment for surveying, a laptop and other relevant materials. Under note 5, the budget will support the printing of material related to training, production and distribution of finished land use maps, and publications related to the design and implementation of integrated land use planning. The latter will be used to share lessons and support up-scaling of the initiative.

6-10	This output will focus on improving the range management system on communal rangelands. This will involve a participatory process of bringing together traditional rangeland management systems and contemporary ones based on technical knowledge. Effective implementation of the output will need contributions from technical staff of the line ministries with technical assistance from civil society, academic institutions and the private sector. The budget will be used as follows: Under note 6, the budget line will be used to identify and contract companies/civil society and academic institutions to provide the PMU and line ministries with technical assistance to ensure that implementation of the output is based on the best science and cutting-edge practices. Technical assistance will be provided in undertaking baseline physical, economic and social assessments for the communal rangelands, reviewing international best practices in communal range management and livestock stocking rates/carrying capacities, and application of the information to design range improvement systems for these communal lands. Further technical assistance will be needed in identifying sustainable, economically-viable income generating activities for improving livelihoods, and designing an implementation strategy. Institutions that could provide support to various components of this output include the following: i) Okavango Research Institute (ORI) of the University of Botswana, which will could support DAP in the improvements to the cattlepost pastoral system (communal lands, paid from GEF grant); ii) Botswana Tourism Organization and Letlhakane sub-Land Board which will support the existing Community Trust to set up community-based campsites (pilot site 3), working closely with the Department of Wildlife and National Parks (DWNP; for these agencies the GEF grant would support only their direct costs required to facilitate this output e.g. travel, DSA etc.); iii) the Botswana College of Agriculture (BCA) would support the Department of Agricultural Research (DAR) and Department of Crop Production (DCP), which will jointly provide community mobilization and training; working closely with the village Farmers' Committees (no GEF support for routine extension work, except for some of their direct costs crucial to project outcomes). Under note 7, *training* – this budget will be used to support actual training, by the PMU and government officials as required, for relevant groups of farmers to provide the skills they need to implement the program of improving range and livestock management systems. Training for commercial ranchers (through the Farmer's Association) will revolve around effective use of enclosures, paddocking, rotational grazing, supplementary feeding and controlled off-take and marketing. Training of farmers on communal lands (again through the Farmer's Association, and for many others through the village Trusts, *kgotla* meetings and farmers committees) will revolve around the improvement of pastoral system based on a combination of herding, kraaling and livestock movement and marketing. The budget line will pay for the development of training materials and the actual cost of delivering the training. Under note 8 - The Department of Animal Production (DAP), Department of Agricultural Research (DAR) and Department of Forestry and Range Resources (DFRR) will be the frontline for implementing the training. This budget will finance the travel of the PMU, and technical staff of these departments, including the costs of fuel, vehicle maintenance and DSAs, etc. Under note 9, the budget line will be used to purchase materials and goods required by the communities to effectively implement the range and livestock improvement programs as well as the livelihoods improvement programs designed through the project support. Careful assessment of needs will inform the purchases, which are likely to include materials for trialling income generating activities (e.g. bee hives, setting up honey processing facilities, local technologies for improving processing of veld (grasslands) products and linking them to markets etc., campsite development etc.). Under note 10, the budget will support printing of training materials and publications documenting lessons for widespread sharing.

11-13	Under this output the project will pilot the effective use of fire as a vegetation management tool in Southern Sua Pan. The budget will be used as follows: Under note 11, *Travel* – The Department of Forestry and Range Resources (DFRR) fire rangers will facilitate the community training and facilitate increased participation of community members in fire control and management. This budget will support the field work by the department, and the PMU, including paying for fuel, DSAs and other field work related expenses. Under note 12, the budget will be used to establish a multi-stakeholder Southern Sua Pan Fire Management Committee and to through this structure, develop a Southern Sua Pan Fire Management Strategy. This budget line will also pay for the expenses of training the fire management committees and the land users on the use of fire as a management tool. This training will be delivered by the DFRR, and other agencies as required. Under note 13, the budget line will be used to purchase equipment and other materials related to the actual implementation of the fire management plan.
14-15	Under this output, through co-financing BotAsh will use its resources to quantify their water usage and pilot innovative technologies to cut their water usage, while also committing their own resources to support especially farmers in southern Sua Pan in water management, in line with recommendations from outputs 1.1 and 1.2; on the other hand the GEF allocation will be used mostly for knowledge management and information sharing activities, so that BotAsh's water conservation programme does not remain an activity internal to the company, but benefits farmers in the sub-district, and through information dissemination, the general public inside and outside Botswana. Under note 14, this budget will support printing of training materials and publications documenting lessons from BotAsh's water conservation programme for widespread sharing, especially amongst farmers in the project site (Pilot Area 2). Under note 15, the budget will finance the travel necessary to implement the output, mainly by technical staff of government departments, including the costs of fuel, vehicle maintenance and DSAs, etc., as they travel to disseminate information on water conservation, and assist farmers with their water conservation projects/installations after BotAsh provides the infrastructural support to those farmers.

16-18	The output will support the formation of a regional multi-stakeholder SLM forum (at the Makgadikgadi/MFMP level) to lead Makgadikgadi-level dialogue on mainstreaming SLM considerations in implementation of critical national and regional policies, plans and strategies. The output will empower local institutions in SLM issues, particularly the review of policies and formulation of recommendations for mainstreaming SLM into selected productive sector policies. The budget will be used as follows: Under 16, the budget will be used to support an individual to provide technical services to assist the Project Management Unit (PMU) and government counterparts in the establishment of the regional multi-stakeholder SLM forum. The contractor will assist the PMU to ensure that the formation of the forum is based on relevant experiences from the region and the international level. The PMU will, working with the contractor, help facilitate the formation of the forum through the steps (i) determination of a preliminary list of potential participants from Government, NGOs, water and land user groups such as Farmers' Associations, and private sector; (ii) dissemination of basic information materials on the role of the Makgadikgadi SLM forum to potential participants; (iii) organization of area visits and meetings for consultations on the role, status and importance of the forum, as well as local expectations; (iv) consultations on and selection of forum members; (v) preparation and implementation of the initial meeting for establishing the forum; (vi) follow-up discussions of founding documents of the forum with members; (vii) first full meeting of the forum; (viii) development and approval of the strategy and work plan for influencing key policies; (ix) continuing training and technical assistance related to SLM for forum members during the project. Working closely with the Ministry of Lands and Housing together with the Department of Environmental Affairs (MEWT) and Department of Forestry and Range Resources (DFRR), the contractor will also facilitate policy reviews and formulation of recommendations; and produce policy briefs. S/he will also link with national processes to influence policy discussions and reform process. This support would be provided largely during year 1, after which their support would be scaled-down as the PMU assumes more of the responsibility to ensure the SLM forum is functional. Under note 17, the budget will support empowerment of the local natural resource management/ community-based management institutions such as community trusts, farmers' committees, village development committees, and *Bogosi*[15] to be able to participate in the policy discussions, as well as lead the design and implementation of range management principles envisioned in SLM at the local level. The budget line will support the development and delivery of training for these groups. Under note 18, the budget line will be used by the local natural resource management/ community-based management institutions and the multi-stakeholder forum to facilitate their participation in the forum discussions, including organizing meetings with communities to consolidate consultations, particularly of policy reviews; and participating in national level policy discussions.

[15] Chieftainship

19-22	This output will support the Letlhakane sub-land board and the Physical Planning Unit (under the Boteti District Council) to facilitate effective rangeland planning of areas within their jurisdiction. The budget will be used as follows: Under budget note 19, the project will contract a company/agency that can train Letlhakane sub-land board and the Physical Planning Unit, and DLUPU, as well as other planners from across the Makgadikgadi in integrated planning, and especially targeting the main weaknesses as identified in the capacity assessment report (Annex 4). Under note 20 the budget will support empowerment of the Letlhakane sub-land board and the Physical Planning Unit, and DLUPU, as well as other planners from across the Makgadikgadi, local natural resource management/community-based management institutions such as community trusts, farmers' committees, village development committees, and *Bogosi* to be able to participate in integrated land use planning. The budget line will support the development and delivery of training for these groups. Under note 21 – *travel* – the budget will finance travel necessary to implement the activities, primarily by technical staff of government departments, including the costs of fuel, and DSAs, etc. Under note 22, the project will assist with procuring for the land board and Physical Planning Unit, hardware and software required for using their planning software, and also assisting with compilation of the associated shapefiles (financed by co-finance). It will also support production and printing of rangeland management and monitoring manual for planners and users in the Boteti Sub district, as well as printing of a hard copy of the Boteti sub-district land use plan that best minimises conflicts among land uses, and identifies strategic areas where major land uses could be allocated.
23-28	The output will support the development of a participatory management-oriented monitoring system to serve as a decision support tool for farmers; it will allow them to plan and implement SLM strategies, as well as re-evaluate them based on results and impacts. The budget will be used as follows: Under note 23, *training* – of communities and staff of line ministries on formulation of M&E plans, to be delivered jointly by the a recruited specialist, PMU and the technical staff of the line ministries (those with the skills already); Under note 24 – *travel* – the budget will finance travel necessary to implement the activities, primarily by technical staff of government departments, including the costs of fuel, and DSAs, etc. Under note 25, the project will contract an external consultant to assist BirdLife Botswana in providing technical assistance to the line ministries – especially DFRR and DAP, who will facilitate the communities to collect monitoring data, formulate and implement the M&E plans, utilize data for adaptive management; Under note 26, the budget will finance professional services (audit, mid and terminal reviews/evaluation) of the monitoring system Under note 27, the budget will support printing of training materials and publications documenting lessons for widespread sharing, including sharing lessons from all the outputs (including linking to PRAIS portal of the UNCCD). This will also support production of annual reports on the Southern Sua rangelands and its component biodiversity, using the 'state-pressure-response' model, and the Biodiversity Intactness Index. Under note 28, the project will procure field-equipment (e.g. GPS units, range finders etc.) as required, for use by the project's technical team, to complement the community-based indigenous monitoring protocols.
29-33	This budget will support project administration and auditing as follows: Under note 29, the project will hire the services of a Project Administrator and a Finance Assistant (US$ 650 per month), including recruitment. Under note 30 – *travel* – the budget will finance travel necessary to implement the activities, primarily by PMU staff, including the costs of fuel, and DSAs, etc. Under note 31, the project will procure equipment and furniture necessary to support implementation of activities. Under note 32, the project will meet the cost of office rent and supplies; Under note 33, the project will procure Communication & Audio Visual Equip

Sources of Co-Finance

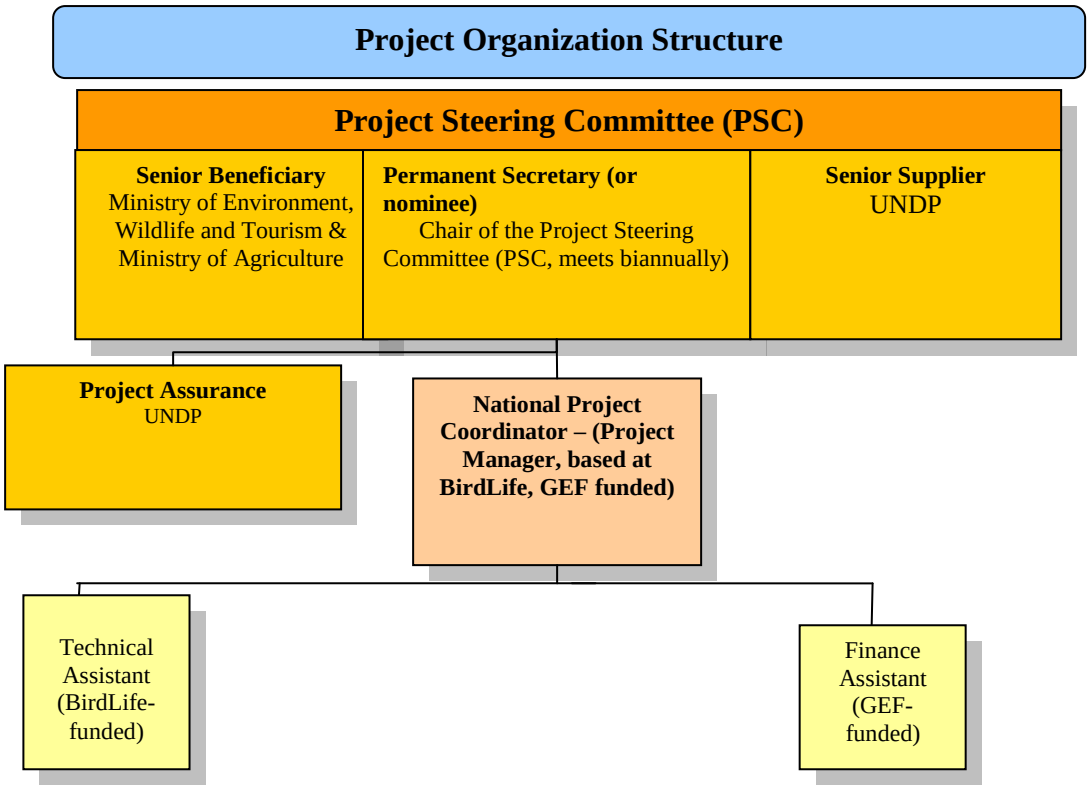
Sources of co-financing	Name of co-financier	Type	Amount $
Multi-lateral	UNDP	Cash	225 000.00
Bilateral	Japan International Cooperation Agency (JICA)	Cash	150 000.00
National Government	Department of Forestry and Range Resources (DFRR)	Cash	2 000 000.00
National Government	Department of Environmental Affairs	Cash	1 500 000.00
National Government	Department of Animal Production	Cash	500 000.00
National Government	Department of National Museum and Monuments	Cash	50 000.00
National Government	Boteti sub-district Council	In kind	200 000.00
Private	Botswana Ash Pty Ltd	Cash	280 000.00
Civil Society Organisation	BirdLife Botswana	Cash	1 440 000.00
Civil society organisation	Gaingo-O Community Trust	Cash	150 000.00
National Government	Letlhakane Sub-Land Board	Cash	150 000.00
Civil society organisation	Gumakutshaa Conservation Trust	In-Kind	150 000.00
Total Co-financing			**6 795 000.00**

MANAGEMENT ARRANGEMENTS

Project Implementation arrangement

86. The project will be implemented by BirdLife Botswana (Implementing Partner), on behalf of the Government of Botswana's Ministry of Environment, Wildlife and Tourism (MEWT). Oversight of project activities will be the responsibility of the Project Steering Committee (PSC), chaired by the Permanent Secretary of MEWT (or his/her nominee); other members will include DFRR, DEA, DWNP, Department of Animal Production, Crop Production, Department of Town and Regional Planning, UNDP, and BirdLife Botswana (*PSC will meet twice annually*). However, the project will also have a Makgadikgadi-based Project Advisory Committee, meant to be a platform that engages all stakeholders relevant for the project at the site-level (*to meet quarterly*), and the project will also work closely with the MFMP Thematic Working Group on Natural Resources (*meets quarterly*), which structure would provide technical advice to the project, and assure linkages and synergy with other MFMP natural resources initiatives (the relationships between the PMU, the PSC, the Project Advisory Committee and the MFMP Thematic Working Group on Natural Resources are shown in Annex 6, which arrangement is meant to put in place mechanisms to help especially government agencies and their staff, at HQ and district-levels, to mainstream SLM and the project activities into their policies and processes). Notwithstanding, regular operational oversight will be ensured by UNDP, through the UNDP Office in Gaborone, and strategic oversight by the UNDP/GEF SLM Regional Technical Advisor responsible for the

project. The Implementing Partner will be BirdLife Botswana working with the Ministry of Environment, Wildlife and Tourism [Department of Forestry and Range Resources (DFRR) and Department of Environmental Affairs (DEA) and the Ministry of Agriculture [Department of Animal Production ((DAP), and Department of Crop production (DCP)) as lead agencies]. Project activities will be undertaken by relevant governmental, non-governmental, parastatal, private sector and community based entities. The Implementing Partner will remain accountable to UNDP for the delivery of agreed outputs, and for financial management, including the cost-effectiveness of project activities.



87. A small Project Management Unit (PMU) will be set up to coordinate the implementation of the project on a day-to-day basis. The PMU, all of whom would be BirdLife Botswana staff, and recruited by the organisation in consultation with UNDP, DFRR and DEA, will be composed of a National Project Coordinator (NPC) who will function as the Project Manager. Support staff will include a Technical Assistant, who will provide technical back-stopping to the manager, and especially lead on site-based livelihood activities, working effectively as project extension staff, especially for Outcome 2, as well as being responsible for M&E activities overall (this position will be fully-funded by BirdLife Botswana), and a Finance Assistant who will play a coordination role for administrative and financial activities of the project (GEF-funded position, see diagram above). In addition to their technical contribution, the PMU will be responsible for overall project coordination, implementation and routine reporting. Project staff will be based in Letlhakane and will report to UNDP and the Project Steering Committee (PSC). However, day-to-day supervision of the PMU will be provided by the BirdLife Botswana Director, who will be the Implementing Partner's authorized personnel with delegated authority to in consultation with the PSC approve and sign the annual work plan for the following year; and Approve and sign the Combined Delivery Report (CDR) at the end of the year. (See Annex 6 for generic terms of reference for key project personnel and other delegated authorities).

88. To operationally ensure key institutions mainstream SLM into their policies, projects and plans, DFRR, DEA, DCP and DAP will each nominate counterparts to work with the PMU team. This will include senior officers at headquarters (Gaborone, may or may not be PSC members), and at the district level (based in Letlhakane, ideally members of the Project Advisory Committee) to ensure there are responsible officers for site-based actions. Therefore, for those in Gaborone, in addition to bi-annual Project Steering Committee (PSC) meetings, the PMU will meet (*at least twice per year*) and brief the HQ based senior officials (collectively) on project progress, and appraise them

on opportunities, implications and obligations of the project for their respective departments, further enhancing government buy-in and ownership of the project.

89. The main duties of the PSC will be to receive project reports and documents, make recommendations and approve budgets and work plans. The PSC is responsible for making executive decisions for the project and provide guidance as required to the National Project Coordinator. There will be mid-Term and Terminal Evaluations for the project, as well as routine project M&E according to the project's M&E Plan. The PSC will convene twice a year to review progress and recommend adjustments to actions. Quarterly reports produced by the PMU for the Project Advisory Committee and the MFMP Thematic Working Group on Natural Resources (*focussing on operational matters*) will be shared with members of the PSC, for information, with bi-annual PSC-specific reports also produced (*focussing on policy issues and higher-level project management issues, including budgets*). Changes within the stipulated budget of an output will not require convening of the PSC. However, changes across outputs (the outputs represent also deliverables of different institutions) will have to be approved by the PSC.

Financial and other procedures

90. The Implementing Partner will utilize the FACE and HACT mechanisms and provide at the end of each quarter both the financial report and narrative report to UNDP. In the case of BirdLife Botswana and Government procurement, BirdLife Botswana or Government procurement rules respectively apply, while UNDP rules will apply in the case of Country Office support to NGO. The Implementing Partner will use the following procedures and transfer modalities for requesting cash and reporting on its utilization – (i) *Direct Cash Transfer* – This will be in the form of an advance disbursed to the Implementing Partner for obligations and expenditures to be made by them in support of activities in annual work plans (AWPs); (ii) *Direct Payments* – This would be payments to vendors and other third parties for obligations incurred by the Implementing Partner in support of activities agreed in AWPs; and (iii) *Reimbursement* – This would be reimbursements to the Implementation Partner for obligations made and expenditure incurred by them in support of activities agreed in AWPs.

91. Since the project will be implemented through a NGO modality, the preferred method of cash transfer is the Direct Cash Transfer (i.e. Advance). Direct Payments and Reimbursements will only be allowed in emergency cases which cannot await processing of an advance (Direct Cash Transfer) and/or UNDP is unable to honour the request for an advance at the time of request (e.g. in cases where the UNDP account has not yet been replenished).

Audit Clause

The project will be audited at least once in its life-time, and the audit will be conducted according to UNDP Financial Regulations and Rules and applicable audit policies (only).

2. MONITORING FRAMEWORK AND EVALUATION

92. The project's monitoring and evaluation (M&E) activities will build on UNDP's existing M&E Framework for land degradation programming. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the project team and the UNDP Country Office (UNDP-CO) with support from the UNDP/GEF Regional Coordination Unit. The Project Results Framework provides performance and impact indicators for project implementation along with their corresponding means of verification. The LD-PMAT will be used to monitor the project's impact on land degradation (see Annex 7). The M&E plan includes: inception report, project implementation reviews, quarterly and annual reviews, an independent mid-term review and an independent terminal evaluation. The following sections outline the principle components of the M&E Plan and indicative cost estimates. The project's M&E Plan will be presented and finalized in the Project's Inception Report following a collective fine-tuning of indicators, means of verification, and the full definition of project staff M&E responsibilities.

Project start:

93. A Project Inception Workshop will be held within the first 6 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible Regional Technical

Advisor(s) as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

94. The Inception Workshop will address a number of key issues including: (a) assist all partners to fully understand and take ownership of the project; (b) detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team; (c) discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms; (d) discuss again, as needed, the Terms of Reference for project staff; (e) finalize the first annual work plan based on the project results framework and the relevant GEF Tracking Tool as appropriate, as well as review and agree on the indicators, targets and their means of verification, and re-check assumptions and risks; (f) provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled; (g) discuss financial reporting procedures and obligations, and arrangements for the project's audit; (h) plan and schedule Project Steering Committee (PSC) meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first PSC meeting should be held within the first 2 months following the inception workshop, and if possible back to back with this workshop.

95. An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Project Implementation Workplan:

96. Immediately following the inception workshop, the project will be tasked with generating a strategic workplan. The workplan will outline the general timeframe for completion of key project outputs and achievement of outcomes as detailed within this project document. The workplan will map out and help guide project activity from inception to completion. This will include process indicators to monitor project activity. These time-bound indicators will serve as benchmarks to measure progress towards achievement of intended project outcomes and outputs. The updated workplan and related progress report will be submitted annually to the Project Steering Committee and UNDP/RTA for review. To ensure smooth transition between project design and inception, the inception workshop and work planning process will benefit from the input of parties responsible for the design of the original project, including as appropriate relevant technical advisors.

Quarterly Progress Monitoring:

97. Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical). Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot. Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually (Annual Project Review/Project Implementation Reports (APR/PIR)):

98. This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements. The APR/PIR includes, but is not limited to, reporting on the following: (a) Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative); (b) Project outputs delivered per project outcome (annual); (c) Lesson learned/good practice; (d) AWP and other expenditure reports; (e) Risk and adaptive management; (f) ATLAS QPR; (g) Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

99. UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Steering Committee may also join these visits. A Field Visit Report/BTOR will be prepared by the UNDP CO and UNDP RCU and will be circulated no more than one month after the visit to the project team and PSC members.

Mid-term of project cycle:

100. The project will undergo an independent Mid-Term Evaluation during the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization and terms of reference of the mid-term evaluation will be decided after consultation between the parties to the project document.

101. The Terms of Reference for this mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The terms of reference will be completed 6 months before the planned mid-term. The international evaluator/team leader will be recruited directly by the UNDP CO. The international independent expert will be recruited at least 3-months prior to the planned commencement of the mid-term evaluation. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

102. An independent Final Evaluation will take place three months prior to the final Project Steering Committee meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

103. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response that should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Centre (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing:

104. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and Visibility Requirements

105. Full compliance with UNDP's Branding Guidelines and guidance on the use of the UNDP logo will be maintained. These can be accessed at http://web.undp.org/comtoolkit/reaching-the-outside-world/outside-world-core-concepts-

visual.shtml. Full compliance will also be maintained with the GEF Branding Guidelines and guidance on the use of the GEF logo. These can be accessed at http://www.thegef.org/gef/GEF_logo. The UNDP and GEF logos will be the same size. When both logos appear on a publication, the UNDP logo will be on the left top corner and the GEF logo on the right top corner.

106. Full compliance will also be maintained with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines").[16] Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

107. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements will be similarly applied.

Table 1. M&E Activities, Responsibilities, Budget and Time Frame

Type of M&E activity	Responsible Parties	Budget US $ Excluding project team Staff time	Time frame
Inception Workshop	Project Manager UNDP CO UNDP GEF	$5,000	Within first three months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following Inception workshop
Measurement of Means of Verification for Project Purpose Indicators	Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	To be finalized in Inception Phase.	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	Oversight by Project Manager Technical Assistant (also M&E officer) Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
Quarterly progress reports	Project team	None	Quarterly
CDRs	Project Manager	None	Quarterly
Issues Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Risks Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Lessons Learned Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Mid-term Evaluation	Project team UNDP- CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)	$17,000	At the mid-point of project implementation.
Final Evaluation	Project team, UNDP-CO UNDP-GEF Regional Coordinating Unit External Consultants (i.e. evaluation team)	$35,000	At the end of project implementation
Terminal Report	Project team UNDP-CO local consultant	Funds are budgeted for local consultants to assist where needed (approximately $2,000)	At least one month before the end of the project
Lessons learned	Project team UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, etc.)	Funds are budgeted for local consultants to assist where needed (approximately $10,000)	Yearly

[16]The GEF Guidelines can be accessed at http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf

Type of M&E activity	Responsible Parties	Budget US $ Excluding project team Staff time	Time frame
Audit	UNDP-CO Project team	$6,000	At least once during the lifetime of the project as per UNDP audit regulations
Visits to field sites	UNDP Country Office UNDP-GEF Regional Coordinating Unit (as appropriate) Government representatives	Paid from Implementing Agency fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US $ 75,000	

3. LEGAL CONTEXT

108. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the Standard Basic Assistance Agreement and all CPAP provisions apply to this document.

109. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

110. The implementing partner shall: (a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried; and (b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

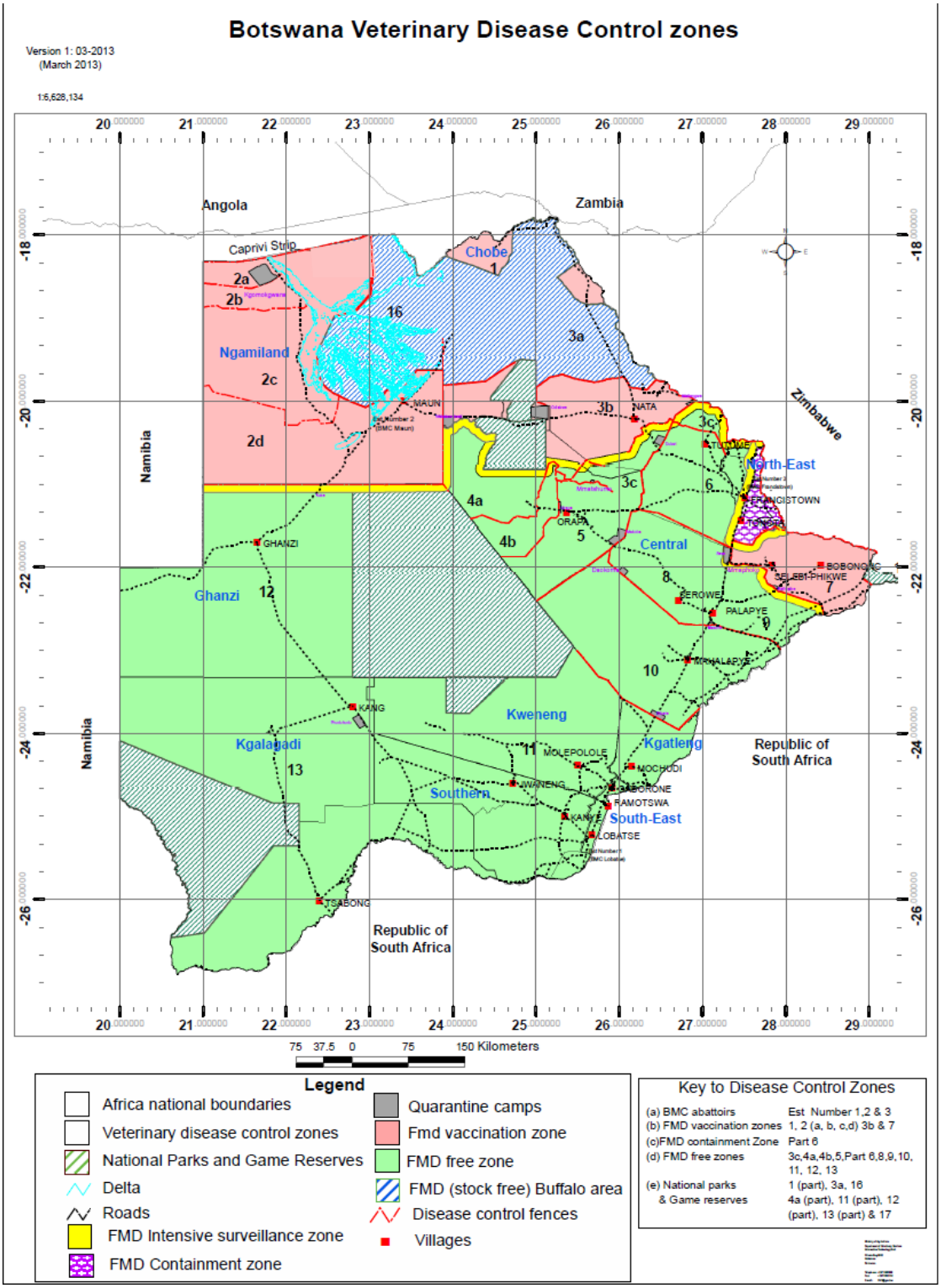
111. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

112. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

4. ANNEXES

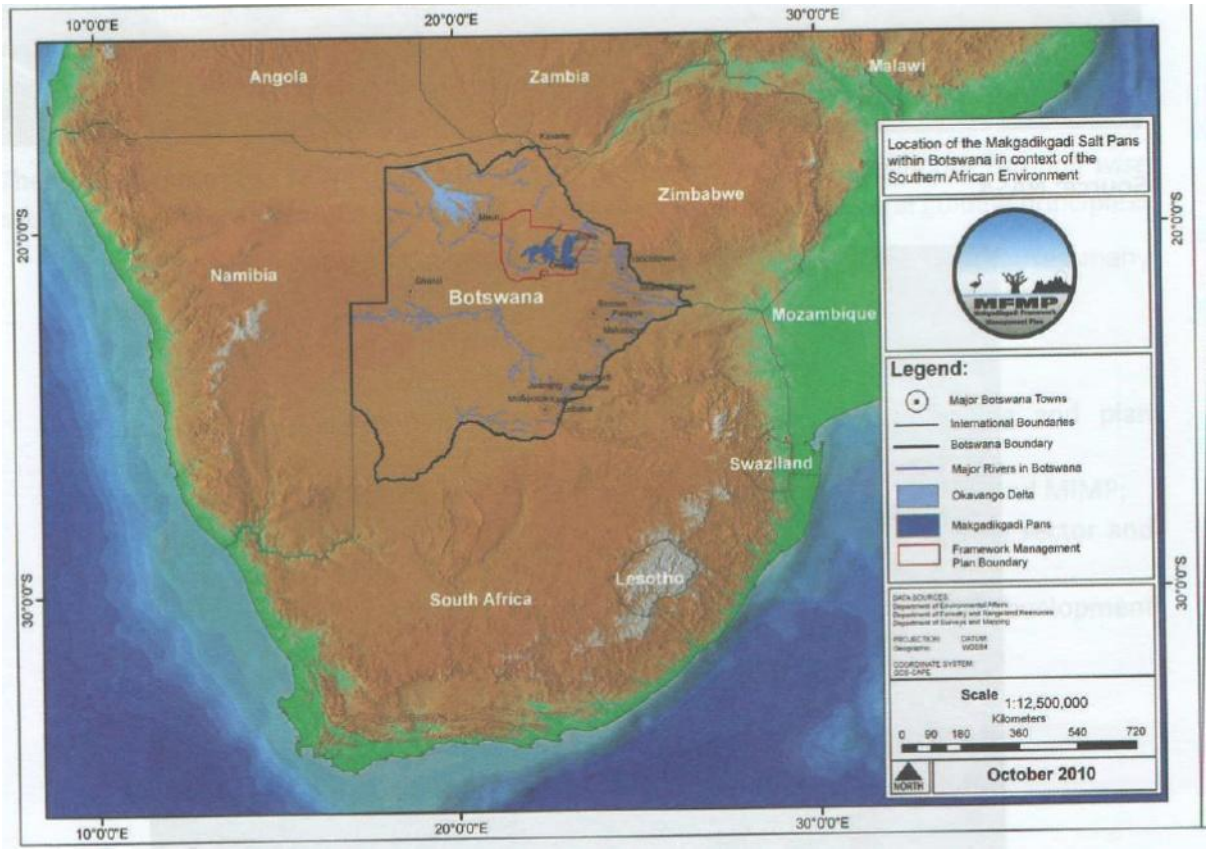
(Next page)

ANNEX 1:MAP OF VETERINARY DISEASE CONTROL ZONES



ANNEX 2: PILOT AREAS WHERE SUSTAINABLE RANGELAND MANAGEMENT WILL BE DEMONSTRATED

113. The Makgadikgadi ecosystem is located in the north-eastern part of the country (see Map 1), south-east of the Okavango Delta and south of the Chobe River front, both of which are major tourism centers in northern Botswana. The catchment area of the Makgadikgadi Pans is larger and extends into Zimbabwe in the east and north through the Nata River System. It is also linked to the Okavango system on the north-western side of the Boteti River. The wetland area is divided into the eastern Sua Pan and western Ntwetwe Pan. Each pan has a different catchment area, and both these catchments are considered priority catchments under the Southern Africa Development Community (SADC) Shared Water Courses Protocol. The two pilot areas for this project will be the Southern Sua Pan area (*Outcome 1*), where village-level conservation initiatives will be supported, while the project will also support district-level land-use planning process within the Boteti sub-district (specifically the region under the jurisdiction of the Letlhakane Sub land board), whilst also supporting the up-scaling of lessons from this sub-district to the Makgadikgadi Framework Management Planning (MFMP) area (*Outcome 2*).

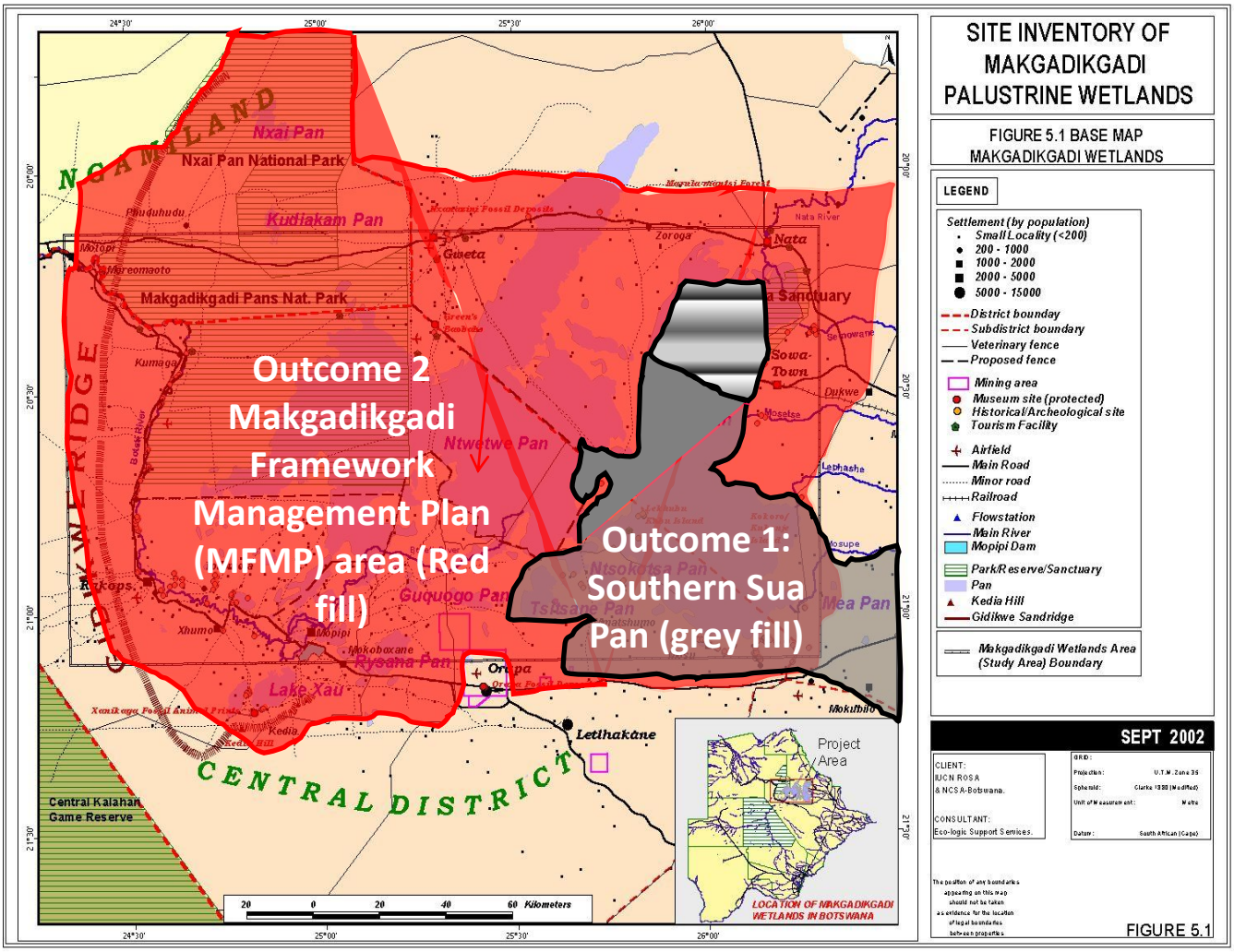


Map 1. Southern Africa showing Botswana and in red the Makgadikgadi Framework Management Plan (MFMP) area

114. The Makgadikgadi ecosystem largely falls within the Central District. The Central District has fourteen sub land boards, one of which is the Letlhakane Sub- Land Board. Its tribal territory covers the Letlhakane, Khwee, Kedia, Mokoboxane, Mopipi, Mmatshumo and Mosu villages. Before land was administered by the Land Boards in 1970, it was the responsibility of the Tribal Chiefs to manage land allocations.

115. The Makgadikgadi region has four protected areas (PAs), namely Makgadikgadi and Nxai Pan National Parks (State managed), Nata Sanctuary (community managed), Orapa Game Park (privately managed by Debswana mining company) and the Flamingo Sanctuary (co-managed by the State and local communities in Southern Sua Pan; the sanctuary forms part of the area within which the Southern Sua Pan community Trusts have user-rights). The buffer zones (around PAs) are comprised of multiple land use areas, ranging from livestock grazing, subsistence arable

farming, consumptive and non-consumptive tourism (although as of January 2014, trophy hunting has been suspended countrywide until further notice), veld products harvesting, human settlements, critical wildlife dispersal areas/corridors, and mining. Rangelands in the Makgadikgadi are characterized by resource competition, conflicts, land degradation and rural poverty. To pilot how these challenges may be addressed, this project will largely operate at two spatial scales (see Map 2) with *Outcome 2* at the larger spatial scale (Makgadikgadi Framework Planning area, and Boteti sub-district) and *Outcome 1* (focussing on finer spatial scale, with activities in Southern Sua Pan, and the neighbouring BotAsh mining lease area).



Map 2. Outline of pilot areas, with Outcome 2 activities implemented across the Makgadikgadi Framework Management Plan (MFMP) area (in red) and Outcome 1 activities implemented within Southern Sua Pan (grey fill, with neighbouring BotAsh lease area in shades of grey).

Pilot area 1. Makgadikgadi Framework Management Planning (MFMP) area, and Boteti sub-district (Outcome 2 activities)

Key SLM issues/problems

116. In the Makgadikgadi Framework Management Plan (MFMP) area, as with much of Botswana, key pressures on biodiversity have been identified as land degradation and desertification, habitat fragmentation, fuel wood collection,

unsustainable harvesting of veld products, increased incidences of fire, arable agriculture, and hunting[17]. Habitat destruction and degradation can be caused by a variety of factors ranging from direct destruction through construction of houses, roads and other infrastructure, to damage caused by pollution, unsustainable land and resource use, including unsustainable rangeland management (localized overgrazing and bush encroachment), over harvesting and excessive water abstraction. National statistics suggest that human population density *per se* is not a threat to biodiversity in Botswana, but that in some areas the activities related to increases in population pressure are. For example, excessive harvesting of fuel wood is starting to emerge in the eastern corridor of the country. Climate change is today a reality, but in Botswana mitigation of its effects is complicated, as the changes are not yet clearly understood. However, global long-term predictions are that rainfall patterns will get more erratic and that dryland countries can expect to get drier and hotter. Botswana is already considered an arid country, so this scenario will have serious long-term implications on the country's biodiversity, and may affect distribution of species and habitats, and influence livelihoods based on agriculture and rangelands. An increase in the frequency of droughts and floods will also seriously affect agrobiodiversity activities[18]. Moreover, water is a key commodity sustaining biodiversity. Water is already a scarce resource in many parts of the MFMP area and with climate changing, the need for wise water management is even more important. This does not only include reaching sustainable consumption levels, water accounts and hydrological monitoring, but also implementation of Environmental Impact Assessment mitigation activities, such as reducing water pollution levels and improving water conservation awareness levels.

117. The root causes leading to unsustainable rangeland management and biodiversity loss are often quoted as being related to poverty, inequality, economics and demographic change. Poverty results in forced overuse of resources, while the general increase in development levels often results in an influx of people into towns and villages adding pressure on fuel wood resources and water demand, for example, and changes in attitudes towards traditional methods and knowledge. In the case of especially sites such as the MFMP, one of the root-causes affecting biodiversity and unsustainable rangeland management is land allocation and associated land- use. The promotion of the cattle industry, with associated issues such as grazing rights and fencing continues to be an issue of contention, not only between the agricultural and environmental sectors, but between the communities and cattle owners as well. Management of the rangeland resources and related knowledge depend on the capacity and health of people, and in this respect the long-term effects of HIV/AIDS on the management of rangeland resources and knowledge cannot be understated. Continued training programmes and collection and recording of traditional crops, breeds and knowledge are therefore very important.

118. Within the MFMP area, the issue of bush encroachment, which is largely induced by livestock grazing patterns, is probably compounded by the high salt content of the soils, also affecting vegetation in some areas. The combined effect of large and growing herds, shrinking pasturelands, and disregard for sustainable principles of range management in the livestock sector have led to serious rangeland degradation, bush encroachment and loss of perennial grass cover. According to the MFMP, stocking rate estimates for the area suggest that the rangelands are marginal for livestock keeping due to poor forage on halomorphic soils and predominantly saline underground water. Consequently, improved community rangeland management is a key priority, and thus this project is highly relevant and timely.

119. The high incidence of fire is recognized as one of the principal causes of structural and compositional change of vegetation in the MFMP. The high incidence of hot dry-season fires appears to be resulting in the loss of emergent woody vegetation. Within parts of the MFMP, such as the Southern Sua Pan some of the recommendations[19] to mitigate these negative impacts of wild fires include the need to promote 'cool burning' i.e. early winter burning; however, effective implementation of these recommendations through community based natural resource monitoring and management approaches should form a major part of sustainable land management in the affected areas of the MFMP.

120. Additional pressure on the ecosystem comes from arable farming and unsustainable harvesting of veld (grasslands) products by the growing population; however within many parts of the MFMP, there are additional concerns that

[17] State of the Environment Report. 2002. Ministry of Environment, Wildlife and Tourism. Government of Botswana.
[18] Botswana Initial Communication to the United Nations Framework for Convention on Climate change, 2001
[19] BirdLife Botswana and Department of Wildlife and National Parks, 2012. Southern Sua Pan Management Plan.

much of the resource extraction is by people from outside of this area. Across the MFMP, arable farming is characterized by the growing of traditional crops such as sorghum, maize, water melons and sweet reed, mostly for subsistence purposes; notwithstanding, arable farming is the main source of livelihood. For instance, out of 8 MFMP villages where a comprehensive analysis of livelihoods was undertaken as part of the MFMP development, at least 72% of the households benefited from the activity, with livestock farming second at 56%. The major sources of livelihoods were government support (33%), informal employment (24%), formal employment (19%), remittances (15%) and *Ipelegeng* (a government-funded labor-intensive drought relief programme, 14%) respectively (MFMP, 2010). Agriculture is complemented by collection of veld products (such as *mophane* worm, thatching grass, wild fruits, medicinal plants etc.). Similar to the livestock production sector, these livelihood activities are contributing to ecosystem degradation due to the fact that they are being undertaken without due consideration for sustainability; there is therefore a need to formulate regulations for natural resource harvesting, with regards to where and when to harvest, as well as quantities to harvest. Permits need to be issued to allow for better control of natural resource utilization and facilitate monitoring, with particular emphasis on monitoring extraction by people from outside the MFMP to ensure that over-extraction (according to allocated license) is not occurring. Additionally, there are strong suspicions (which will be quantified in this project) that rangeland degradation due to high livestock grazing pressure is negatively affecting some important veld products (such as Hoodia) and other biodiversity-rich areas supporting important flora species, which further emphasizes the need to reduce pressures on natural resources from competing land uses in the wider landscape so as to enable other resource users to continue deriving the ecosystem services they currently receive from rangelands.

Specific pilot SLM activities

121. *A regional multi-stakeholder forum for facilitating dialogue on SLM and mainstreaming SLM into regional and national policy programs*: This project will support the formation of a regional multi-stakeholder SLM forum (at the MFMP level) to lead dialogue on mainstreaming SLM considerations in planning and implementation of critical national and regional policies, plans and strategies. To the best extent possible, the project will strengthen existing governance structures created by and servicing the MFMP outcomes, and notably lobby for, and support the representation of Farmer's Associations in the MFMP structures, notably the Makgadikgadi Wetlands Management Committee (MWMC).

122. *Decision-making support tool for Letlhakane sub-land board and Physical Planning Unit (Boteti sub-district council):* At the sub-district-level, this project will support the appropriate Physical Planning Unit (who draw sub-district-wide land use plans) and sub-Land Board (who issue land certificates and land ownership/user rights, and thus effectively implement the land use plans) with appropriate tools, training, information and plan with SLM considerations in mind, whilst also ensuring that the sub-district-wide land use plans minimises land-use conflicts, whilst maximising the potential benefits that could be obtained from especially communal rangelands.

123. *System for monitoring of range condition and productivity*: The objective of the monitoring system will be to serve as a decision support tool for farmers to help them in planning and implementing SLM strategies, as well as re-evaluating these strategies based on results and impacts. The monitoring system will essentially be designed as a community level management-oriented monitoring system (MOMS). Although primarily applied within the Southern Sua Pan region, this tool should enable the development of a robust M&E system for the condition of rangelands in the Boteti sub-district, which assessment would be championed by the Farmers Associations, working in close partnership with the relevant government officials, with technical backstopping from the Project Management Unit and external consultants as required.

Pilot Area 2: Southern Sua Pan, and the neighbouring BotAsh mining lease area (Outcome 1)

124. Activities at this pilot area will be in two main categories: those implemented largely on communal rangelands in Southern Sua Pan, and those piloting water conservation within the BotAsh mining concession area, with the mine then supporting the roll-out of information dissemination, technologies and other infrastructural support to farmers in the neighbouring rangelands. Thus, the BotAsh participation effectively represents a South-South knowledge transfer of skills and resources between BotAsh and the farmers.

125. Brief description of the Southern Sua Pan area: The international RAMSAR agreement management planning process highlights that both ecological and social linkages are important in defining management area boundaries. This was

taken in consideration when defining the boundary of the area. In identifying the boundary for the pilot site, for the natural resources to be managed by the four communities (from the villages of Mmatshumo, Mosu, Mokubilo and Mmeya), a systematic approach combining geophysical, hydrological and ecological characteristics and features with those of the social, administrative and infrastructural boundaries of the area was used. This extensive area of rangeland contains both wildlife and livestock. Of the total 5,450 km² of the pilot site, 2,950 km² is salt pans, 1,800 km² is Mopane and sandvelt, and 700 km² is Mopane woodland. The current land uses for all the non-pan areas are pastoral, arable and residential. On the other hand, the salt pans area includes a 24 km by 7 km Flamingo Sanctuary, gazetted as a protected area in 2010.

Map 3. Outline of Makgadikgadi Pans showing boundary line of the Southern Sua pan pilot site

Key SLM issues/ problems:

126. As with the rest of the MFMP, overgrazing has led to severe rangeland degradation, observed through transformation of the grassland composition from predominantly perennial to annual grass species, and bush encroachment, particularly by *Acacia mellifera* and *Dichrostachyis cineria*.

127. Across this area, there is limited to no rangeland management. The area is dominated by communal rangelands, where the primary form of land management by the Land Board is to restrict the density of cattlepost development with a minimum 6 km permissible distance between cattlepost boreholes. There is no structured community management of the rangeland owing to the collapse of the traditional range management practices in recent decades.

128. As with the rest of the MFMP, although arable farming is a significant economic activity, there is presently much use of arable farming practices which fail to integrate SLM intensions. Moreover, the use of veld products is largely unsustainable and fails to incorporate local level (indigenous) sustainable practices. Unsuitable harvesting of veld products (grasses, poles, and edible veld products) has increased as commercialization increases. There is also a lack of organized markets, and low levels of value-addition to the veld products which are often sold raw and at low prices. There is a notable intrusion of outsiders who come in large numbers to harvest indiscriminately and without any monitoring.

129. With unpredictable change of climate people need to understand adaptive measures. This project will facilitate local communities' adaptive measures to climate change, notably through the promotion of conservation agriculture.

Specific SLM pilot activities:

130. *Local-level land use plans*: Central District has a regional Integrated Land Use Plan which defines broad zones of land use. Although traditional land zoning at local level still exists for most settlements, these are not recognized by government, and interference from the land authority, often without consultation with the local leaders and their community, has resulted in land-use conflicts between traditional land uses and the so-called alternative modern ones such as tourism. For this pilot site, local land use plans will be developed for each of the four villages of Mmatshumo, Mokubilo, Mmea and Mokubilo, to ensure the existence of agreed-upon local-level land zoning on which the land authority will base its land allocations. Participatory methods will be used to conduct land use and land needs situational analysis studies as part of the broader integrated range management studies. This will form the basis for agreed local land use zoning.

131. *Conservation agriculture*: Soils in this area are saline and characterized by low fertility, rainfall is variable and crop failure is common. The project will pilot a labour-intensive soil and moisture conservation crop production system (conservation agriculture, CA) which has been tried and found to be productive in parts of Namibia with similar conditions (CA has recently been piloted in Ngamiland, and this project will seek to benefit from initial lessons from that district). CA has also been found to greatly reduce the need to clear large tracks of land and will hence reduce clearing of presently vegetated habitats, further aiding SLM objectives. Activities to be supported will include exchange visits, and training and experimentation by implementing the system on-the-ground with volunteer farmers.

132. *Sustainable veld products harvesting and marketing*: The project will pilot a community based sustainable veld products management, harvesting and marketing imitative. An assessment of the current veld products harvesting, availability, and other SLM-relevant issues, will be done, following which a deliberate and targeted intervention will be supported, guided by the communities' priority of veld products on which to focus.

133. *Community rangeland monitoring and management teams*: Working with both pastoral and arable farmers, this project will train rangeland management teams to establish, record and ensure the continued protection of rare, endangered or endemic plant species throughout the area, using systems such as MOMS, and BirdLife's Important Bird Area (IBA) monitoring and Bird Population Monitoring (BPM) programs. Wind is an important meteorological factor in the Makgadikgadi, and dust deposited has a considerable impact on the soil chemistry down-wind, so teams will be capacitated to monitor critical wind and soil parameters for local management purposes.

134. *Enhancement of the community based rangeland governance structures*: The project will strengthen farmers associations (at a regional/sub-district level), farmers committees (at a village level), and also strengthen the SLM work of the community Trusts. With these structures strengthened, farmers, and the Trusts, would then be able to effectively articulate their concerns in management and planning structures where issues pertaining to rangelands are discussed.

135. *Fire management*: Effective fire management strategies will be implemented, so as to halt widespread range degradation and negative damage to key range resources that is occurring. The Department of Forestry and Range Resources will guide the development and implementation of a Southern Sua Pan Fire Strategy. An integrated fire management committee will be formed and supported to develop and implement the strategy.

136. *Brief description of the Botswana Ash area*: Located at Sua Pan, Botswana Ash (BotAsh) is one of Africa's major producers and suppliers of soda ash and salt. The aim was to build a soda ash and salt plant to exploit the natural resources of Sua Pan and provide most of South Africa's soda ash requirements. This has been achieved as BotAsh supplies almost all of its soda ash into South Africa and accounts for 70% of that country's needs.

137. Soda ash (sodium carbonate) produced by BotAsh is a basic chemical used mainly in glass manufacture, metallurgical applications, the detergent industry, and chemical manufacture. The product is extracted from alkali-rich brine which exists beneath Sua Pan. Salt is BotAsh's other major product, which is obtained as a by-product; the salt deposits in the solar pond crystallisers as the brine concentrate during the time when the brine is left in the 'evaporation ponds'.

138. BotAsh believes that its continued existence depends on the sustainable management of its resources and on the way it safeguards the natural environment. For this reason it continually manages and controls the effect of its operations on the environment. Despite a hot and semi-arid climate, birdlife is prolific in the area. Sua Pan itself is a major flamingo breeding ground, attracting tens of thousands of flamingos, as well as other species, which flock to the pans

in the rainy season. The company plays an active role in the preservation of all flora and fauna in its lease area, and has sponsored an important research project on the ecology of this special environment and the breeding and feeding habits of flamingos. The company has also adopted the flamingo as its corporate symbol.

Key SLM issues/problems

139. BotAsh's contribution towards this project is to help reduce water consumption. Due to its nature the BotAsh plant consumes a lot of water (Table 1), which is used for the washing of the products during processing. The mine also extracts underground water concentrated in sodium chloride (brine), which is put on evaporation ponds and the salt crystallises. This has a negative impact on the ground water capacity.

Table 1. Water consumption and demand for Sowa township and BotAsh mine

Month	Amount (m3)		Average daily demand	Peak
	Botash	Sowa Town		
Jan	31096	37978	2228	2803
Feb	29829	38095	2425	3247
March	32527	45458	2515	2961
April	29874	44964	2494	3200
May	32370	49763	2649	3341
June	29692	48029	2550	3286
July	29462	47534	2483	4651
August	26464	42663	2229	3158
Sept	24765	38484	2108	3206
Oct	29657	40927	1320	2903
Nov	28442	39402	1262	1336
Dec	29186	42421	1411	1711

Source: Sowa Township Authority, 2003

140. Furthermore, the brine itself is extracted from underground water across the BotAsh mine lease area of the pans. It has been hypothesized, but never tested and quantified, that excessive groundwater extraction, especially around the pan fringes, could affect soil salt content on the neighbouring terrestrial habitats, which changes could then affect rangelands, most probably through the encroachment of woody vegetation in previously non-woody areas, including grasslands. This project will work with BotAsh to investigate the possible relationships between ground water extraction and water quality, and changes in rangeland characteristics. This project will fill the knowledge gap that presently exists regarding whether changes in soil properties and groundwater table depletion are indeed present, and linked to mining activities, and this analysis will also include a strong climate change component to assess the role of rainfall variability (presently, and into the future) due to the global climate change phenomenon; this gives opportunity for synergistic implementation of the UNCCD and UNFCCC conventions. Additionally, due to the interest by BotAsh in flamingo conservation, financed by the mining company, there are also linkages to the CBD.

141. The possible implications of brine mining need to be seen within the broader context of water quality, and thus links to SLM through suitable water for livestock watering, and human consumption, across the MFMP. Groundwater quality in the Makgadikgadi catchment is variable (Vogel 2004). In general the most saline water occurs around Rakops and other sections of the Boteti as well as Letlhakane (Map 4). It is assumed that such shallow groundwater is subject to prolonged evaporation. Water at Gweta and Dukwi are pumped from some of the karstic terrain, which is fresher in nature and more suitable for human consumption.

142. The Sua Pan itself hosts 2 types of groundwater: the shallow near-surface water, as well as the deeper saline brine. Gould (1986) suggests that the Pan holds 8,013,000 m^3 of brine containing 1,026,000 tons of sodium chloride and 233 million tons of sodium bicarbonate. It was concluded that current river water has little to do with the development of the brine and that recharge from the surface was unlikely, which was supported in part by isotope analysis carried out by Eckardt et al (2008).

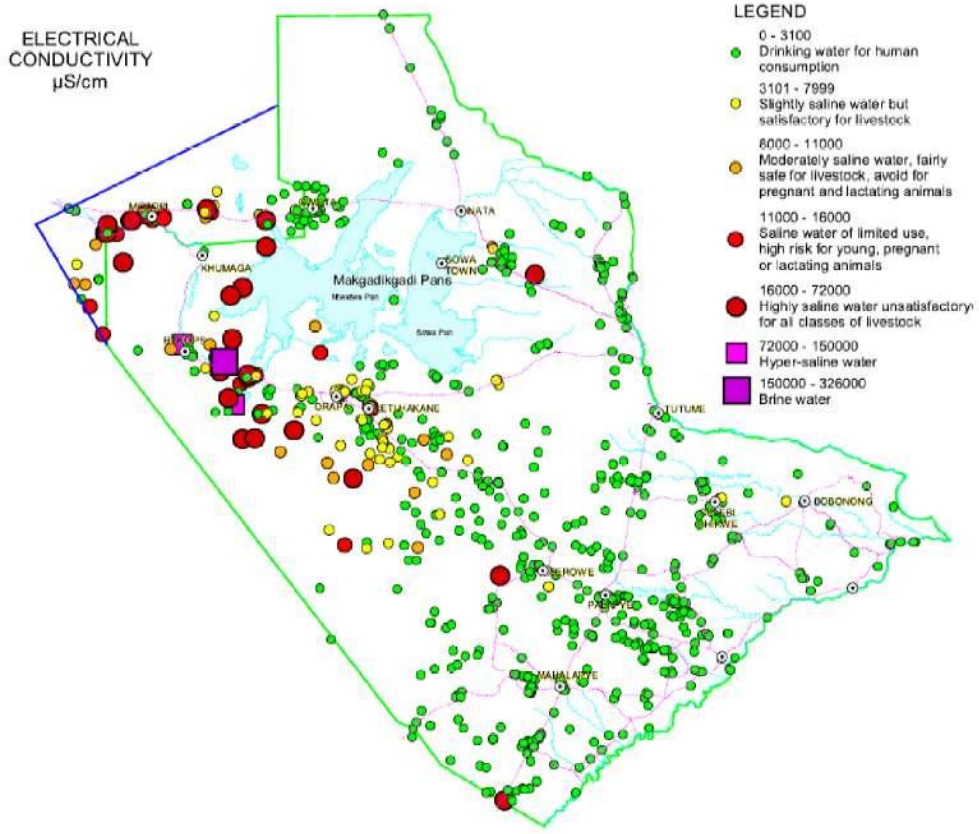
143. BotAsh pump from over 90 well points in the north basin of Sua Pan and aim to expand to an area that covers much of the middle basin of Sua Pan, for which they already have a prospecting licence for and are drilling some test boreholes. Pump rate is approximate 2 400 m^3/hr and pump rate is inversely related to Total Dissolved Solids,

suggesting little brine recharge and decoupling of surface and subsurface waters. Pump rates of 3 500 m^3/hr are considered feasible with the expansion.

144. The implication for SLM is that some ground water (from which livestock are watered) in Southern Sua Pan is saline, and as human and livestock population increases, the available water may not be enough. Rather than drilling more and more boreholes, this project will not only facilitate harvesting of rain water, but also provide programs that encourage recycling of available water. Through BotAsh co-financing, the mining company will develop innovative means to cut their own water use, and working with BirdLife Botswana, support independent research to investigate linkages between brine mining and the water quality and quantity in neighbouring rangelands.

Specific SLM pilot activities

145. *Water conservation by BotAsh (financed by the company)*: Working with the PMU, BotAsh will investigate innovative ways to conserve water used for the mining operations. A tentative target (to be finalised at project inception) is a reduction of at least 10% in water usage by the end of project. Water consumption will be analyzed every month to see the progress of the strategy. The following will be suggested in order to meet the target: (i) System Side Management (to detect and minimize water losses within the system, a comprehensive leak detection survey of the water system will be done annually); (ii) Consumption Side Management (avenues to reduce water use, including through investments in new and innovative technology); (iii) Educational outreach (mine staff, contractors and public will be educated on water conservation and the importance of water conservation). All these activities will be financed by BotAsh.



Map 4. Groundwater quality data from boreholes throughout the MFMP area (Vogel, 2004)

Rain water harvesting and water conservation in Southern Sua Pan area: On the basis of lessons and experiences from their own water conservation initiatives, BotAsh will support water conservation by livestock farmers in Southern Sua Pan, which support would be guided by both the company's lessons learnt, and the needs of the farmers as articulated through their Farmer's Associations. The GEF grant

would be used to support only the knowledge management and information dissemination activities of this output.

ANNEX 3: ALTERNATIVE LIVELIHOODS

Livelihood activity	*Current situation*	Opportunities for expansion	Challenges	Project strategy/ activities
Livestock products	Although the livestock sector generates important cash and in-kind benefits, the current use value appears very low. Grazing areas cover a large part of the MFMP area, and are often degraded, especially around villages.	District has a large herd of cattle. The sheer number of livestock translates into an opportunity for growth for the livestock sector. The strategy towards livestock for the MFMP should focus on improving productivity and livelihoods benefits from existing grazing areas, and to reduce conflicts with wildlife and crop production. Rather than expand livestock grazing areas, focus should be on better use of the existing areas.	*Challenges to increasing markets for beef products and thus increasing off-take rate include the following*: Government policies in the district appear to favour the tourism sector. For instance, tourism land uses encroach into grazing areas in the district; There is significant wildlife-livestock conflict which manifests through predation; Drought events present a significant challenge, and the supply of fresh drinking water is also a limiting factor, resulting in clustering of boreholes and thus inflated cattle densities in areas with fresh water, and consequently greater range degradation as a result of overgrazing; and Land available for various economic sectors is rapidly shrinking, mainly due to encroachment of settlements into ploughing fields, which, in turn, encroaches into grazing areas.	Understanding of the bottlenecks to livestock productivity and improving livestock productivity at the farmer-level. Promoting better kraaling and herding practices to reduce the losses to predation by mammalian carnivores. Rangeland management improvements (driven by farmer's committees and farmer's associations) to be promoted and adopted to prevent overstocking and range degradation.
Crop production	This is mainly undertaken at the subsistence level for domestic consumption and not commercially. Major crops are cereals (maize and sorghum). Many of the fields are unfenced, due to limited financial resources, which then results in greater yield loss due to both domestic stock and wildlife.	Conservation agriculture has been introduced (in principle, a one village, Mokubilo), but with little update and backstopping available to farmers; it is important that the district emphasizes conservation agriculture. Cluster fencing of fields (which is subsidized by government) would help minimise conflicts with livestock and wildlife. Cooperative/communal effort in weeding, chasing birds and other wildlife raiders, which would be facilitated by cluster fencing. .	Low soil fertility. Much of the Makgadikgadi is covered by the Kgalagardi sands which are devoid of many vital soil nutrients which are necessary for plant growth. The cost of improving these soils is often beyond what farmers can afford. Human-wildlife conflict. Majority of the area that is planted is destroyed by wildlife.	Pilot conservation agriculture which helps improve soil fertility and conserves soil moisture. Conservation agriculture also increases yields significantly and reduces the need to plough large areas. Small areas are easy to weed and control pests (including wild and domestic animal field raids and crop destructions). Where feasible, cluster farming will be promoted, especially where it would be possible to engage in communal/cooperative efforts in weeding, chasing crop raiders, and utilising cooperatives to store and/or market crops. Innovative means to keep quelea off crop fields using trained falcons will be piloted (this would also help reduce the

Livelihood activity	*Current situation*	Opportunities for expansion	Challenges	Project strategy/ activities
				amount of pesticides used to try and keep quelea numbers low).
Wildlife Tourism	Currently, the tourism sector in the district is foreign-dominated, mainly by South Africans. Tourism is underdeveloped, but there is potential for growth	There is an opportunity for tourism expansion that benefits local livelihoods and participatory park management (community-management of other areas of high tourism potential). Areas of Tourism Potential have been identified (largely by the MFMP process, and lately by Botswana Tourism Organisation) across much of the Makgadikgadi, including parks, sanctuaries, and other sites of biodiversity, archaeological, heritage and scenic significance.	Local communities believe that tourism is always favoured by the government over agricultural sector. These perceptions result in a negative attitude towards biodiversity, which is the main driving factor behind tourism. The tourism sector is booming and hence a source of resentment amongst the locals. Another significant challenge facing the tourism sector in the district is that of increasing local participation in the industry. Local tourism businesses account for a very small percent, which mainly include guest houses and small entities. Large operations which generate sufficient revenue are white foreign dominated. Funding to increase local participation in the tourism sector is another limiting factor.	Piloting of community-managed campsites. Participation of local population and CBOs in the management, protection and development of archaeological and heritage sites, especially those supporting stands of Morula or Baobab trees considered to be national monuments. Tourism marketing and branding of the protected and special trees, and their associated fauna and flora.
Veld products	Products produced for commercial purposes include timber poles for fencing (game and beef ranches), wooden sculptures, baskets, and medicinal plants. A key concern is that many of these veld resources are utilised by people from outside the Makgadikgadi, with residents deriving minimal economic benefits from these resources.	Several veld products can be harvested such as honey, wild fruits and tubers, medicinal plants, herbal teas, *mophane* worms etc; this is an untapped market. Consultations with communities involved in the veld product sector revealed that the demand for products is significant. However, they indicated that currently, only outsiders (who presumably have better resources to enable them take the products to market) are exploiting these resources. Therefore, there is an opportunity to organise local citizen to harvest and then process the products (value-addition), so that even if they sell to the outsiders, they at least generate significant income; in the long-term, communities can be supported to sell to the national and international market directly (e.g. utilizing internet services to sell on-line). There already exist models (e.g. Kgetsi-ya-tsie, in Tswapong) which CBOs can adopt for managing their veld products activities.	Widespread fire events in the district have catastrophic impacts on availability of natural resources used to produce products. The extensive illegal harvesting of natural resources could result in unsustainable utilization and subsequent decline in natural resources in the district. There is lack of monitoring of harvesting rates and stock inventory exercises. A harvest permit allocation system already exists at DFRR, and this should be used as a tool to ensure sustainable harvesting. Communities lack capacity to undertake extensive marketing and transportation of their products to access markets in other major cities such as Francistown and Gaborone. Lack of capital to market internationally and regionally relegates the communities and traders to sell within the Makgadikgadi where the demand is low and supply high.	Pilot integrated fire management in southern Sua Pan. Pilot a community based sustainable veld products management, harvesting and marketing project in southern Sua pan. An assessment of the veld products harvesting and availability situation and issues will be undertaken. Depending on the situation there could be deliberate focus on wild fruits. Identification and mapping of the main veld products in southern Sua Pan, with community participation and based on local knowledge, will represent a major output through which to obtain official recognition of veld product use in sustainable development and land use planning.

Livelihood activity	*Current situation*	Opportunities for expansion	Challenges	Project strategy/ activities
Minerals	Some communities have identified particular soils that are either used for beauty products, or construction, but whose extraction is regrettably unregulated presently. Additionally, there are also some farmers (including those coming from outside the Makgadikgadi), who occasionally harvest salt from the pans, for feeding to their livestock.	Regulated harvesting and sale of the minerals, by the community trust, would improve both their income earning opportunity, whilst minimising the negative impacts on the landscape due to unregulated harvesting of the soils and salt.	Important soils are not mapped at localised scales; identification and mapping of the important areas for soils and salt that can be used for community-managed enterprises, with community participation and based on local knowledge, will enable for official recognition of these soils and salt deposits, and allow for better controls on access and harvesting of these resources.	Small-scale salt harvesting and production will be piloted in southern Sua Pan, with BotAsh providing technical backstopping. Supplementary feeding of the salt to livestock in the area, which would be facilitated by the ability of the Trust to collectively harvest the salt, and then sell at subsidized rates to the local community, should contribute towards improved livestock productivity; this project will aim to systematically test this assumption.

ANNEX 4: CAPACITY DEVELOPMENT SCORECARD

Summary results from the Capacity Development Scorecard

Strategic Areas of Support	Systemic			Institutional			Individual			Average %
	Project Scores	Total possible score	% achieved	Project Scores	Total possible score	% achieved	Project Scores	Total possible score	% achieved	
(1) Capacity to conceptualize and formulate policies, legislations, strategies and programs	2.4	6	40	2	3	6.66	n/a	n/a	n/a	53.33
(2) Capacity to implement policies, legislation, strategies and programs	1.4	3	46.66	11.6	24	48.33	7	12	58.33	51.1
(3) Capacity to engage and build consensus among all stakeholders	3	6	50	3	6	50	2	3	66.66	55.55
(4) Capacity to mobilize information and knowledge	1	3	33.33	1	3	33.33	2	3	66.66	44.44
(5) Capacity to monitor, evaluate, report and learn	2	6	33.33	2	6	33.33	2	3	66.66	44.44
TOTAL Score and average for %'s	**9.8**	**24**	**40.83**	**19.6**	**42**	**46.66**	**13**	**21**	**61.90**	**49.79**[20]

Detailed results from the Capacity Development Scorecard

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
1. Capacity to conceptualize and formulate policies, legislations, strategies and programs										
	Systemic	The SLM agenda is being effectively championed / driven forward	0 -- There is essentially no SLM agenda; 1 -- There are some persons or institutions actively pursuing a SLM agenda but they have little effect or influence; 2 -- There are a number of SLM champions that drive the SLM agenda, but more is needed; 3 -- There are an adequate number of able "champions" and "leaders" effectively driving forwards a SLM agenda	1	2	1	n/a	0	0	Weak policy and legal support

[20] The average capacity score of 49.79% for the whole institutional environment for SLM in Makgadikgadi is far below the 70% capacity required for medium support for SLM. This is because there is serious capacity building needs at the systemic and institutional levels which score 40.83% and 46.66% respectively.

[21] Capacity assessment for Birdlife Botswana not added to summary score.

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
	Systemic	There is a strong and clear legal mandate for the establishment and management of SLM structures	0 -- There is no legal framework for SLM; 1 -- There is a partial legal framework for SLM but it has many inadequacies; 2 – There is a reasonable legal framework for SLM but it has a few weaknesses and gaps; 3 -- There is a strong and clear legal mandate for the establishment and SLM structures	2	3	1	n/a	1	1	The legal framework offers weak support for SLM
	Institutional	There is an institution responsible for SLM able to strategize and plan (this is 2 issues - needs separating, 1 Systemic, 2 institutional)	0 – Potential SLM institutions have no plans or strategies; 1 – Potential SLM institutions do have strategies and plans, but these are old and no longer up to date or were prepared in a totally top-down fashion; 2 – Potential SLM institutions have some sort of mechanism to update their strategies and plans, but this is irregular or is done in a largely top-down fashion without proper consultation; 3 – Potential SLM institutions have relevant, participatorially prepared, regularly updated strategies and plans	2	2	2	3	2	2	DLUPU has no plans and strategies. The institution does not implement its integrated planning mandate
2. Capacity to implement policies, legislation, strategies and programs										
	Systemic	There are adequate skills for SLM planning and management	0 -- There is a general lack of planning and management skills; 1-- Some skills exist but in largely insufficient quantities to guarantee effective planning and management; 2 -- Necessary skills for SLM planning do exist but are stretched and not easily available; 3 -- Adequate quantities of the full range of skills necessary for effective SLM planning and management are easily available	1	2	2	2	1	1	Serious staff and skills shortages at District level.
	Institutional	SLM institutions are effectively led	0 – Potential SLM institutions have a total lack of leadership; 1 -- Potential SLM institutions exist but leadership is weak and provides little guidance; 2 -- Potential SLM institutions have reasonably strong leadership but there is still need for improvement; 3 -- Potential SLM institutions are effectively led	1	2	2	2	1	1	Leadership is weakened by lack of support from legal framework

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
	Institutional	There exists regularly updated, participatorially prepared, comprehensive management plans for SLM	0 – There are no SLM management plans; 1 -- Poor SLM management plans exists but they are typically not comprehensive and were not participatorially prepared; 2 – Good SLM management plans exist though some are old, not participatorially prepared or are less than comprehensive; 3 – There exist regularly updated, participatorially prepared, comprehensive management plan	1	1	1	n/a	1	1	Inadequate stakeholder participation
	Institutional	Human resources are well qualified and motivated	0 -- Human resources are poorly qualified and unmotivated; 1 -- Human resources qualification is spotty, with some well qualified, but many only poorly and in general unmotivated; 2 -- HR in general reasonably qualified, but many lack in motivation, or those that are motivated are not sufficiently qualified; 3 -- Human resources are well qualified and motivated.	1	2	2	3	1	1	Staff shortages and lack of motivation to work in remote areas
	Institutional	Management plans are implemented in a timely manner effectively achieving their objectives	0 -- There is very little implementation of management plans; 1 -- Management plans are poorly implemented and their objectives are rarely met; 2 -- Management plans are usually implemented in a timely manner, though delays typically occur and some objectives are not met; 3 -- Management plans are implemented in a timely manner effectively achieving their objectives	2	2	2	2	2	2	Staff and skills shortages
	Institutional	Potential SLM institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	0 -- Potential SLM institutions typically are severely underfunded and have no capacity to mobilize sufficient resources; 1 -- Potential SLM institutions have some funding and are able to mobilize some human and material resources but not enough to effectively implement their mandate; 2 -- Potential SLM institutions have reasonable capacity to mobilize funding or other resources but not always in sufficient quantities for fully effective implementation of their mandate; 3 -- Potential SLM institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	1	2	2	3	1	1	Government funding available for some institutions but grossly inadequate. DLUPU has no budget.
	Institutional	Potential SLM institutions are effectively	0 -- While Potential SLM institution exists it has no resources management role; 1 -- Institutional management is largely ineffective and	1	2	2	3	1	1	Top-down management reduces

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
		managed, efficiently deploying their human, financial and other resources to the best effect	does not deploy efficiently the resources at its disposal; 2 -- The institution is reasonably managed, but not always in a fully effective manner and at times does not deploy its resources in the most efficient way; 3 -- The potential SLM institution is effectively managed, efficiently deploying its human, financial and other resources to the best effect							operational capacity
	Institutional	Potential SLM institutions are highly transparent, fully audited, and publicly accountable	0 -- Potential SLM institutions totally non-transparent, not being held accountable and not audited; 1 – Potential SLM institutions are not transparent but are occasionally audited without being held publicly accountable; 2 -- Potential SLM institutions are regularly audited and there is a fair degree of public accountability but the system is not fully transparent; 3 -- Potential SLM institutions are highly transparent, fully audited, and publicly accountable	2	2	2	3	2	2	Audit largely internal for some institutions
	Institutional	There are legally designated SLM institutions with the authority to carry out their mandate	0 -- There is no lead institution or agency with a clear mandate or responsibility for SLM; 1 -- There are one or more institutions or agencies dealing with SLM but roles and responsibilities are unclear and there are gaps and overlaps in the arrangements; 2 -- There are one or more institutions or agencies dealing with SLM, the responsibilities of each are fairly clearly defined, but there are still some gaps and overlaps; 3 -- SLM institutions have clear legal and institutional mandates and the necessary authority to carry this out	1	1	1	n/a	1	1	Sectoral approach to NR management
	Individual	Individuals are able to advance and develop professionally	0 -- No career tracks are developed and no training opportunities are provided; 1 -- Career tracks are weak and training possibilities are few and not managed transparently; 2 -- Clear career tracks developed and training available; HR management however has inadequate performance measurement system; 3 -- Individuals are able to advance and develop professionally	2	2	2	3	2	2	Staff training and development managed centrally at headquarters
	Individual	Individuals are appropriately skilled for their jobs	0 -- Skills of individuals do not match job requirements; 1 -- Individuals have some or poor skills for their jobs; 2 -- Individuals are reasonably skilled but could further improve for optimum match with job requirement; 3 -- Individuals are appropriately skilled for their jobs	2	2	2	2	2	2	No clear strategy for job specific skills development
	Individual	Individuals are highly motivated	0 -- No motivation at all; 1 -- Motivation uneven, some are but most are not;	1	1	1	3	1	1	Staff not motivated to

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
			2 -- Many individuals are motivated but not all; 3 -- Individuals are highly motivated							work in remote areas
	Individual	There are appropriate systems of training, mentoring, and learning in place to maintain a continuous flow of new staff	0 -- No mechanisms exist; 1 -- Some mechanisms exist but unable to develop enough and unable to provide the full range of skills needed; 2 -- Mechanisms generally exist to develop skilled professionals, but either not enough of them or unable to cover the full range of skills required; 3 -- There are mechanisms for developing adequate numbers of the full range of highly skilled SLM professionals	2	2	2	2	2	2	Centralised staff development systems and high staff turnover are a problem
3. Capacity to engage and build consensus among all stakeholders										
	Systemic	SLM has the political commitment it requires	0 -- There is no political will at all, or worse, the prevailing political will runs counter to the interests of SLM; 1 -- Some political will exists, but is not strong enough to make a difference; 2 -- Reasonable political will exists, but is not always strong enough to fully support SLM; 3 -- There are very high levels of political will to support SLM	2	2	2	3	2	2	The broader sectoral system of NR governance makes it difficult to support SLM
	Systemic	SLM has the public support it requires	0 -- The public has little interest in SLM and there is no significant lobby for it; 1 -- There is limited support for SLM; 2 -- There is general public support for SLM and there are various lobby groups such as environmental NGO's strongly pushing them; 3 -- There is tremendous public support in the country for SLM	1	1	1	2	1	1	Due to lack of public participation in NR, SLM is not viewed as an option worth pursuing.
	Institutional	SLM institutions are mission oriented	0 -- Institutional mission not defined to cover SLM; 1 -- Institutional mission poorly defined to operationalise SLM and generally not known and internalized at all levels; 2 -- Institutional mission well defined and internalized but not fully embraced; 3 – Institutional missions are fully internalized and embraced	1	1	1	3	1	1	For example DLUPU not implementing integrated planning mandate
	Institutional	Potential SLM institutions can establish the partnerships needed to achieve their	0 -- SLM institutions operate in isolation; 1 -- Some partnerships in place but significant gaps and existing partnerships achieve little; 2 -- Many partnerships in place with a wide range of agencies, NGOs etc., but there are some gaps, partnerships are not always effective and do not always	2	2	2	3	2	2	Some key and primary stakeholders left out

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
		objectives	enable efficient achievement of objectives; 3 -- SLM institutions establish effective partnerships with other agencies and institutions, including provincial and local governments, NGO's and the private sector to enable achievement of objectives in an efficient and effective manner							
	Individual	Individuals carry appropriate values, integrity and attitudes	0 -- Individuals carry negative attitude; 1 -- Some individuals have notion of appropriate attitudes and display integrity, but most don't; 2 -- Many individuals carry appropriate values and integrity, but not all; 3 -- Individuals carry appropriate values, integrity and attitudes	2	2	2	2	2	2	Primary stakeholders complain of inappropriate attitude by some NR managers
4. Capacity to mobilize information and knowledge										
	Systemic	Potential SLM institutions have the information they need to develop and monitor strategies and action plans for the management of the land resources	0 -- Information is virtually lacking; 1 -- Some information exists, but is of poor quality, is of limited usefulness, or is very difficult to access; 2 -- Much information is easily available and mostly of good quality, but there remain some gaps in quality, coverage and availability; 3 -- SLM institutions have the information they need to develop and monitor strategies and action plans for the management of the land resources	1	1	1	3	1	1	Capacity and skills for this is very low at operational levels.
	Institutional	Potential SLM institutions have the information needed to do their work	0 -- Information is virtually lacking; 1 -- Some information exists, but is of poor quality and of limited usefulness and difficult to access; 2 -- Much information is readily available, mostly of good quality, but there remain some gaps both in quality and quantity; 3 -- Adequate quantities of high quality up to date information for SLM planning, management and monitoring is widely and easily available	1	1	1	3	1	1	No targeted research and monitoring for key areas
	Individual	Individuals working within SLM work effectively together as a team	0 -- Individuals work in isolation and don't interact; 1 -- Individuals interact in limited ways and sometimes in teams but this is rarely effective and functional; 2 -- Individuals interact regularly and form teams, but this is not always fully effective or functional; 3 -- Individuals interact effectively and form functional teams	2	2	2	2	2	2	The existing sectoral system lowers levels of integration and SLM
5. Capacity to monitor, evaluate, report and learn										
	Systemic	SLM relevant policy is continually	0 -- There is no policy or it is old and not reviewed regularly; 1 -- Policy is only reviewed at irregular intervals;	1	1	1	2	1	1	Policies reviewed at irregular

Strategic Area of Support	Target for Capacity Development	Outcomes	Outcome Indicators (Scorecard)	DFRR	Letlhakane Sub-Land Board	Boteti Sub district Council	BLB [21]	DCP	DAP	Evaluative Comments
		reviewed and updated	2 -- Policy is reviewed regularly but not annually; 3 -- National SLM relevant policy is reviewed annually							intervals
	Systemic	Society monitors the state of SLM	0 -- There is no dialogue at all; 1 -- There is some dialogue going on, but not in the wider public and restricted to specialized circles; 2 -- There is a reasonably open public dialogue going on but certain issues remain taboo; 3 -- There is an open and transparent public dialogue about the state of land resources	1	1	1	1	1	1	Limited public participation
	Institutional	Institutions are highly adaptive, responding effectively and immediately to change	0 -- Institutions resist change; 1 -- Institutions do change but only very slowly; 2 -- Institutions tend to adapt in response to change but not always very effectively or with some delay; 3 -- Institutions are highly adaptive, responding effectively and immediately to change	1	1	1	2	1	1	Very slow change on the rare occasion when policy is reviewed
	Institutional	Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	0 -- There are no mechanisms for monitoring, evaluation, reporting or learning; 1 -- There are some mechanisms for monitoring, evaluation, reporting and learning but they are limited and weak; 2 -- Reasonable mechanisms for monitoring, evaluation, reporting and learning are in place but are not as strong or comprehensive as they could be; 3 -- Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	1	1	1	2	1	1	Capacity for this is low. Is affected by shortage of personnel at operational levels
	Individual	Individuals are adaptive and continue to learn	0 -- There is no measurement of performance or adaptive feedback; 1 -- Performance is irregularly and poorly measured and there is little use of feedback; 2 -- There is significant measurement of performance and some feedback but this is not as thorough or comprehensive as it might be; 3 -- Performance is effectively measured and adaptive feedback utilized	2	2	2	2	2	2	Most institutions measure performance every year but feedback is not used

ANNEX 5: RISK ANALYSIS

Risk	Rating	Mitigation measures
Lack of buy-in from planning institutions and Government. There is a possibility of conflicts arising from perceptions of interference and differences on approaches to how the issues could be addressed, especially between government institutions and civil society organizations.	M	The project requires collaboration and coordination by all key stakeholders. It will, therefore, strengthen multi-stakeholder forums (linked to the MFMP structures: MFMP Implementation Committee and Makgadikgadi Wetlands Management Committee) which will ensure dialogue, joint planning, implementation and monitoring and evaluation in order to create ownership and accountability. Government institutions participating in the project will be directly driving their own mandates; they will therefore have a direct interest in the successful implementation of the project. Participating government institutions (notably DFRR, DEA and Letlhakane Sub-Land Board) will benefit from the project intervention activities. Civil society organizations will be provided capacity development support.
The benefits generated by the project may be offset by the impacts of climate change, which might exacerbate the usual droughts.	M	The project will address this risk by building a better understanding of the potential impacts of climate change on trends in rangeland condition, particularly the issue of bush encroachment and the apparent thriving of invasive species. The findings of this study will contribute to the land use plans, a key element for improving ecological integrity of the rangelands and improving ecosystem functionality and cover. This is expected to increase the resilience of ecosystems to climate change induced fire, drought and other perturbations. By reducing existing anthropogenic stressors to ecosystems, the project will enhance their capacity to recover following such perturbations. Building capacity for long-term monitoring of rangeland conditions will increase the possibility of adaptive management, including early detection (and addressing) of climate change impacts. Additionally, climate change is being addressed as a cross-cutting issue within the MFMP. There are plans to mobilise resources through the MFMP to assess the likely risks to water resources, ecosystem functioning, wildlife conservation and more importantly rural livelihoods, and appropriate adaptive and mitigation measures instituted. This project will use results from that assessment to guide sustainable land management within the demonstration sites.
Weak enforcement of the TGLP has in the past encouraged overstocking in the communal lands since commercial farmers have retained the right to offload excess livestock to the communal areas. Increased organizational, and thus greater likelihood of profit-making, might become a perverse incentive for farmers with ranches and fuel higher stocking rates, if governance is not improved simultaneously.	M	Enforcement of the TGLP has been difficult in the past since it seemed to benefit the elite, who are commercial farmers. However, losses from the high rate of rangeland degradation in the Makgadikgadi seem to be causing larger losses than gains from exploiting the weakness in the policy, even for commercial farmers. The project seeks to improve local-level governance by engaging and capacitating local natural resource management/community-based management institutions such as community trusts, farmers' committees and associations, village development committees, and *Bogosi*. These institutions will be empowered, through a clear mandate and financial and technical resources, to lead the design and implementation of range management principles envisioned in SLM at the local level. The land use plans to be developed by the project for southern Sua Pan pilot area will guide decisions on livestock management (including sales). Moreover, the formation and technical backstopping of the farmer's associations (with membership from both ranch owners and those who keep livestock in communal areas), should ensure that these two categories of livestock keepers engage each other through a structured process, which would hopefully develop improved understanding and consideration of the other user's perspective regarding rangeland management, which could curb dual grazing by ranchers; the project provides ample learning opportunities.

Reluctant participation by local communities due to fear that the project will compromise their livelihoods by introducing strict management systems.	L	Noting that local communities bear the heaviest cost of rangeland degradation and limited access to markets for livestock products, the project will work closely with them to address the challenges in a participatory manner. The project strategy emphasizes the fact that local communities need to participate meaningfully in rangeland governance. The project will provide technical, institutional and financial support for engaging in improved livestock production and mixed livelihood systems. It will also recognize and build on the traditional knowledge and institutions of local communities and fully integrate this in designing management interventions. The project will also improve targeting and distribution of benefits among women.
There is a risk of resistance to the empowerment of poorer women from the more privileged sections of the community	M	The project will make deliberate interventions that raise awareness about the importance of participation and inclusion in implementing solutions and most importantly recognize that access to productive resources may be based on qualifications such as age, gender, ethnicity, religion, status, profession, place of birth or origin, common education and many other attributes that constitute social identity. The initial stakeholder consultation processes will engage the services of a sociologist or rural development specialist as part of a team that will conduct participatory rural appraisal as a component of the rangeland assessments. This will mobilize the whole community for participation in the project, build rapport between the outsider project implementers and local communities and make a case for full stakeholder participation and attendant partnerships
Effectiveness of the project in increasing productivity depends, in part, on the farmers' quick adjustments to different livestock products (pastoral farming), or the adoption of conservation agriculture (arable farming). There is a small risk that there might be inertia from the farmers to take up some of the suggested approaches to enhance productivity.	M	Participation of the farmer's committees and farmer's associations in designing the project interventions is critical in overcoming this risk. Fortunately, the MFMP activities have very high political support from the country's leadership (President's office, to whom quarterly updates are made regarding progress in implementing the MFMP) as well as local and central government agencies. The project will also involve the private sector (especially through Debswana, who are supporting agriculture as part of their post-mine closure operations). Additionally, the ministry of agriculture has been promoting conservation agriculture, and their support for a project that actually implements the ideals of this approach will ensure that the ministry avails its extension staff to ensure that farmers are supported to understand some of the approaches being suggested (which would as much as is possible incorporate Indigenous Knowledge Systems). Through such coordinated support, this risk would be minimized.
Private sector is capable (i.e. partner companies continue running profitably) and willing to invest in sustainable rangeland management	L	Technical and marketing skills will be enhanced to optimize the use of rangelands for income generation. Policy reviews will be done to facilitate private sector participation and investment in sustainable land management. Advocacy for policy change and private sector engagement and investment will be undertaken.
Overall Risk Rating	L	This project proposal was developed through a consultative process, involving the government, UNDP CO, private sector, civil society, and local authorities at the demonstration sites, and each are willing to play their role to ensure the success of the project and the tools being piloted through it.

*Risk rating – H (High Risk), S (Substantial Risk), M (Modest Risk), and L (Low Risk).

ANNEX 6: TERMS OF REFERENCE

National SLM Project Coordinator (NPC)[22]

146. The NPC will be responsible for ensuring the overall coordination and smooth implementation of the UNDP-GEF project: **"**Using SLM to improve the integrity of the Makgadikgadi ecosystem and to secure the livelihoods of livestock dependent communities**".** The NPC will work in close collaboration with the Implementing Partner and UNDP to ensure efficient and effective day-to-day management and monitoring of the project as well as its integration in the national planning and development processes.

Technical, managerial and financial responsibilities:

- Ensure full stakeholder consensus on the implementation of Project outcomes through structured workshops and meetings;
- Work closely with relevant Government agencies and partner NGOs to ensure that project implementation contributes synergistically to the relevant projects in the District;
- Coordinate technical input from the technical staff of line ministries, civil society, academic institutions and the private sector – and channel the assistance to the communities;
- Prepare annual work plans and budgets for the Project;
- Prepare quarterly, annual, mid-term and terminal project progress reports including technical, financial and policy matters, for the consideration by Project Steering Committee, UNDP-GEF, UNDP CO;
- Evaluate the performance of the project staff;
- Represent the Project in meetings and conferences to which the Project is invited to attend;
- Ensure proper management of the properties of the project;
- Provide overall professional guidance to partner institutions;
- Ensure and maintain linkages between the district authorities and partner institutions through regular district meetings;
- Ensure and maintain linkages between the implementation management structures;
- Supervise the activities or inputs of short/ long-term consultants and ensure proper delivery of all outputs under implementation;
- Provide technical advice and facilitation of the identification and implementation of project training needs assessment and the development of a training programme;
- Secure provision of guidance to the project's M&E procedure and making recommendations to national authorities and donors;
- Ensure that local authorities of Sua Pan (Mmea, Mokubilo, Mmatshumo and Mosu) embrace the integration of SLM objectives into local planning processes and development.

Leadership Skills:

147. The NPC will be a leader who will bring to the position status and credibility that is recognized by partner institutions/ implementers. She/he will have the ability to think strategically and laterally and maintain a broad perspective. The NPC will have the ability to work effectively under pressure and manage work and resources within deadlines. The NPC will possess excellent communication skills including the ability to write lucidly and succinctly.

Qualifications and Experience:

- A minimum of 10 years of technical and managerial experience dealing with applied natural resources management issues in Botswana;
- Must have at minimum a MSC degree in Environmental or Biological Sciences (e.g. rangeland ecology and management, natural resources management, conservation ecology) or any other related disciplines;
- Post-graduate experience in a research and/or training environment;
- Demonstrable experience in project coordination in the environment field including prior experience of coordinating GEF projects;

[22] Specific Terms of Reference for supporting staff will be agreed to during the project Inception Workshop.

- Knowledgeable about GEF and UNDP procedures;
- Demonstrable land management and planning experience in rural Botswana will be an added advantage;
- Proven ability to lead and motivate a multi-disciplinary team to produce the required outputs in a timely manner;
- Familiarity with institutional, planning and regulatory structures, and rural livelihoods in Botswana is key;
- Good command of English and Setswana.

Project Steering Committee (PSC)

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks and agree on possible countermeasures and management actions to address specific risks;
- Review the project progress and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Review combined delivery reports prior to certification by the implementing partner;
- Appraise the project annual review report, make recommendations for the next annual work plan, and inform the outcome group about the results of the review;
- Assess and decide to proceed on project changes through appropriate revisions.

UNDP Project Assurance

- Ensure that funds are made available to the project;
- Ensure the project is making progress towards intended outputs;
- Perform regular monitoring activities, such as periodic monitoring visits and "spot checks";
- Ensure that resources entrusted to UNDP are utilized appropriately;
- Ensure that critical project information is monitored and updated in Atlas;
- Ensure that financial reports are submitted to UNDP on time, and that combined delivery reports are prepared and submitted to the PSC;
- Ensure that risks are properly managed, and that the risk log in Atlas is regularly updated.

UNDP Project Support

- Set up and maintain project file;
- Collect project related information/ data;
- Assist the project manager in updating project plans;
- Administer PSC meetings;
- Administer project revision control;
- Establish document control procedures;
- Compile, copy and distribute all project reports;
- Assist in the financial management tasks under the responsibility of the project manager;
- Provide support in the use of Atlas for monitoring and reporting;
- Review technical reports;
- Monitor technical activities carried out by responsible parties.

UNDP Programme Manager (UNDP Resident Representative or delegated authority)

- Ensure that resources entrusted to UNDP are utilized appropriately;
- Ensure that the project is making progress towards intended outputs;
- Ensure national ownership, ongoing stakeholder engagement and sustainability;
- Ensure that the project's outputs contribute to intended country programme outcomes;

- Ensure that key results and issues pertaining to project performance are fed into the outcome and programme level monitoring;
- Approve budget for the first year in Atlas;
- Approve and sign the annual work plan for the following year.
- Sign the Financial Report or the Funding Authorization and Certificate of Expenditures (FACE).

Linkages and relationships among the project reporting and monitoring structures

This sub-section outlines the management arrangements and structures that will guide the BirdLife Botswana-based Project Management Unit (PMU; ultimately responsible for project deliverables, activities and outcomes).

1. Project Steering Committee (PSC)

In accordance with the project expectation approved by the GEF, a Project Steering Committee (PSC) is to be established to monitor progress in project execution, to provide strategic and policy guidance, and to review and approve annual work plans and budgets.

Membership (8)[23]:

- DFRR, DEA, DWNP, Department of Animal Production, Crop Production, Department of Town and Regional Planning, UNDP, BirdLife Botswana

Chair: DFRR (delegated/nominated by Permanent Secretary, Ministry of Environment, Wildlife and Tourism)
Secretariat: Project Manager, SLM Makgadikgadi project, BirdLife Botswana

Frequency of meetings: Biannually (schedule to be draw annually)

Responsibility/ToRs.

- Provides policy directions
- Review of Project Status Reports
- Endorsement of the final reports from project experts and consultants
- Approval of the Annual Project Work plan and budget respectively and any changes thereto, in accordance with GEF, and UNDP guidelines;
- Annual review of project activities to assess project development
- Any other business brought before the PSC by one of its members
- Reviews and authorizes work plan etc as per the usual PSC role (Extracts to be taken from the UNDP guidelines for PSCs)
- The PSC will be guided and advised on all technical aspects of project by the Project Advisory Committee (PAC) and the MFMP-Natural Resources Thematic Working Group (MFMP-NRTWG; see below membership and role of PAC and MFMP-NRTWG).

The PSC is especially responsible for evaluation and monitoring of project outputs and achievements. In its formal meetings, the PSC will be expected to review the project work plan and budget expenditure, based on the Project Manager's report. The PSC should be consulted for supporting any changes to the work plan or budget, and is responsible for ensuring that the project remains on target with respect to its outputs. Where necessary, the PSC will support definition of new targets in coordination with, and approval from UNDP and GEF. Other than these ToRs, the PSC will set its own guidelines and procedures for operating. Communication via emails will be used for urgent matters that do not need a meeting. The costs for the meetings will be met by the project.

[23] It is suggested that heads of department (or their representatives, at the rank of Chief, or above i.e. heads of divisions) represent their organizations.

2. **Project Advisory Committee (PAC) (Makgadikgadi Based**)

This committee will be based in Letlhakane and will meet prior the PSC. Its role will mainly be a platform that engages all stakeholders relevant for the project. There is currently no structure of this sort, at the site-level, and the only available structures are those whose membership is wholly government departments. However there is MWC, which works across the entire Makgadikgadi system as opposed to the project site.

Membership (20):

- Letlhakane Sub Land Board
- Boteti TAC chair and secretary,
- Boteti Sub-DLUPU chair and Secretary,
- 1 representative from each of the four villages at the project site, i.e. Mmatshumo, Mosu, Mmea and Mokubilo, these being members of the Makgadikgadi Wetlands management committee from each village.
- 1 representative of the Trust from each of the Community trusts in the four villages.
- 1 representative from Debswana, BirdLife Botswana, DFRR, DA, DWNP, and Tribal Admin.

Frequency of meetings: quarterly.

Chair: Letlhakane Sub Land Board
Secretary: DFRR (Letlhakane), assisted by Project officer, BirdLife Botswana

Responsibility: (1) facilitates work on the ground, provides on the ground guidance and onsite information, and (2) reviews technical and quarterly/annual progress reports (financial and narrative) before they are forwarded for final approval and endorsement by the PSC.

3. **MFMP Natural Resources Thematic Working Group (MFMP-NRTWG)**

The role of this committee (chaired by DWNP) is to provide technical advice to the Project. It prepares reports on natural resources management to the **MFMP Implementing Committee (MFMP-IC),** and is expected to meet quarterly, which target is currently not being met; however, this is probably because there is presently no project that demands the collective inputs of the MFMP-NRTWG, an anomaly to be hopefully addressed through this project. With regards to this project, this committee will meet as and when required, to review (from a technical perspective), scientific and consultancies commissioned by the SLM Makgadikgadi project; otherwise their inputs will be sort electronically, as a cost cutting measure, with SLM Makgadikgadi updates provided at the NRTWG quarterly meetings.

The project management unit will be linked to all committees through its presence in all these committees and provides updates as necessary (Fig 1); moreover various linkages already exist and will be exploited to ensure regular and coordinated information-flow between the various committees and structures, including those linked to the MFMP (see below).

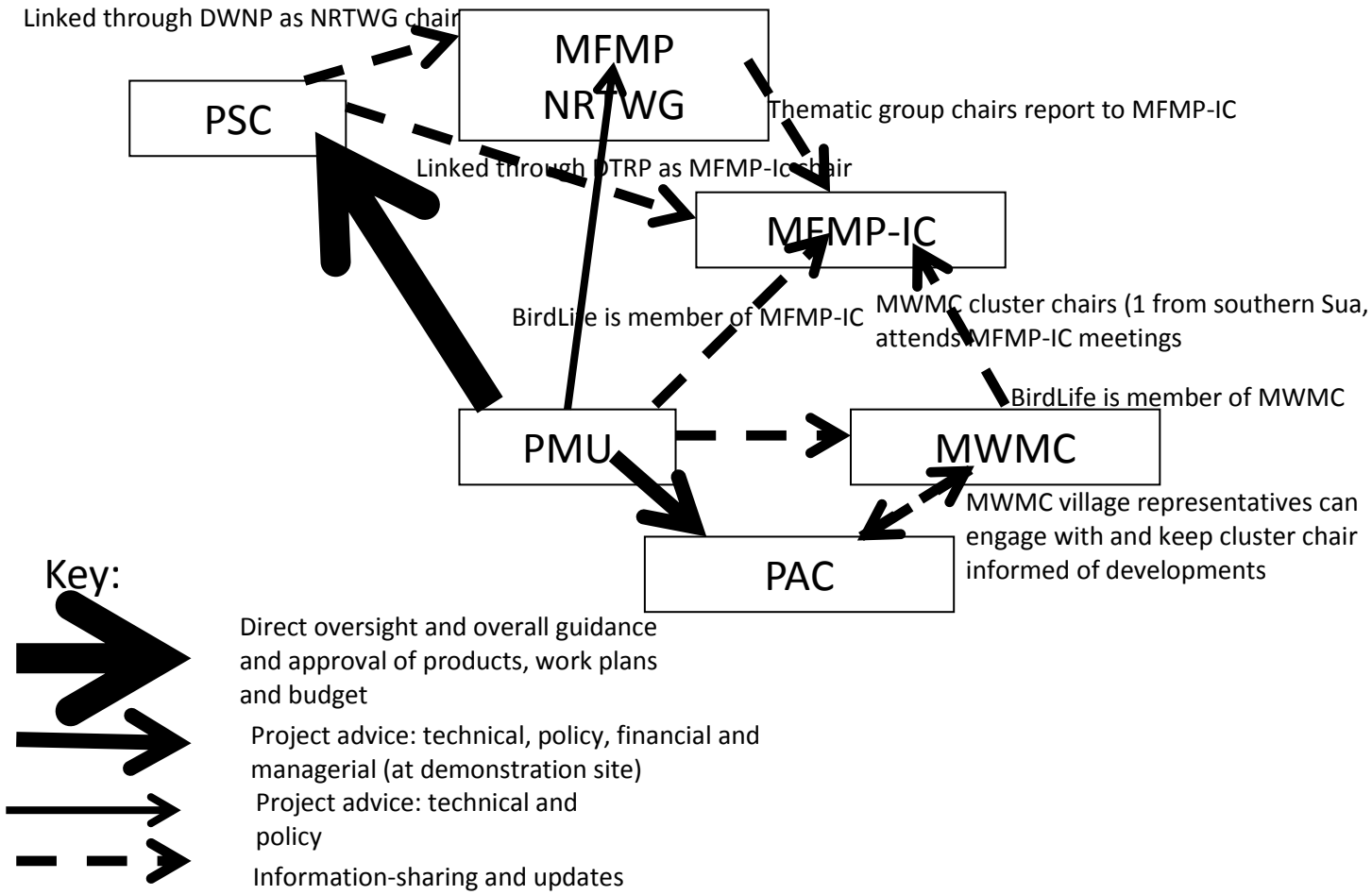


Fig. 1. Reporting lines (PMU and PSC), channels for technical and policy guidance (PMU and PAC; plus PMU and MFMP NRTWG) and information-sharing loops (with notes to demonstrate the conduits for such information flow).

ANNEX 7: TRACKING TOOL FOR LAND DEGRADATION (LD-PMAT)

Attached separately.

ANNEX 8. UNDP ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST

QUESTION 1:

Has a combined environmental and social assessment/review that covers the proposed project already been completed by implementing partners or donor(s)?

Select answer below and follow instructions:

- **X NO** → Continue to Question 2 (do not fill out Table 1.1)
- ☐ **YES** → No further environmental and social review is required if the existing documentation meets UNDP's quality assurance standards, and environmental and social management recommendations are integrated into the project.

TABLE 1.1: CHECKLIST FOR APPRAISING QUALITY ASSURANCE OF EXISTING ENVIRONMENTAL AND SOCIAL ASSESSMENT	Yes/No
1. Does the assessment/review meet its terms of reference, both procedurally and substantively?	**Yes**
2. Does the assessment/review provide a satisfactory assessment of the proposed project?	**Yes**
3. Does the assessment/review contain the information required for decision-making?	**Yes**
4. Does the assessment/review describe specific environmental and social management measures (e.g. mitigation, monitoring, advocacy, and capacity development measures)?	**Yes**
5. Does the assessment/review identify capacity needs of the institutions responsible for implementing environmental and social management issues?	**Yes**
6. Was the assessment/review developed through a consultative process with strong stakeholder engagement, including the view of men and women?	**Yes**
7. Does the assessment/review assess the adequacy of the cost of and financing arrangements for environmental and social management issues?	**Yes**
Table 1.1 (continued) For any "no" answers, describe below how the issue has been or will be resolved (e.g. amendments made or supplemental review conducted).	

QUESTION 2:

Do <u>all</u> outputs and activities described in the Project Document fall within the following categories?

X Procurement (in which case UNDP's Procurement Ethics and Environmental Procurement Guide need to be complied with)
X Report preparation
X Training

X Event/workshop/meeting/conference (refer to Green Meeting Guide)
X Communication and dissemination of results

Select answer below and follow instructions:

X NO → Continue to Question 3

☐ **YES** → No further environmental and social review required. Complete Annex A.2, selecting Category 1, and submit the completed template (Annex A) to the PAC.

QUESTION 3:

Does the proposed project include activities and outputs that support *upstream* planning processes that potentially pose environmental and social impacts or are vulnerable to environmental and social change (refer to Table 3.1 for examples)? (Note that *upstream* planning processes can occur at global, regional, national, local and sectoral levels)

Select the appropriate answer and follow instructions:

NO → Continue to Question 4.

X YES →Conduct the following steps to complete the screening process:

1. Adjust the project design as needed to incorporate UNDP support to the country(ies), to ensure that environmental and social issues are appropriately considered during the upstream planning process. Refer to Section 7 of this Guidance for elaboration of environmental and social mainstreaming services, tools, guidance and approaches that may be used.
2. Summarize environmental and social mainstreaming support in Annex A.2, Section C of the Screening Template and select "Category 2".
3. If the proposed project ONLY includes upstream planning processes then screening is complete, and you should submit the completed Environmental and Social Screening Template (Annex A) to the PAC. If downstream implementation activities are also included in the project then continue to Question 4.

TABLE 3. 1 EXAMPLES OF UPSTREAM PLANNING PROCESSES WITH POTENTIAL DOWNSTREAM ENVIRONMENTAL AND SOCIAL IMPACTS	Check appropriate box(es) below
1. Support for the elaboration or revision of **global- level** strategies, policies, plans, and programmes. *For example, capacity development and support related to international negotiations and agreements. Other examples might include a global water governance project or a global MDG project.*	
2. Support for the elaboration or revision of **regional-level** strategies, policies and plans, and programmes. *For example, capacity development and support related to trans-boundary programmes and planning (river basin management, migration, international waters, energy development and access, climate change adaptation etc.).*	
3. Support for the elaboration or revision of **national-level** strategies, policies, plans and programmes. *For example, capacity development and support related to national development policies, plans, strategies and budgets, MDG-based plans and strategies (e.g. PRS/PRSPs, NAMAs), sector plans.*	

TABLE 3. 1 EXAMPLES OF UPSTREAM PLANNING PROCESSES WITH POTENTIAL DOWNSTREAM ENVIRONMENTAL AND SOCIAL IMPACTS	Check appropriate box(es) below
4. Support for the elaboration or revision of **sub-national/local-level** strategies, polices, plans and programmes. *For example, capacity development and support for district and local level development plans and regulatory frameworks, urban plans, land use development plans, sector plans, provincial development plans, provision of services, investment funds, technical guidelines and methods, stakeholder engagement.*	✓

QUESTION 4:

Does the proposed project include the implementation of *downstream* activities that potentially pose environmental and social impacts or are vulnerable to environmental and social change?

To answer this question, you should first complete Table 4.1 by selecting appropriate answers. If you answer "No" or "Not Applicable" to all questions in Table 4.1 then the answer to Question 4 is "NO". If you answer "Yes" to any questions in Table 4.1 (even one "Yes" can indicate a significant issue that needs to be addressed through further review and management) then the answer to Question 4 is "YES":

☐ **NO** → No further environmental and social review and management required for downstream activities. Complete Annex A.2 by selecting "Category 1", and submit the Environmental and Social Screening Template to the PAC.

X YES → Conduct the following steps to complete the screening process:

1. Consult Section 8 of this Guidance, to determine the extent of further environmental and social review and management that might be required for the project.
2. Revise the Project Document to incorporate environmental and social management measures. Where further environmental and social review and management activity cannot be undertaken prior to the PAC, a plan for undertaking such review and management activity within an acceptable period of time, post-PAC approval (e.g. as the first phase of the project) should be outlined in Annex A.2.
3. Select "Category 3" in Annex A.2, and submit the completed Environmental and Social Screening Template (Annex A) and relevant documentation to the PAC.

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT		
1.	**Biodiversity and Natural Resources**	**Answer** (Yes/No/ Not Applicable)
1.1	Would the proposed project result in the conversion or degradation of modified habitat, natural habitat or critical habitat?	NO
1.2	Are any development activities proposed within a legally protected area (e.g. natural reserve, national park) for the protection or conservation of biodiversity?	NO

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT		
1.3	Would the proposed project pose a risk of introducing invasive alien species?	NO
1.4	Does the project involve natural forest harvesting or plantation development without an independent forest certification system for sustainable forest management (*e.g. PEFC, the Forest Stewardship Council certification systems, or processes established or accepted by the relevant National Environmental Authority*)?	NO
1.5	Does the project involve the production and harvesting of fish populations or other aquatic species without an accepted system of independent certification to ensure sustainability (*e.g. the Marine Stewardship Council certification system, or certifications, standards, or processes established or accepted by the relevant National Environmental Authority*)?	NO
1.6	Does the project involve significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction.*	NO
1.7	Does the project pose a risk of degrading soils?	NO
2.	**Pollution**	**Answer** Yes/No/ N/A
2.1	Would the proposed project result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and trans-boundary impacts?	NO
2.2	Would the proposed project result in the generation of waste that cannot be recovered, reused, or disposed of in an environmentally and socially sound manner?	NO
2.3	Will the propose project involve the manufacture, trade, release, and/or use of chemicals and hazardous materials subject to international action bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants, or the Montreal Protocol.*	NO
2.4	Is there a potential for the release, in the environment, of hazardous materials resulting from their production, transportation, handling, storage and use for project activities?	NO
2.5	Will the proposed project involve the application of pesticides that have a known negative effect on the environment or human health?	NO
3.	**Climate Change**	

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT	
3.1 Will the proposed project result in significant[24] greenhouse gas emissions? *Annex E provides additional guidance for answering this question.*	NO
3.2 Is the proposed project likely to directly or indirectly increase environmental and social vulnerability to climate change now or in the future (also known as maladaptive practices)? You can refer to the additional guidance in Annex C to help you answer this question. *For example, a project that would involve indirectly removing mangroves from coastal zones or encouraging land use plans that would suggest building houses on floodplains could increase the surrounding population's vulnerability to climate change, specifically flooding.*	NO
4. Social Equity and Equality	**Answer** (Yes/No/ N/A)
4.1 Would the proposed project have environmental and social impacts that could affect indigenous people or other vulnerable groups?	NO
4.2 Is the project likely to significantly impact gender equality and women's empowerment[25]?	YES
4.3 Is the proposed project likely to directly or indirectly increase social inequalities now or in the future?	NO
4.4 Will the proposed project have variable impacts on women and men, different ethnic groups, social classes?	YES
4.5 Have there been challenges in engaging women and other certain key groups of stakeholders in the project design process?	YES
4.6 Will the project have specific human rights implications for vulnerable groups?	NO
5. Demographics	
5.1 Is the project likely to result in a substantial influx of people into the affected communities?	NO
5.2 Would the proposed project result in substantial voluntary or involuntary resettlement of populations? *For example, projects with environmental and social benefits (e.g. protected areas, climate change adaptation) that impact human settlements, and certain disadvantaged groups within these settlements in particular.*	NO
5.3 Would the proposed project lead to significant population density increase which could affect the environmental and social sustainability of the project?	NO

[24] Significant corresponds to CO_2 emissions greater than 100,000 tons per year (from both direct and indirect sources). Annex E provides additional guidance on calculating potential amounts of CO_2 emissions.

[25] Women are often more vulnerable than men to environmental degradation and resource scarcity. They typically have weaker and insecure rights to the resources they manage (especially land), and spend longer hours on collection of water, firewood, etc. (OECD, 2006). Women are also more often excluded from other social, economic, and political development processes.

TABLE 4.1: ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT		
	For example, a project aiming at financing tourism infrastructure in a specific area (e.g. coastal zone, mountain) could lead to significant population density increase which could have serious environmental and social impacts (e.g. destruction of the area's ecology, noise pollution, waste management problems, greater work burden on women).	
6.	**Culture**	
6.1	Is the project likely to significantly affect the cultural traditions of affected communities, including gender-based roles?	NO
6.2	Will the proposed project result in physical interventions (during construction or implementation) that would affect areas that have known physical or cultural significance to indigenous groups and other communities with settled recognized cultural claims?	NO
6.3	Would the proposed project produce a physical "splintering" of a community? *For example, through the construction of a road, power line, or dam that divides a community.*	NO
7.	**Health and Safety**	
7.1	Would the proposed project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions? *For example, development projects located within a floodplain or landslide prone area*	NO
7.2	Will the project result in increased health risks as a result of a change in living and working conditions? In particular, will it have the potential to lead to an increase in HIV/AIDS infection?	NO
7.3	Will the proposed project require additional health services including testing?	NO
8.	**Socio-Economics**	
8.1	Is the proposed project likely to have impacts that could affect women's and men's ability to use, develop and protect natural resources and other natural capital assets? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their development, livelihoods, and well-being?*	NO
8.2	Is the proposed project likely to significantly affect land tenure arrangements and/or traditional cultural ownership patterns?	NO
8.3	Is the proposed project likely to negatively affect the income levels or employment opportunities of vulnerable groups?	NO
9.	**Cumulative and/or Secondary Impacts**	**Answer** Yes/No/ N/A
9.1	Is the proposed project location subject to currently approved land use plans (e.g. roads, settlements) which could affect the environmental and social	NO

TABLE 4.1:	ADDITIONAL SCREENING QUESTIONS TO DETERMINE THE NEED AND POSSIBLE EXTENT OF FURTHER ENVIRONMENTAL AND SOCIAL REVIEW AND MANAGEMENT	
	sustainability of the project? *For example, future plans for urban growth, industrial development, transportation infrastructure, etc.*	
9.2	Would the proposed project result in secondary or consequential development which could lead to environmental and social effects, or would it have potential to generate cumulative impacts with other known existing or planned activities in the area? *For example, a new road through forested land will generate direct environmental and social impacts through the cutting of forest and earthworks associated with construction and potential relocation of inhabitants. These are direct impacts. In addition, however, the new road would likely also bring new commercial and domestic development (houses, shops, businesses). In turn, these will generate indirect impacts. (Sometimes these are termed "secondary" or "consequential" impacts).*	NO

ANNEX A.2: ENVIRONMENTAL AND SOCIAL SCREENING SUMMARY (to be filled in after Annex A.1 has been completed)

Name of Proposed Project: Mainstreaming Sustainable Land Management (SLM) in Makgadikgadi rangelands for improved livelihoods

A. Environmental and Social Screening Outcome

Select from the following:

☐ Category 1. No further action is needed

☐ Category 2. Further review and management is needed. There are possible environmental and social benefits, impacts, and/or risks associated with the project (or specific project component), but these are predominantly indirect or very long-term and so extremely difficult or impossible to directly identify and assess.

X Category 3. Further review and management is needed, and it is possible to identify these with a reasonable degree of certainty. If Category 3, select one or more of the following sub-categories:

X Category 3a: Impacts and risks are limited in scale and can be identified with a reasonable degree of certainty and can often be handled through application of standard best practice, but require some minimal or targeted further review and assessment to identify and evaluate whether there is a need for a full environmental and social assessment (in which case the project would move to Category 3b).

☐ Category 3b: Impacts and risks may well be significant, and so full environmental and social assessment is required. In these cases, a scoping exercise will need to be conducted to identify the level and approach of assessment that is most appropriate.

B. Environmental and Social Issues (for projects requiring further environmental and social review and management)

In this section, you should list the key potential environmental and social issues raised by this project. This might include both environmental and social opportunities that could be seized on to strengthen the project, as well as risks that need to be managed. You should use the answers you provided in Table 4.1 as the basis for this summary, as well as any further review and management that is conducted.

Would the proposed project result in the conversion or degradation of modified habitat, natural habitat or critical habitat?
This project will not result in the conversion or degradation of modified habitat, natural habitat or critical habitat

Are any development activities proposed within a legally protected area (e.g. natural reserve, national park) for the protection or conservation of biodiversity?
No, all the project activities will be outside protected areas within the district, but it is expected that improved and sustainable management of land outside of the protected area will be have significant positive benefits for the protected area.

Does the project involve natural forest harvesting or plantation development without an independent forest certification system for sustainable forest management?
The project is implemented in a predominantly scrub or bush savanna with no predominant forested landscapes so forest removal is not going to be significant.

Does the project involve the production and harvesting of fish populations or other aquatic species without an accepted system of independent certification to ensure sustainability?
No harvesting of fish or other aquatic species is planned for this project.

Would the proposed project have environmental and social impacts that could affect indigenous people or other vulnerable groups?
Some of the project activities will be implemented in an area settled mainly by indigenous people (the southern Sua Pan villages of Mmatshumo, Mosu, Mokubilo and Mmea) where fire management issues are of critical importance. It is anticipated that the project interventions will have a positive impact on the livelihoods of the local and indigenous people who are dependent on range and veld product resources for livelihoods such as food and crafts. Reversal of range degradation will significantly contribute to their improved livelihoods.

Is the project likely to significantly impact gender equality and women's empowerment[26]?
A number of the project activities will directly and indirectly contribute towards improving the condition of women. This would be through enhancing their capacity to participate in decision-making processes, and engaging in land-use activities that have the potential to improve their economic situation. For instance, where there is collection and processing of veld products (such as *mophane* worms or *Morula* fruits), piloting activities to generate income from the sale of such resources will be implemented and deliberately target women beneficiaries.

Is the proposed project likely to directly or indirectly increase social inequalities now or in the future?
The ownership of livestock (especially cattle), is skewed towards men, and the ownership and the use of land for activities other than subsistence arable farming and collection of wild fruits and grasses is equally skewed towards men. Through the development of land-use plans and pilot activities that are geared towards women and men beneficiaries, the condition of women is expected to be directly or indirectly affected in a positive way.

Will the proposed project have variable impacts on women and men, different ethnic groups, social classes?
Specific pilot activities will involve the participation of different members of the Makgadikgadi community, including different ethnic groups and social classes involved in different aspects of land use such as pastoral and arable farming, collection and use of wild resources such as grass, wild fruits etc. Their participation will invariably affect their conditions in different ways, either directly or indirectly, depending on the activities they will engage in. Overall, the economic condition of these groups is expected to be impacted on positively by the project.

[26] Women are often more vulnerable than men to environmental degradation and resource scarcity. They typically have weaker and insecure rights to the resources they manage (especially land), and spend longer hours on collection of water, firewood, etc. (OECD, 2006). Women are also more often excluded from other social, economic, and political development processes.

Have there been challenges in engaging women and other certain key groups of stakeholders in the project design process?

Women are generally under-represented in governance arrangements and decision-making platforms. It is however, expected that capacity building activities that the project will introduce will improve the capacity of women to engage in decision-making processes and the methodologies and approaches to be utilized during project implementation will ensure that the participation of women, poor and other marginalized groups is considered. Engagement of women as project stakeholders and beneficiaries will also be carried in a manner that allows for deeper and meaningful engagement and participation. This will include focus group discussions that target women in specific activities (e.g. mophane worm harvesters) and even when they engage in livelihood activities that men also engage in (e.g. arable farming), the project will take deliberate steps to recognize their challenges as different from those of men and propose interventions that minimize these challenges. Capacity building activities will include training in sustainable veld products harvesting, packaging and marketing, training on conservation agriculture, and training in tourism related activities within the context of running community-manage campsites. As women dominate the local level committees they will also benefit from local level institutional empowerment in terms of leadership training and involvement in decision making through participatory land resources planning.

Is the proposed project location subject to currently approved land use plans (e.g. roads, settlements) which could affect the environmental and social sustainability of the project?

There is a district-wide land use plan that guides current implementation in the Boteti sub-district, but the project will also pilot area-specific plans that will test new approaches to land use. These will however still be within the confines of what national and district laws and policies allow. The proposed project activities are not only requested by communities but also government institutions and in some cases they are already proposed in national or district planning documents, notably the MFMP (2010), and the Southern Sua Pan Management Plan (2012).

Would the proposed project result in secondary or consequential development which could lead to environmental and social effects, or would it have potential to generate cumulative impacts with other known existing or planned activities in the area?

The project proposes to test a number of approaches to promote sustainable land management. These include conservation agriculture, better livestock husbandry in communal areas to improve grazing conditions and reduce degradation, and the controlled use of fire as a range management tool. Where these piloting activities are successful, lessons will be packaged to influence up-scaling and policy reviews where appropriate. The success of the project therefore has the potential to influence significant shifts in the management and use of land in Makgadikgadi and potential in other parts of Botswana through policy change.

C. Next Steps (for projects requiring further environmental and social review and management):

As the identified environmental and social impacts are largely positive or can readily be addressed with an application of 'best management practices' (and minor adjustments to the Project Document), this project falls within Categories 3a, and no additional review is required.

In summary, based on all the above consideration, it is hereby confirmed that all the necessary environmental and social reviews have been made, and project implementation and management will address these.

D. Sign Off

Project Manager	**Date**
PAC	**Date**
Programme Manager	**Date**

ANNEX 9. LETTERS OF CO-FINANCING

148. Attached separately.