



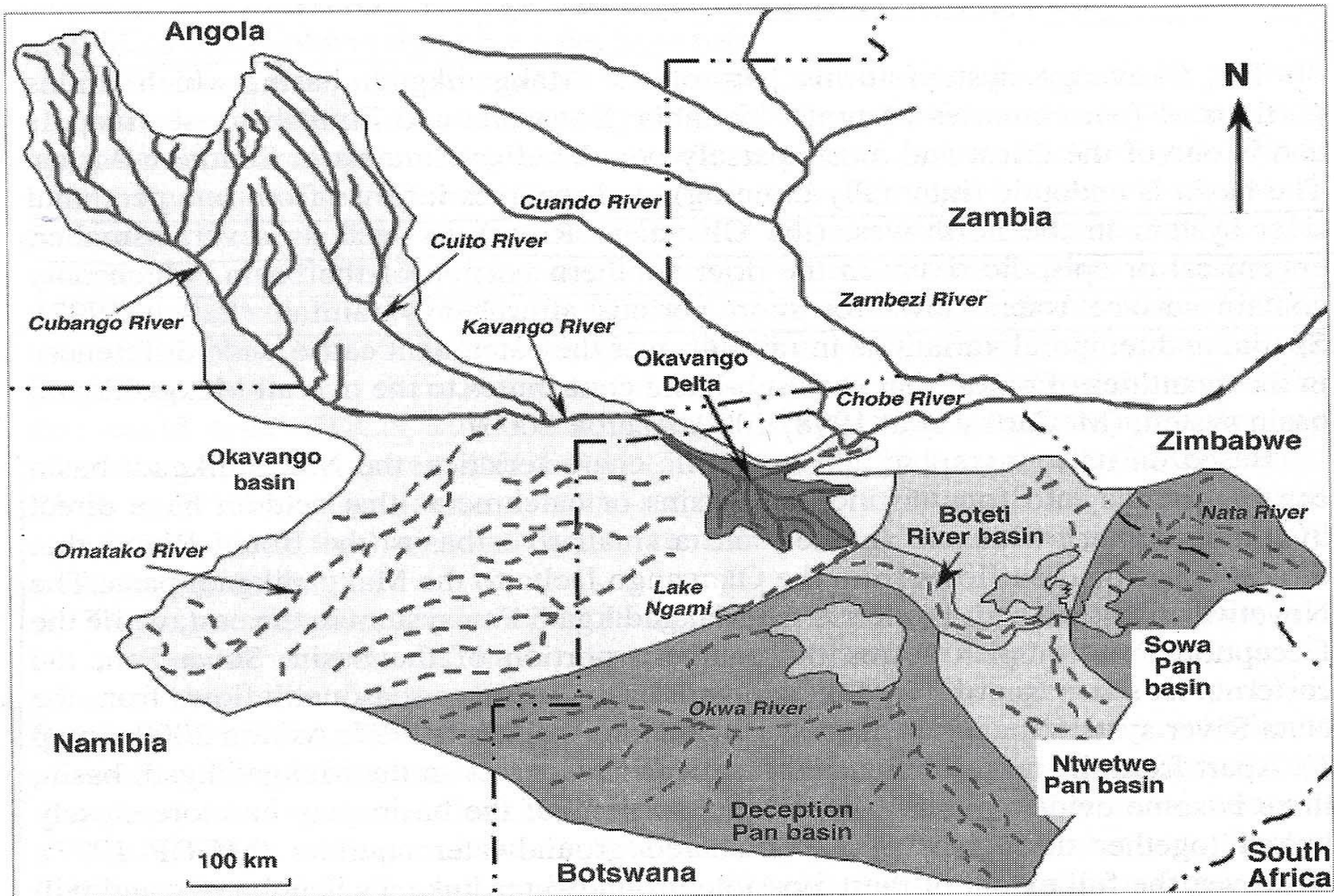
Framework Management Plan for Makgadikgadi Wetlands System

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OUTLINE

1. Background
2. Development and Environmental issues
3. What's in Makgadikgadi Wetland System
4. The MFMP area
5. The MFMP Process
6. The MFMP aim
7. Guiding principles for MFMP
8. FMP structure and components
9. Key maps
10. Implementation



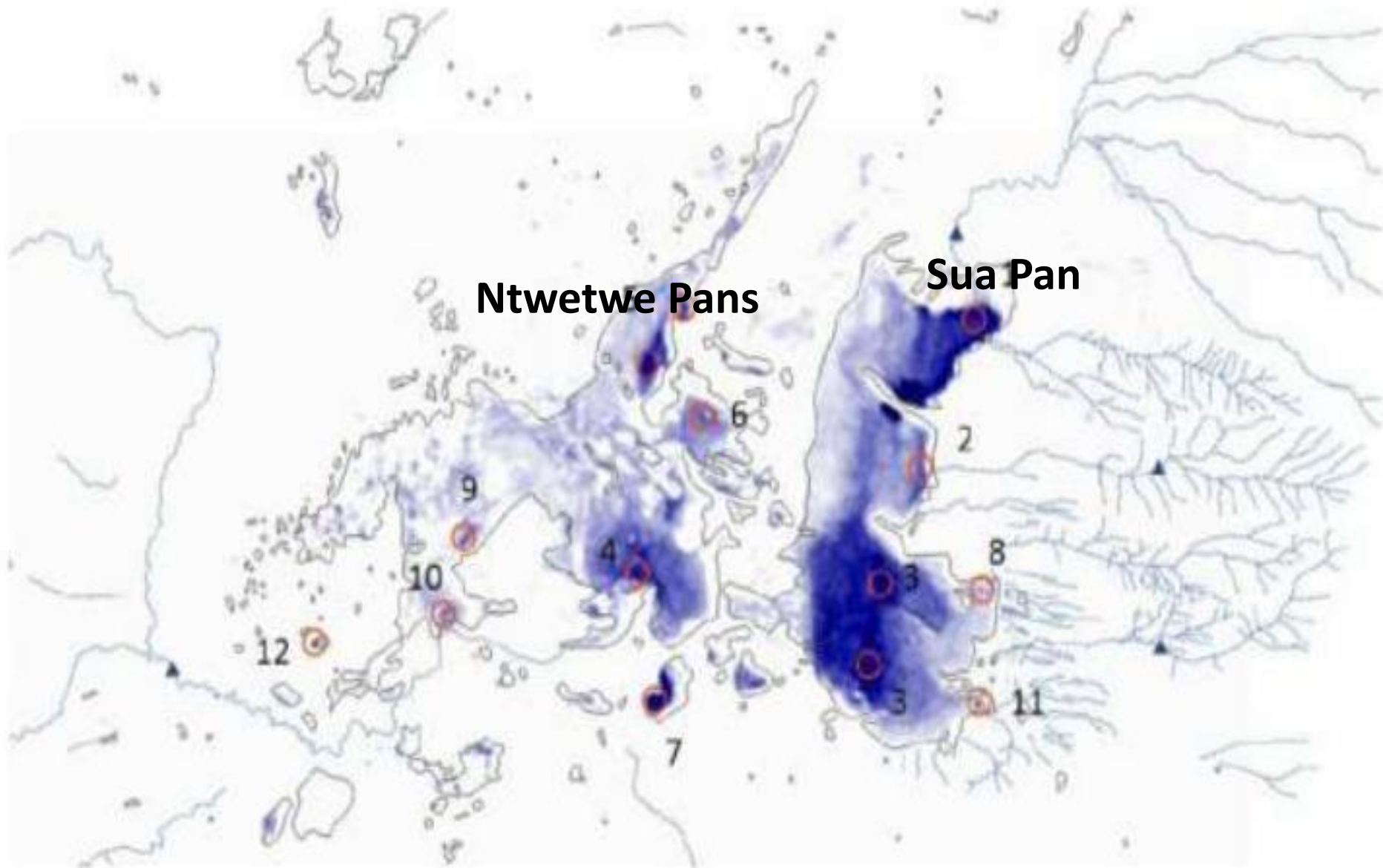
Ephemeral and episodic rivers are shown as dashed lines, while perennial rivers are shown as solid lines.

Source: Map redrawn from UNDP/GEF 2001.

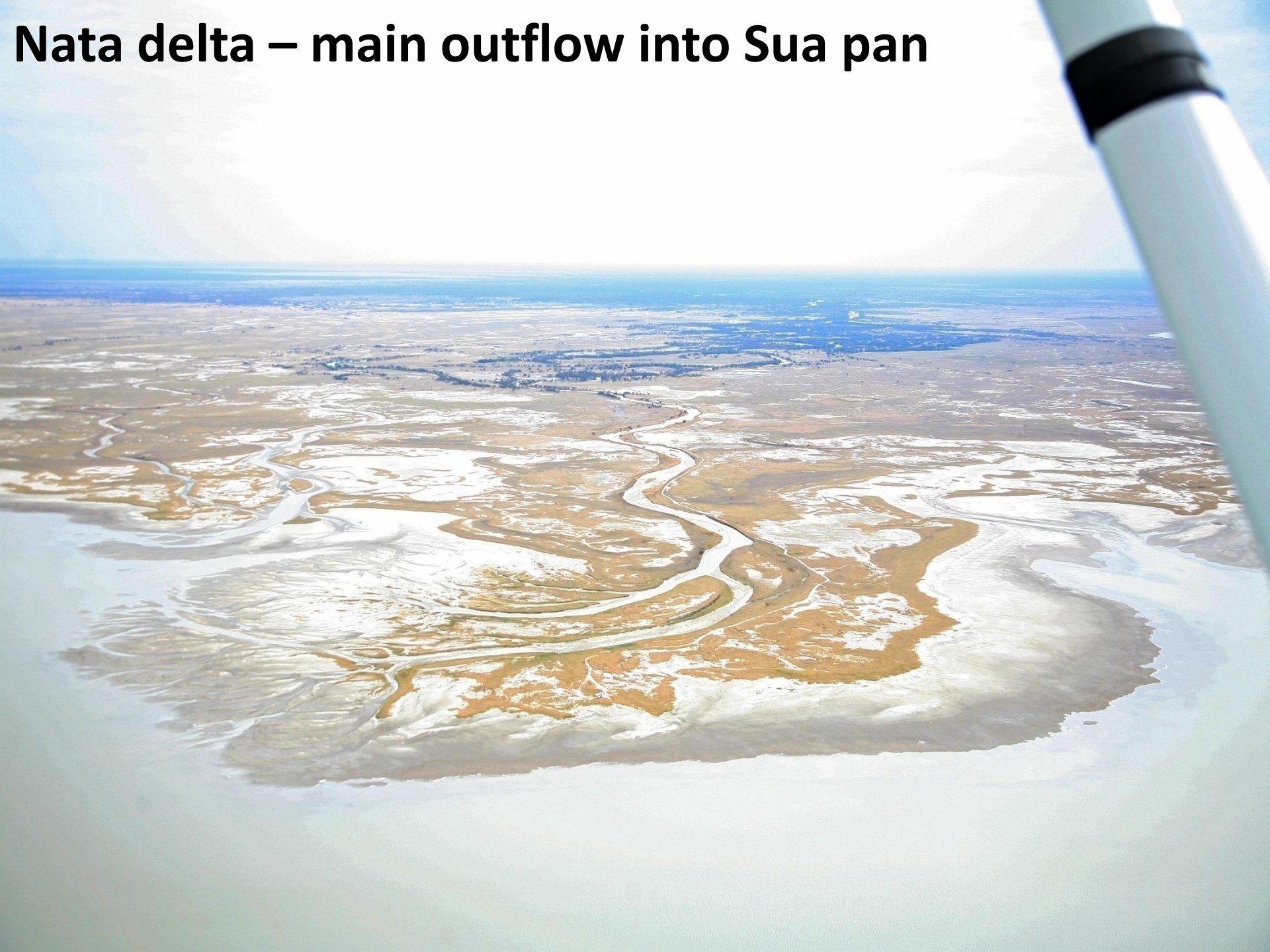
1. Background

- MWS – located in north-eastern Botswana, south east of the Okavango delta and south of the Chobe river front
- MFMP area is located entirely within Botswana
- The catchment area of 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 through the Boteti river (which has been dry since the 1980s).
- It is divided into the eastern Sua pan and western **Ntwetwe pan**.
- **Sua pan** receives seasonal inflows from Nata river system from western Zimbabwe and Moseitse, Lepashe, Semoane, Mosupe

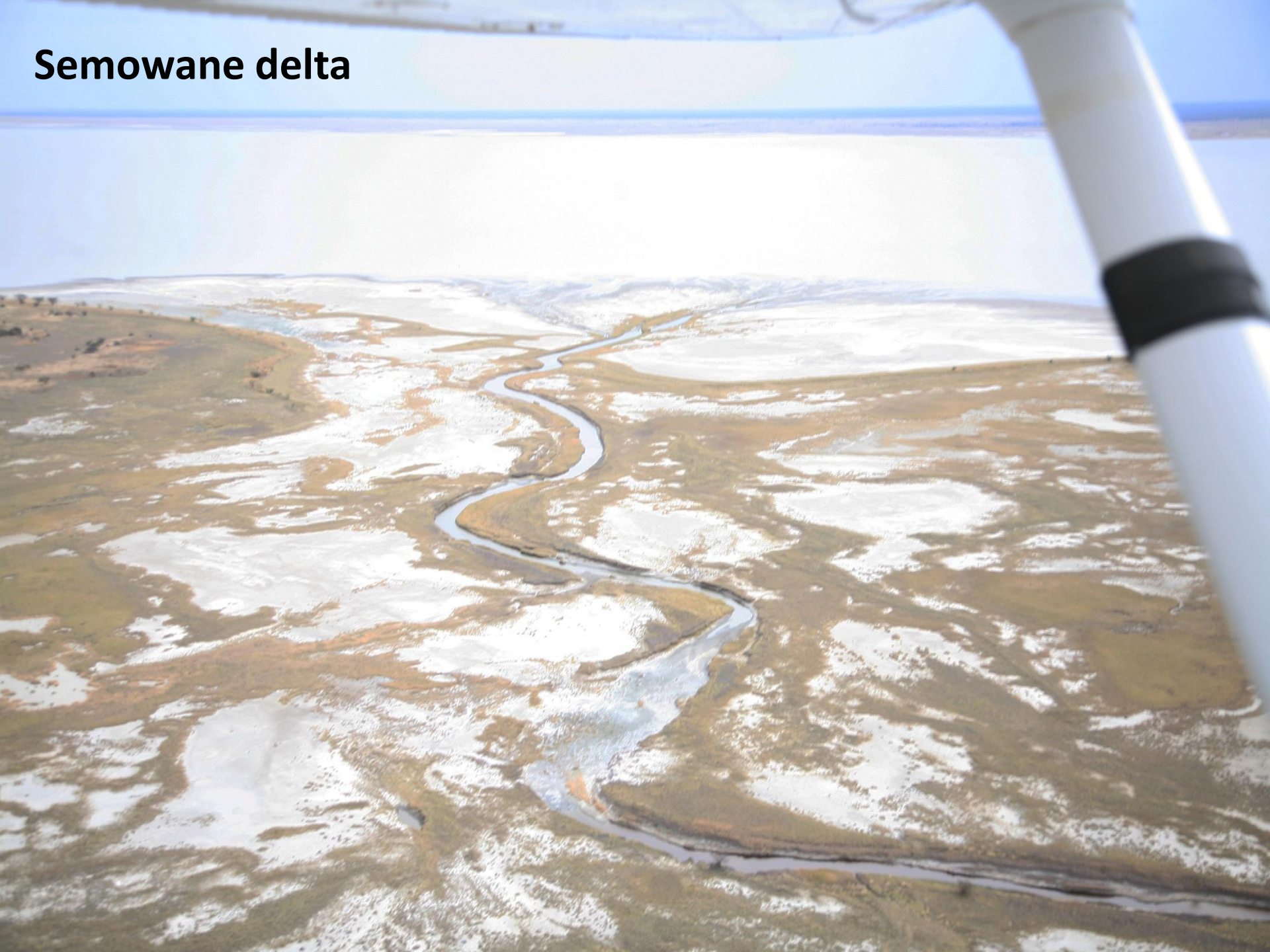
The Pans!



Nata delta – main outflow into Sua pan



Semowane delta



Mosetse River and Dukwi vet.fence



2. Development and Environmental Issues

- Poverty and livelihoods insecurity
- Lack of understanding of resource trends
- Sectoral management, different land tenure regimes, insufficient coordination
- Resource degradation
- Fragmented institutional responsibilities
- Growing number of sectoral and resource conflicts
- Scarce water resource and water quality

3. What's in Makgadikgadi Wetland System?

- Mining – Soda Ash mine in Sowa, two major diamond mines of Orapa & Letlhakane (some mineral explorations exist)
- Wildlife and Biodiversity conservation (Makgadikgadi and Nxai Pan National Park) and a number of Wildlife Management areas (WMAs)
- Tourism attractions – wildlife, pan dominated landscapes, waterbird aggregations, baobabs, archaeological artifacts and local culture
- Community Based Organizations – Nata Conservation Trust, Gaing-O Community, GWEZOTSHA, Ngande, Mokopi Conservation, Gumakotsha.....
- Luxury camps (Jack's camp and Kalahari camps) and lodges (Meno-a-kwena and Leroo la tau, Planet Baobab, Gweta lodge)
- Number of Heritage and archaeological sites are found in the area
- Majority of the population in the area is rural and rely on subsistence livestock and crop production





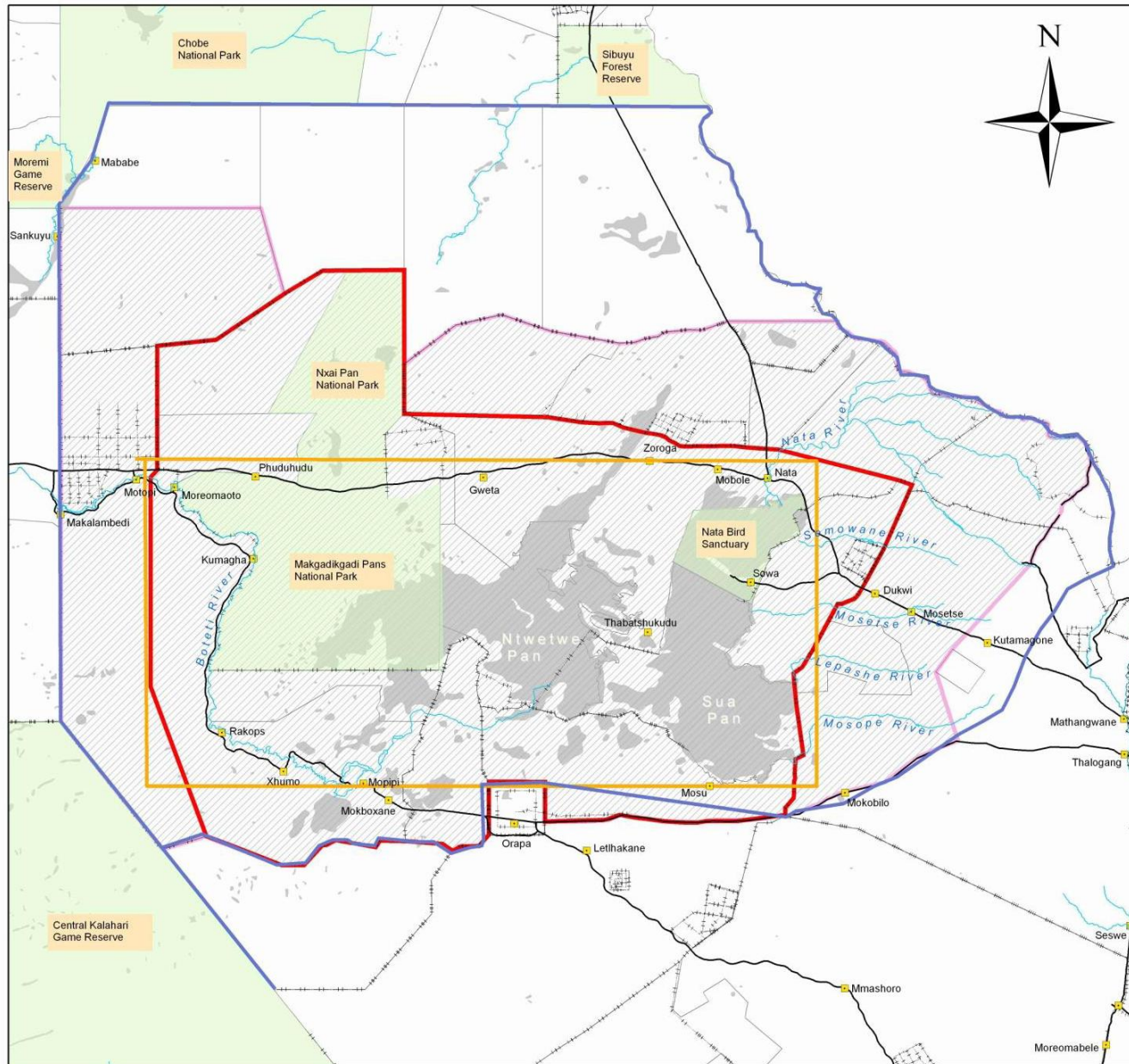
Baobab Island - Thabatshukudu



Lechana pan



Project Boundary for the Framework and Integrated Management Plans (FMP / IMP) and previous proposals for the boundary alignment



Proposed Boundaries for the Makgadikgadi Wetland Framework Management Plan (FMP) and the Integrated Management Plan (IMP)

The delineation of the FMP and IMP boundaries reflects factors that impact upon the hydrological and ecological integrity of the Makgadikgadi Wetland System (MWS) and takes cognisance of administrative boundaries to enhance the effective management and implementation of both the FMP and IMP

Scale 1:1,075,000
Map Datum: WGS84
Projection: Geographic

Kilometers
 0 25 50 100

Key

- Proposed IMP Boundary by CARACAL - 2002
- Proposed IMP Boundary by Ecosurv - 2008
- IMP Boundary
- FMP Boundary
- Protected Areas
- Pans
- Controlled Hunting Area (CHA) Boundaries
- Paved Roads
- Veterinary Cordon and Farm Fences
- Seasonal Rivers
- Towns and Villages

5. The process

- Public-private sector partnership, multidisciplinary and integrated approach
- Inception (Nov – Dec 2009), Analysis & Component development (Jan-July 2010), Synthesis and plan development (Aug – Oct 2010)
- Environment – development approach guided by sustainable development, livelihoods and ecosystem approaches
- Potential Scenarios for the area were developed and valuated using Multi-Criteria Analysis (MCA)
- Development of the activity plan and detailed study reports

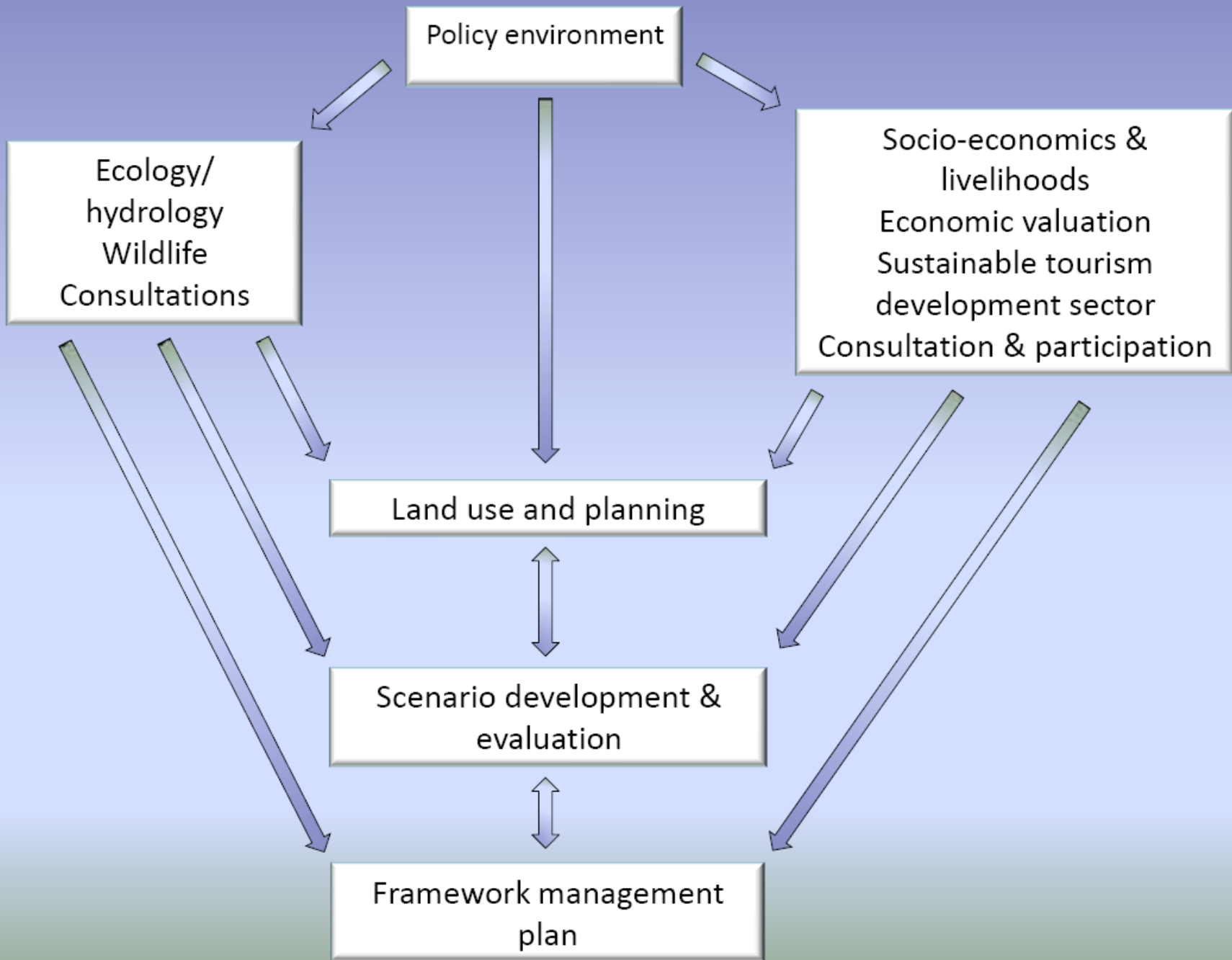
6. MFMP overall aim

- To improve people's livelihoods through wise use of the wetland's natural resources

7. Guiding principles for MFMP

- Holistic planning must prevail over sectoral planning
- Development must benefit rural livelihoods and the environment
- Special attention is needed for vulnerable groups
- Local stakeholders should be involved in the preparation, planning and plan implementation
- Local population must develop a sense of 'ownership' of the MFMP
- Implementation is a shared responsibility of government, private sector and civil society; and
- Resource conservation and management benefits long-term development opportunities and livelihoods

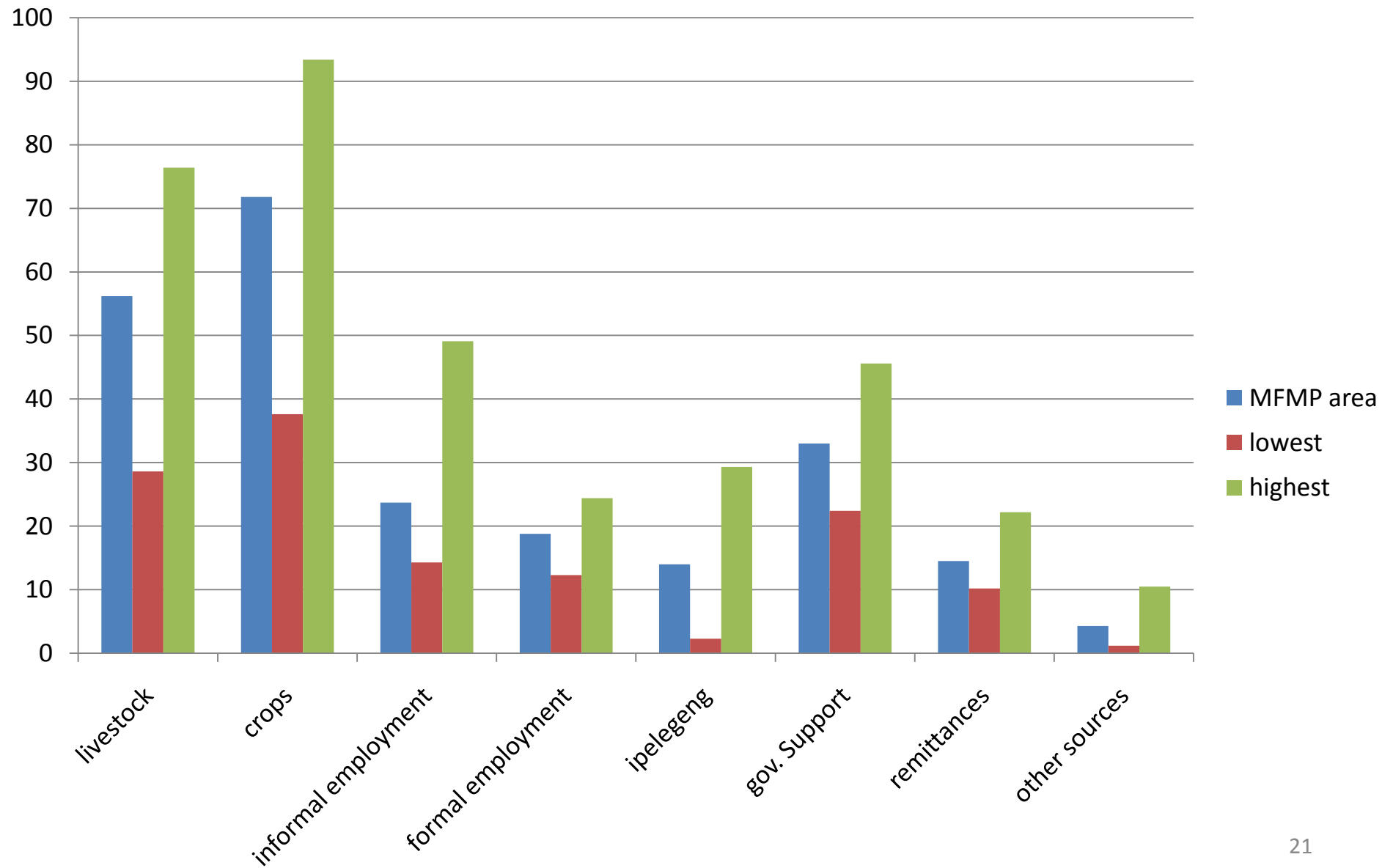
Figure: FMP structure and components



Inventory update in 2010!



Main sources of livelihoods (% HH)



Issue	Challenges
Heavy reliance on crop production	How to improve livelihood returns & productivity?
Livestock production	Retaining access to livestock production Improving benefits/ productivity and rangeland conditions.
Reliance on government support	Can this be sustained in future? Does it create dependency? How is it best targeted?
Shortage of employment	Employment creation in private sector
Livelihood dependency on natural resource	Sustainable management of communal natural resources Drought and climate change adaptations
Low livelihood security	Economic diversification (e.g. Mining, tourism & CBNRM) Increasing returns from crops and livestock (Self-) employment creation Increasing access to livelihood sources



Key Sectors



Consultancy team







Mmatshumo



Phuduhudu



Xhumo



Toromojo

The MFMP Plan- Volume 1

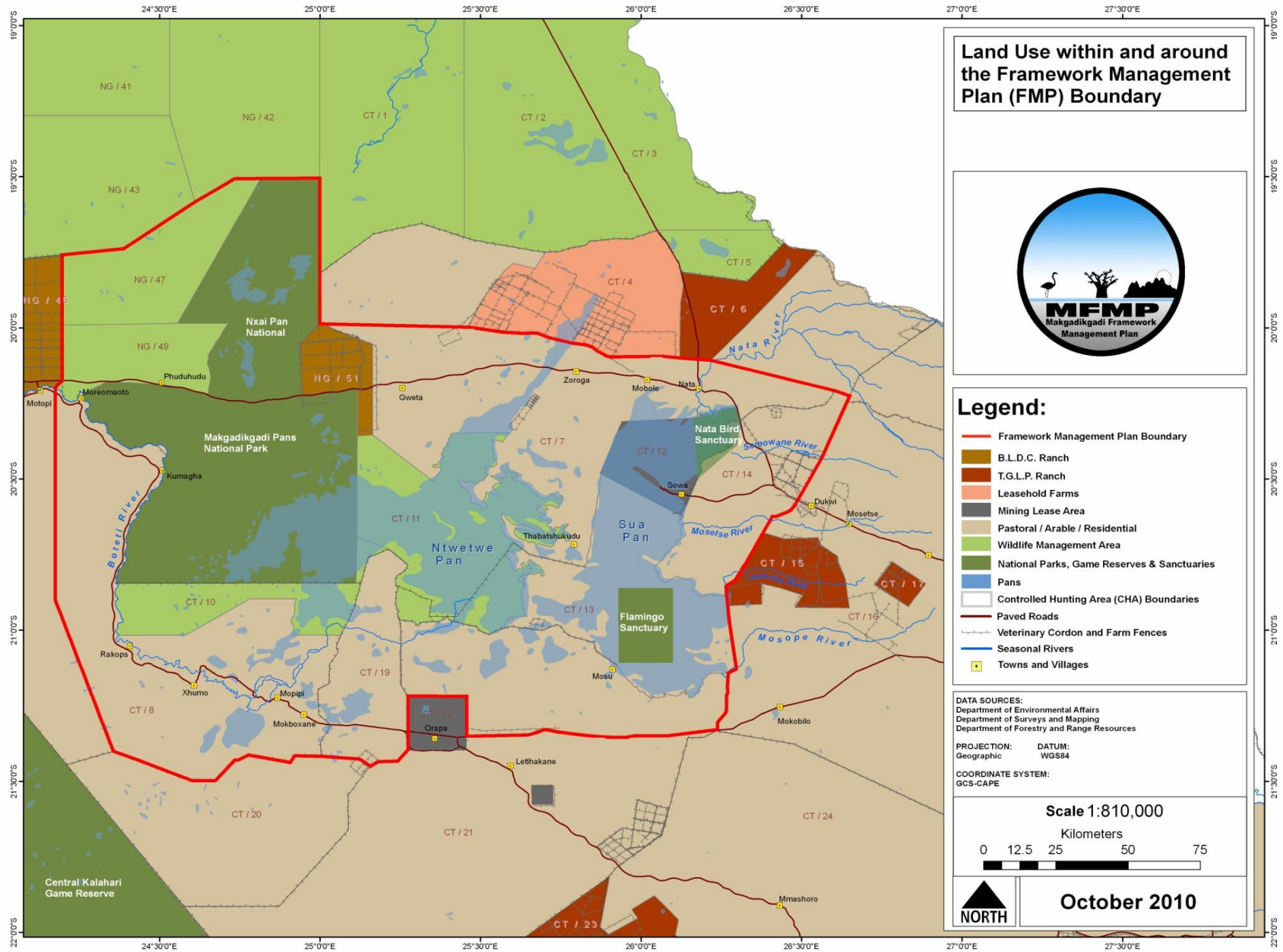
The main plan for Makgadikgadi area, describes the people, natural resources, current land use, economic value, tourism & heritage, consultations, policy environment and possible management scenarios, activities & costs and a detailed monitoring plan.

– **Categories of activities** : management of natural resources, waste management and pollution control, fire and hazard management, drought management and climate change, biodiversity hotspot management, land use and fencing, water use, economic sectors and livelihoods, livelihoods improvement, institutions and governance, education, knowledge and awareness, environmental monitoring and research, Funding.

The MFMP - Volume 2

- Detailed reports on ecology, hydrology, wildlife, economic valuation, tourism and policy environment.
- An update of the Site Inventory – on the current status, trends in the physical and biological characteristics of the system
- Targeting relevant for implementers, communities, NGOs, planners and researchers

9. KEY MAPS!



Land Use within and around the Framework Management Plan (FMP) Boundary

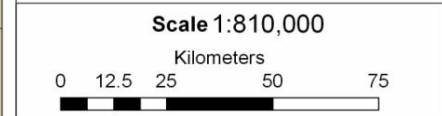


- ### Legend:
- Framework Management Plan Boundary
 - B.L.D.C. Ranch
 - T.G.L.P. Ranch
 - Leasehold Farms
 - Mining Lease Area
 - Pastoral / Arable / Residential
 - Wildlife Management Area
 - National Parks, Game Reserves & Sanctuaries
 - Pans
 - Controlled Hunting Area (CHA) Boundaries
 - Paved Roads
 - Veterinary Cordon and Farm Fences
 - Seasonal Rivers
 - Towns and Villages

DATA SOURCES:
 Department of Environmental Affairs
 Department of Surveys and Mapping
 Department of Forestry and Range Resources

PROJECTION: Geographic **DATUM:** WGS84

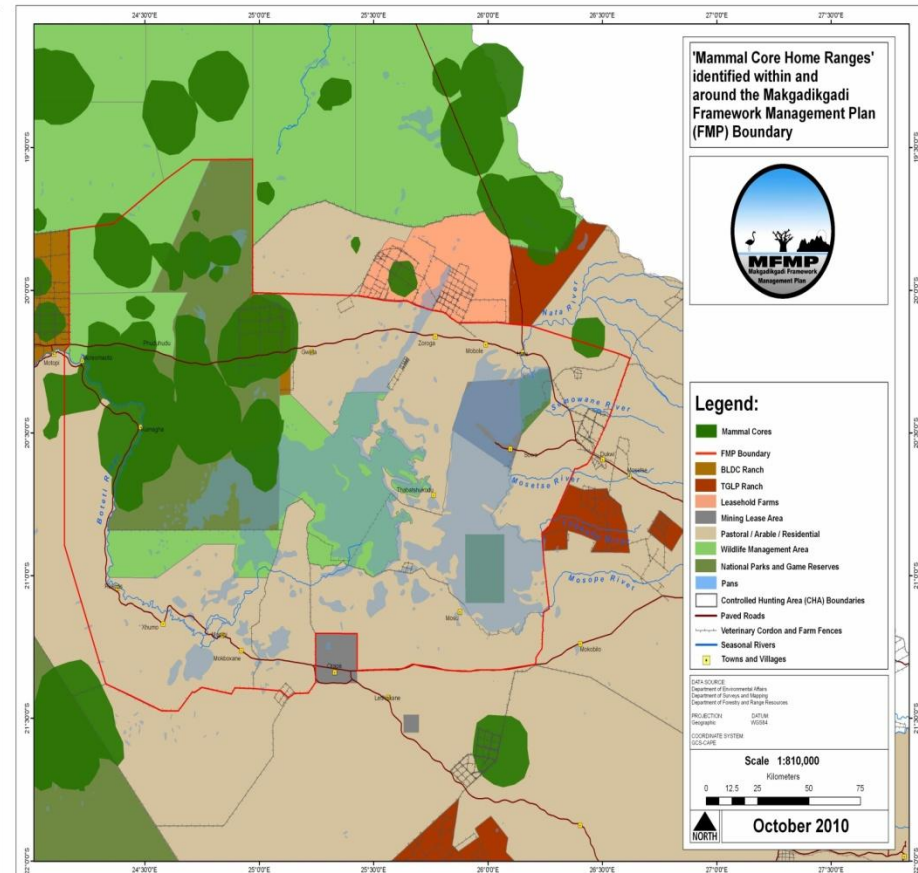
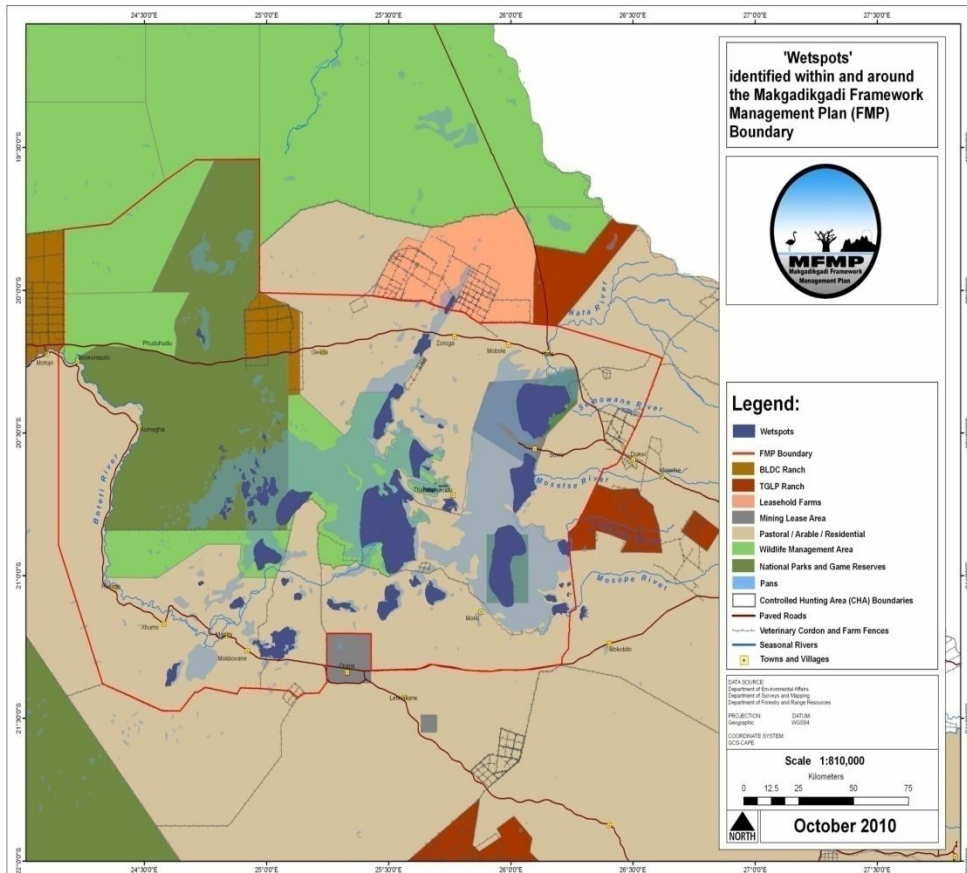
COORDINATE SYSTEM: GCS-CAPE

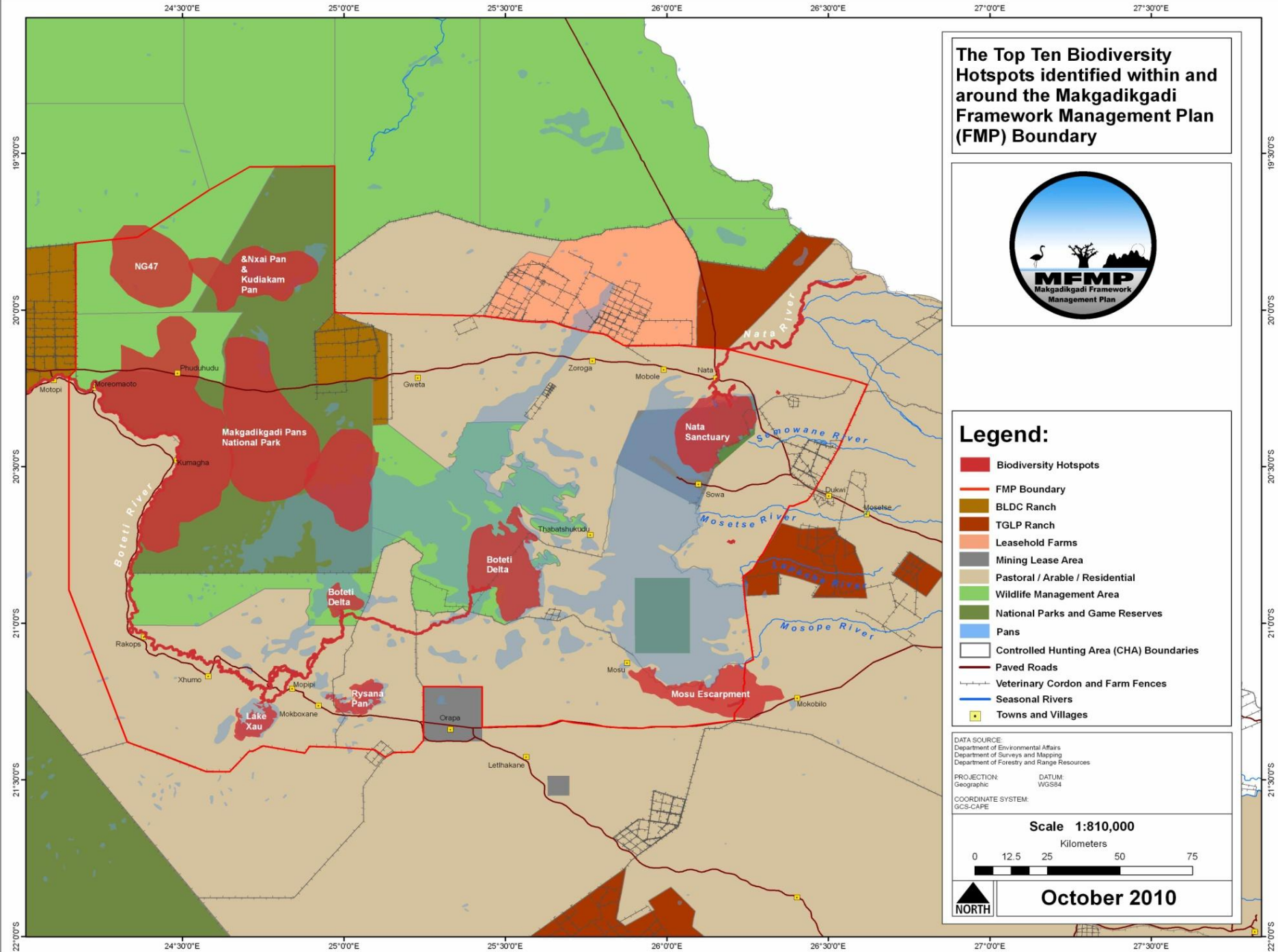


NORTH

October 2010

The Biodiversity Hotspots were initially identified through an extensive analytical assessment of key wetland areas and wildlife habitats





The Top Ten Biodiversity Hotspots identified within and around the Makgadikgadi Framework Management Plan (FMP) Boundary



Legend:

- Biodiversity Hotspots
- FMP Boundary
- BLDC Ranch
- TGLP Ranch
- Leasehold Farms
- Mining Lease Area
- Pastoral / Arable / Residential
- Wildlife Management Area
- National Parks and Game Reserves
- Pans
- Controlled Hunting Area (CHA) Boundaries
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 GCS-CAPE

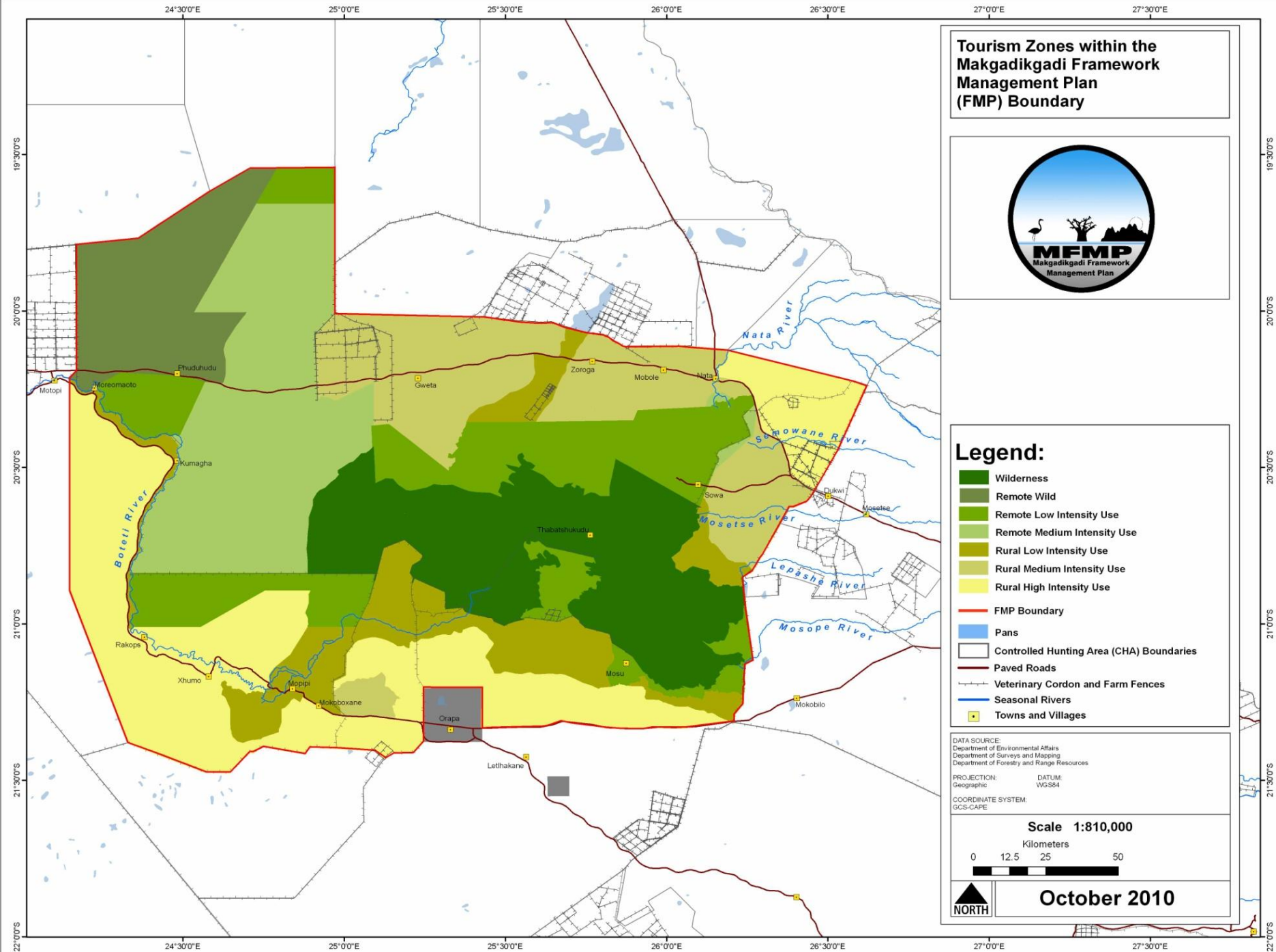
Scale 1:810,000

Kilometers

0 12.5 25 50 75

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Tourism Zones within the Makgadikgadi Framework Management Plan (FMP) Boundary



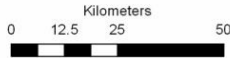
Legend:

- Wilderness
- Remote Wild
- Remote Low Intensity Use
- Remote Medium Intensity Use
- Rural Low Intensity Use
- Rural Medium Intensity Use
- Rural High Intensity Use
- FMP Boundary
- Pans
- Controlled Hunting Area (CHA) Boundaries
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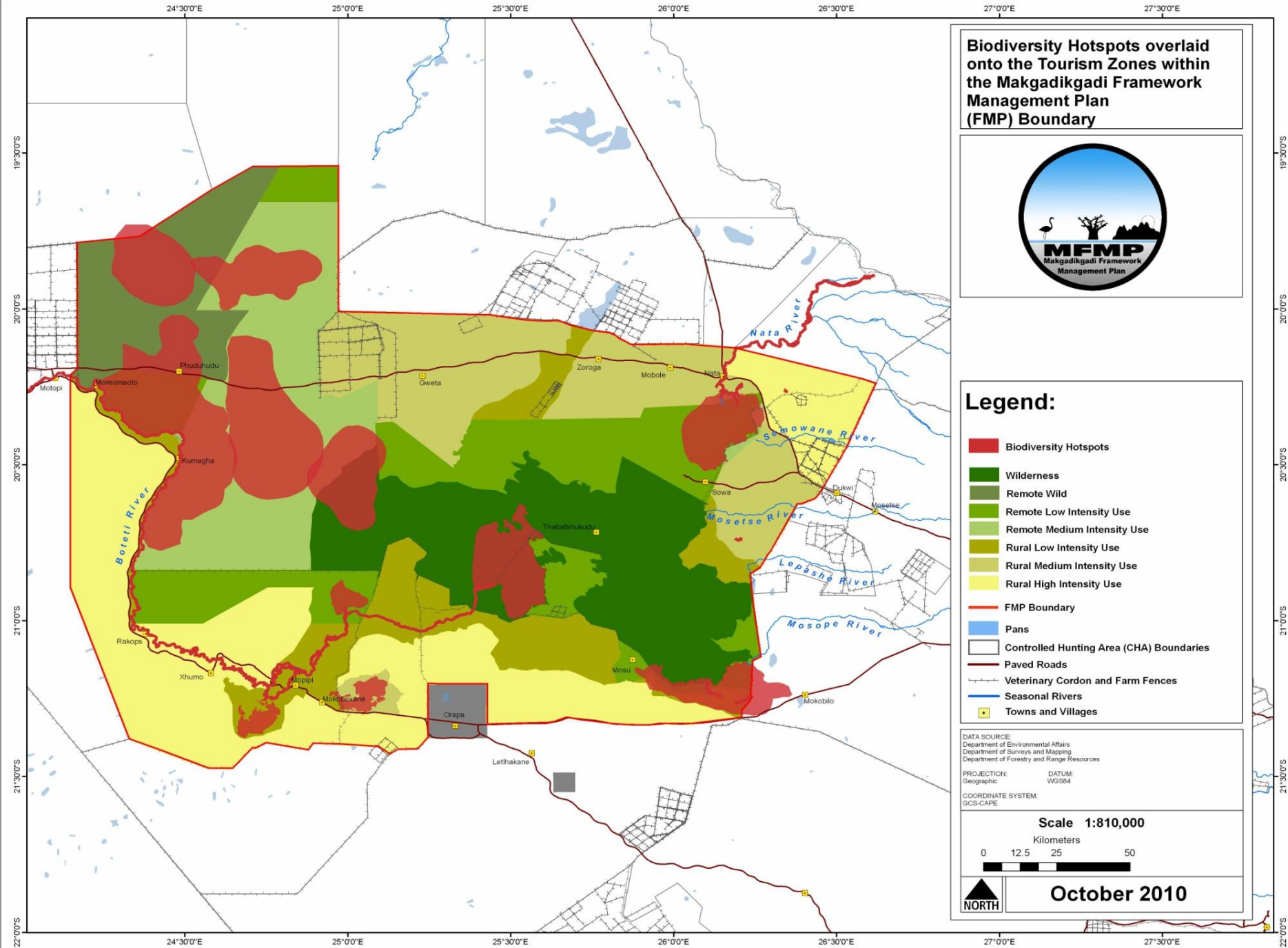
DATA SOURCE:
 Department of Environmental Affairs
 Department of Surveys and Mapping
 Department of Forestry and Range Resources

PROJECTION: Geographic DATUM: WGS84
 COORDINATE SYSTEM: GCS-CAPE

Scale 1:810,000



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Biodiversity Hotspots overlaid onto the Tourism Zones within the Makgadikgadi Framework Management Plan (FMP) Boundary



Legend:

- Biodiversity Hotspots
- Wilderness
- Remote Wild
- Remote Low Intensity Use
- Remote Medium Intensity Use
- Rural Low Intensity Use
- Rural Medium Intensity Use
- Rural High Intensity Use
- FMP Boundary
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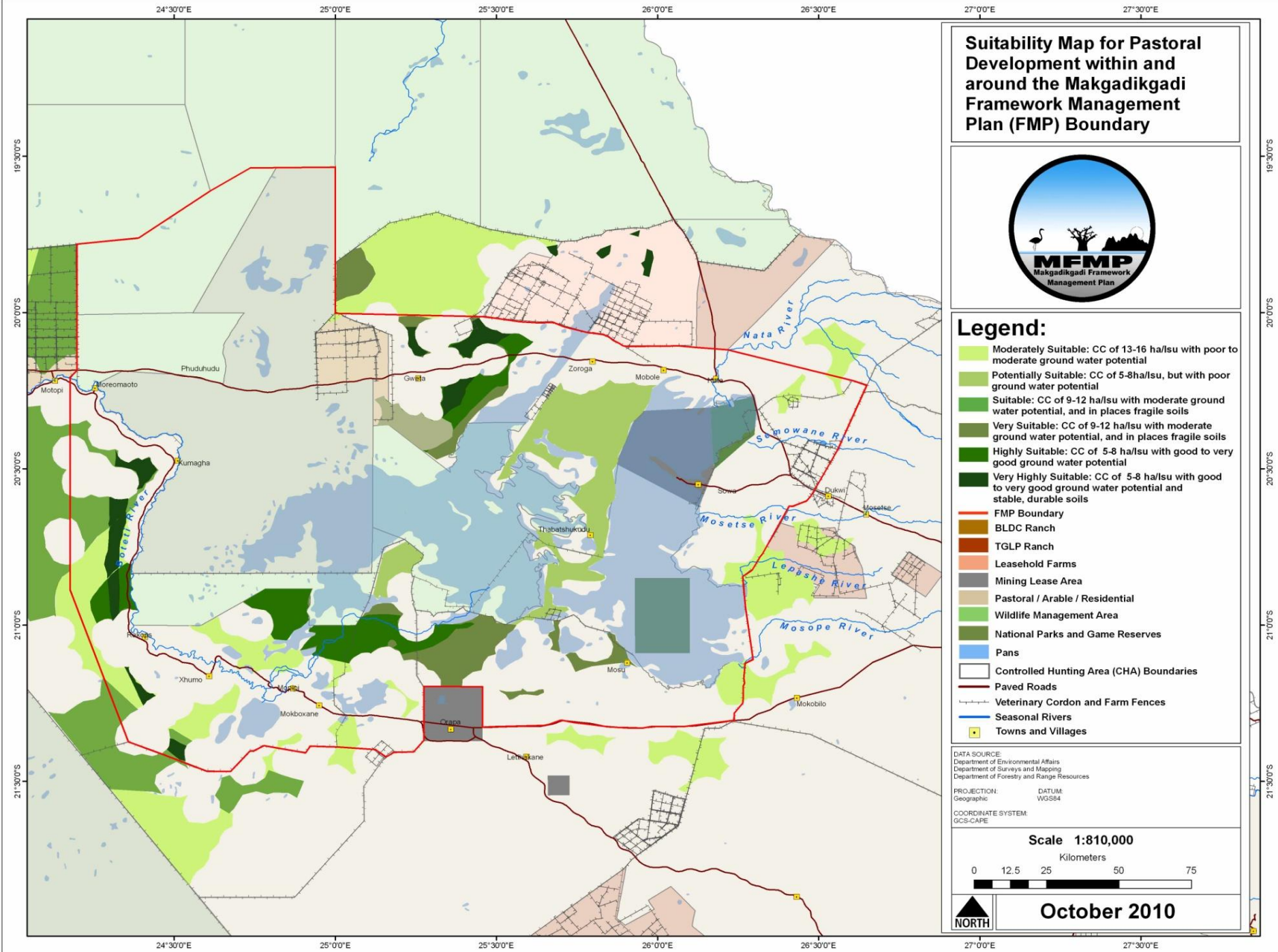
PROJECTION:
 Geographic

DATUM:
 WGS84

COORDINATE SYSTEM:
 GCS-CAPE



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Suitability Map for Pastoral Development within and around the Makgadikgadi Framework Management Plan (FMP) Boundary



Legend:

- Moderately Suitable: CC of 13-16 ha/lsu with poor to moderate ground water potential
- Potentially Suitable: CC of 5-8ha/lsu, but with poor ground water potential
- Suitable: CC of 9-12 ha/lsu with moderate ground water potential, and in places fragile soils
- Very Suitable: CC of 9-12 ha/lsu with moderate ground water potential, and in places fragile soils
- Highly Suitable: CC of 5-8 ha/lsu with good to very good ground water potential
- Very Highly Suitable: CC of 5-8 ha/lsu with good to very good ground water potential and stable, durable soils
- FMP Boundary
- BLDC Ranch
- TGLP Ranch
- Leasehold Farms
- Mining Lease Area
- Pastoral / Arable / Residential
- Wildlife Management Area
- National Parks and Game Reserves
- Pans
- Controlled Hunting Area (CHA) Boundaries
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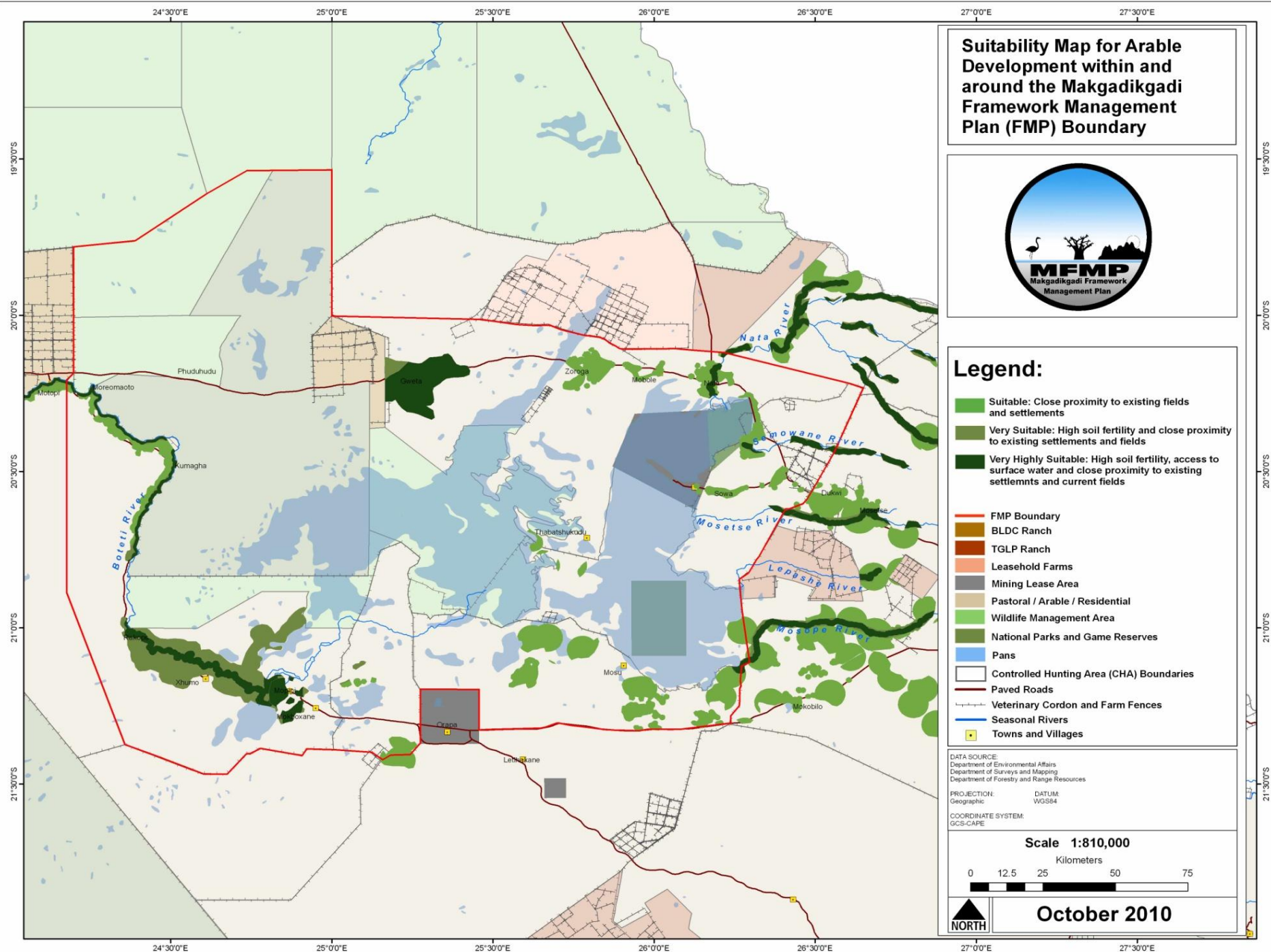
PROJECTION: Geographic
 DATUM: WGS84

COORDINATE SYSTEM: GCS-CAPE



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Suitability Map for Arable Development within and around the Makgadikgadi Framework Management Plan (FMP) Boundary



Legend:

- Suitable: Close proximity to existing fields and settlements
- Very Suitable: High soil fertility and close proximity to existing settlements and fields
- Very Highly Suitable: High soil fertility, access to surface water and close proximity to existing settlements and current fields
- FMP Boundary
- BLDC Ranch
- TGLP Ranch
- Leasehold Farms
- Mining Lease Area
- Pastoral / Arable / Residential
- Wildlife Management Area
- National Parks and Game Reserves
- Pans
- Controlled Hunting Area (CHA) Boundaries
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PROJECTION: Geographic
 DATUM: WGS84

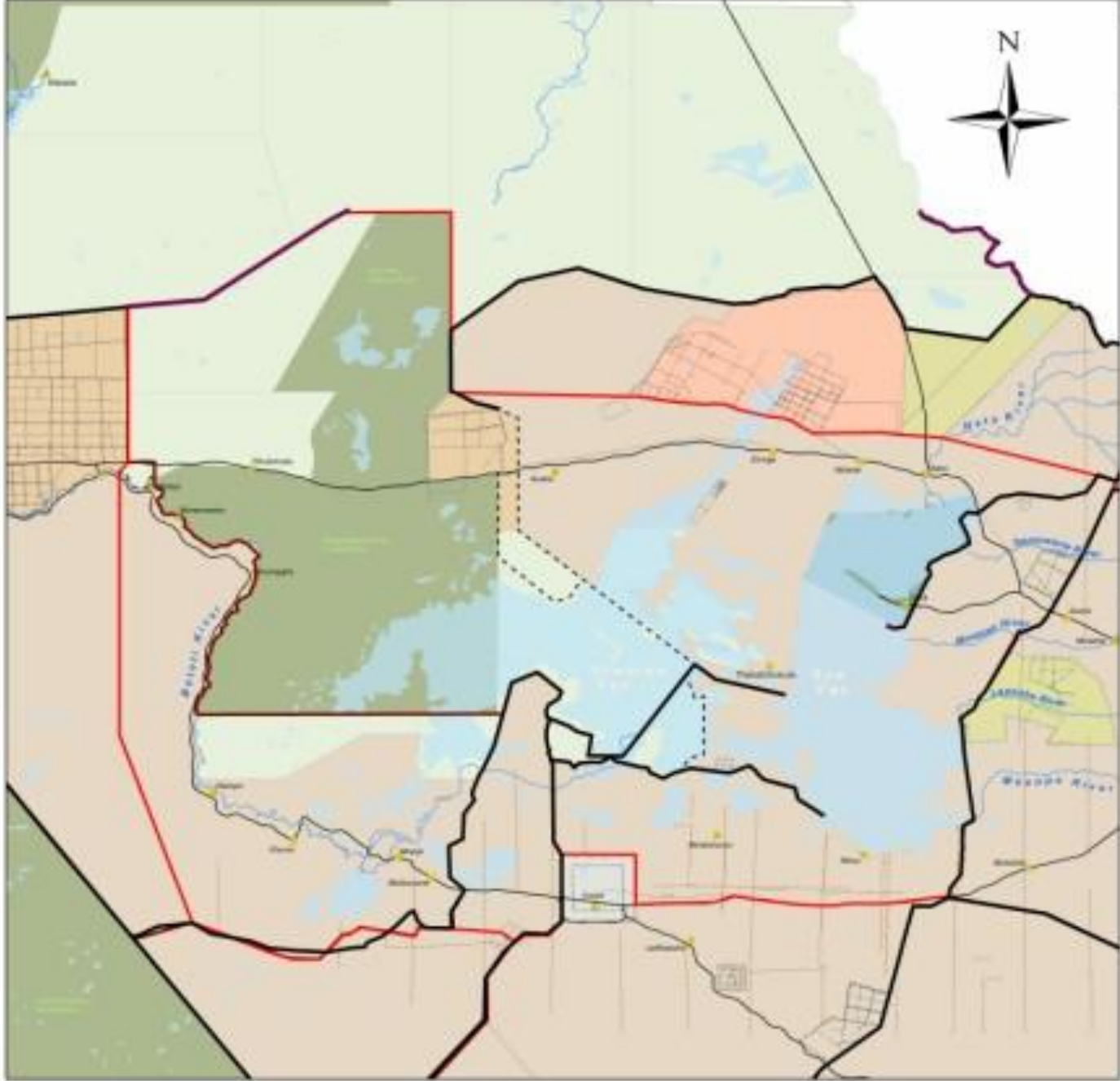
COORDINATE SYSTEM: GCS-CAPE



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Fence alignments within the Framework Management Plan (FMP) Boundary



Scale 1:2,868,948
 Map Datum: WGS84
 Projection: Geographic

Kilometers
 0 12.5 25 50 75

Key

- Drill Fences
- Farm Fences (Ranches / BLDC / Quarantine areas / Mines)
- Veterinary Cordon Fences
- Mahgalligadi Conflict Fence
- Decommissioned Fences
- - - - Proposed alternative alignments for eastern Mahgalligadi conflict fence
- FMP Boundary
- BLDC Ranch
- TSLP Ranch
- Landhold Farms
- Mining Lease Area
- Pastoral / Arable / Residential
- Wildlife Management Area
- National Parks and Game Reserves
- Naza Sanctuary and BotAsh mining concession
- Pans
- Controlled Hunting Area (CHA) Boundaries
- Paved Roads
- Seasonal Rivers
- Towns and Villages

10. Implementation

- DEA coordination unit
- 3rd round of Consultation – Feedback on the results and the planned activities
- Mainstreaming FMP activities in for Central including Boteti & Tutume sub districts Strategic Plans
- MFMP **launch** on the 4th June 2011 during WED
- Collaboration with ongoing projects (KAZA, BLB (PAs), CBOs etc)
- Monitoring of Boteti river flow
- DGS and DNMM – Mokobilo fossilized sedimentary rocks
- Collaborate with ongoing research in the MFMP area
- Explore more funding opportunities

Way forward: Better livelihoods & resource conservation – Integrated NR management - IMP







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KG

Sua pan!!

THANK YOU!

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“Tsela tshweu go ya Makgadikgadi”