

Seronga - Landscape



Fig. 1: Seasonally flooded area of the Panhandle with *Nymphaea nouchali* (photo: R. Revermann).

Table 1: Landscape characteristics.

Geology		Lithology
Pleistocene Kalahari sands & Holocene river sediments		Unconsolidated aeolian & fluvial sands & loams
Mean height (m a.s.l.)		Mean annual precipitation
990 m		478 mm
Landscape units (LSU)		
	LSU 1 (Recent Floodplains): 26%	LSU 2 (Levelled Kalahari Dune Area): 74%
Related land uses		
	fishery, grazing, hunting, tourism, (recession farming), reed harvesting	subsistence agriculture, grazing, wood extraction, hunting
Ecosystem goods		
	drinking water, fish, thatching reed, recreation	maize, pearl millet, cow peas, groundnuts, timber, firewood, meat

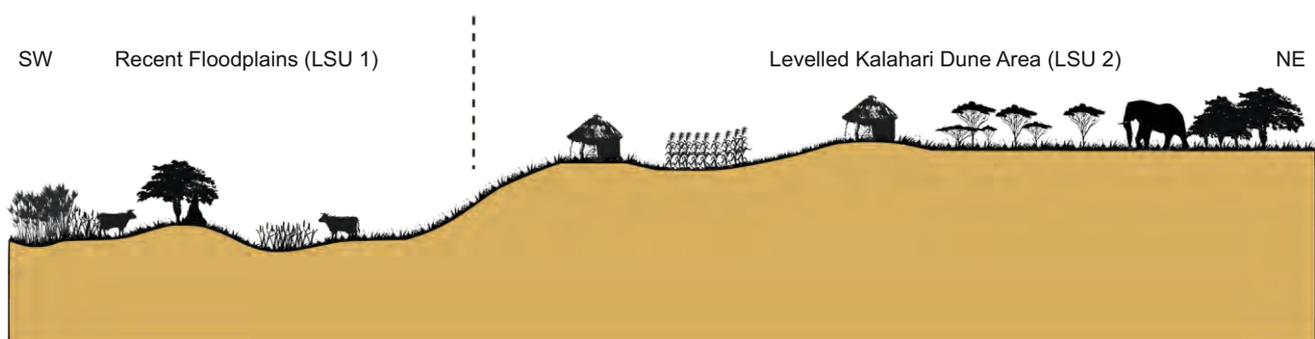


Fig. 2: Landscape catena of the core site Seronga.

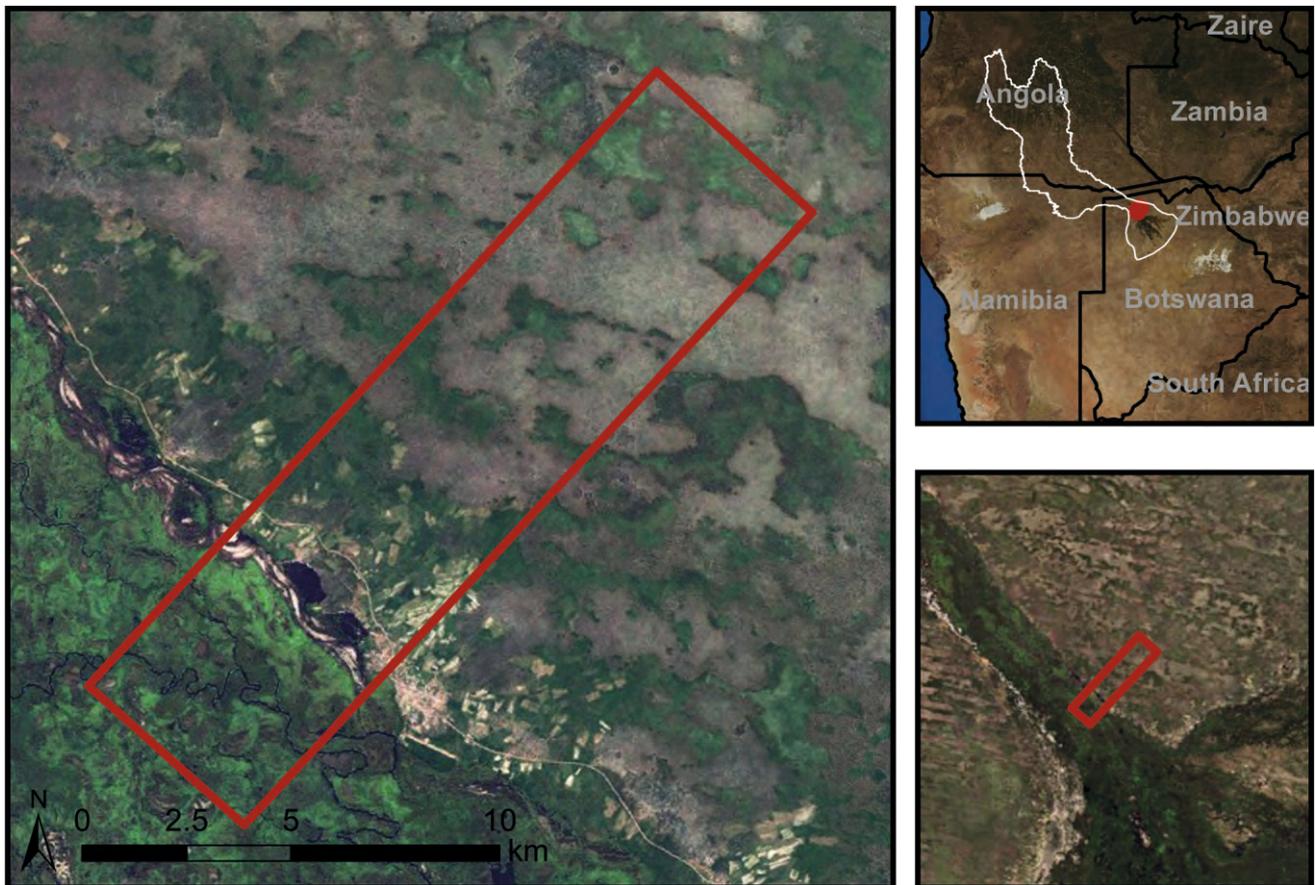


Fig. 3: Seronga core site at three scales. The white line depicts the Future Okavango Research Area (FORA) (background: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community).

This core site is situated at the eastern side of the Panhandle near the northern border of the Okavango alluvial fan. The landscape consists of two main ecosystem units clearly divided by their elevation and their land use potential: the wetlands of the Panhandle and the leveled Kalahari Dune Area, with a difference in altitude of about 10 m (Fig. 2 and 3).

Within this core site at the lower part of the Panhandle, the **Recent Floodplains (LSU 1)** form a wide (about 12.5 km) wetland with a diverse mixture of river channels and lakes, reed and papyrus swamps, micro-islands of termite origin and sandy levees, set apart by elevation above the water level of the river and vegetation. The diversity of habitats corresponds to a multitude of different vegetation units with a highly diverse flora and fauna.

The longitudinal dunes that once characterized the eastern area have long been leveled (**Levelled Kalahari Dune**

Area, LSU 2) by flood events and changing river courses of the interconnected Okavango-Kwando-Zambezi-system. This process termed 'overwashing' dates back more than 120,000 years and has left i) slightly clayish sediments of gray to blackish colour typical for former dune valleys which are covered by Mopane woodlands if not under use; ii) small lines of reddish brown sands, exhibiting the former dune surfaces experiencing initial soil formation and iii) deep and light brown to pale pure sands at places of former dune ridges covered by an *Acacia* and *Terminalia* shrubland.

Depending on the access to water, a line of villages stretches along the borderline between both landscape units. The village of Seronga is surrounded by an extensive area with dark sediments within LSU 2 which are used for cultivation of maize, millet and other crops. Mainly during the dry season, wildlife like elephants and

buffalos coming from the vast hinterland causes conflicts with agricultural land use on their way to the water. Farmers try to protect their fields by erecting solid fences. Such fences thus further interrupt the migration pathways for wildlife.

The husbandry of cattle forms an important part of the local economy. During the dry season the floodplains offer high quantities of fodder whereas during the rainy seasons cattle posts up to distances of 20 km from the villages are established in the hinterland.

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