



# THE WETLANDS OF THE MAPUNGUBWE NATIONAL PARK: A REGIONAL OVERVIEW



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## INTRODUCTION

The Mapungubwe National Park is located in the Limpopo Province on the confluence of the Shashi and Limpopo Rivers. The geological control on the landscape of the park is remarkable as is evident in the plateau to the south, the Limpopo Valley floodplain alluvium to the north and the sandstone cliffs and basalt capped kopjes in between. This control inevitably extends to the distribution, extent and types of wetlands in the Park. Mapping and analysing the wetlands of Mapungubwe is part of the larger Savanna SANPARKS Wetland Project.

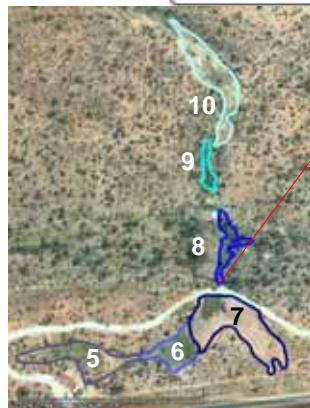
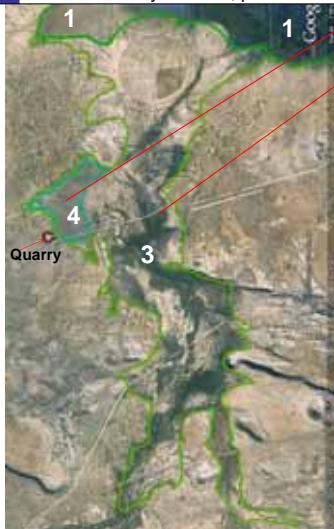
## METHODS

1. Wetlands were identified on aerial photos and investigated in field.
2. Sampling points were investigated for signs of wetland conditions, specifically in the form of hydromorphic (wetland soils), hydrophytic (wetland plants) indicators and terrain morphology according to DWAF, 2005.
3. Wetlands were digitized on screen in Google Earth that helped to indicate topographic differences and vegetation textural changes associated with prolonged saturation in the landscape.



TABLE 1: WETLANDS DESCRIBED IN MAPUNGUBWE.

No	Description	Example
1	Floodplain	Limpopo
2	Oxbow, pan, semi-permanent/seasonal	Maloutswa (M)
3	Alluvial fan with some floodplain features	Kolopi
4	Pan (depression), seasonal	Leeupan
5	Headwater Valley bottom, dry	Mapungubwe 1
6	Headwater Valley bottom (HVB), seasonal	Mapungubwe 2
7	Dam	Mapungubwe 3
8	Spring fed wetland (SFW) in HVB, permanent	Mapungubwe 4
9	SFW in seasonal drainage line, permanent	Mapungubwe 5
10	Valley bottom (VB), unchanneled, seasonal	Mapungubwe 6
11	SFW in seasonal drainage line, permanent	Mapungubwe 7
12	VB in secondary channel, permanent	M. channel



## SAVANNA SANPARKS WETLAND PROJECT OBJECTIVES

### General objectives:

To compile an inventory of the wetlands of the Kruger, Mapungubwe and Marakele National Parks.

### Specific objectives:

1. Characterize the wetlands in Kruger, Mapungubwe and Marakele National Parks in terms of the different ecozones they occur in, their geology, geomorphology, hydrology, soils and vegetation;
2. Development of a wetland classification system in terms of the identified wetland's hydro-geomorphic setting, vegetation cover and habitat type, and
3. Determine the ecological status in terms of erosion impacts of the wetlands
4. Compile an inventory on a 1:50 000 scale.

## STUDY SITE



## RESULTS

Floodplains, the Limpopo (1) and the Kolopi (2), are the dominating wetland type in Mapungubwe. These two floodplains ultimately form one system towards the confluence the Samaria section of the park. The Limpopo floodplain exhibits some classical floodplain features such as oxbow lakes and secondary channels (the Moloutswa system (3)), depressions (pans) and riparian forests. The Kolopi on the other hand are a much drier system with strong alluvial fan features. A major depression wetland, Leeupan (4), occurs in its distal area.

Various other smaller, with steeper gradient, seasonal tributaries occur in the park and mostly mouth onto the Limpopo floodplain (e.g. the Mapungubwe drainage line (5 - 11)). The dolerite features close to the confluence with the Shashi are crucial in the functioning of the floodplain by facilitating back flooding events. Various seeps and springs have been noted and are mostly associated with the dolerite intrusions, the fault zones and also with contacts between different lithologies (Brandl, 2002). The weathered sandstones, weathered contacts and fault zones are excellent aquifers.

The wetlands in the park have been impacted upon by a long history of agriculture practices, including draining, damming, and cultivation and grazing. Recent impacts include exposure to high elephant concentrations and conservation interventions such as water transfer. The implementation of management guidelines in the park should take note of the distribution, type and current ecosystem health of wetlands.

## REFERENCES

- Brandl, G. 2002. Geology of the Alldays Area. Explanation: Sheet 2228. Scale 1: 250 000. Council for Geoscience, SA.  
Department of Water Affairs and Forestry. (2005) A practical field procedure for identification and delineation of wetlands and riparian areas. Department of Water Affairs and Forestry. Pretoria.  
Google Earth. (2009). Cnes/Spot Image