



seit 1558



**Reservoir siltation in the Kruger National Park
A reconnaissance survey**

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Aims

Key questions of reconnaissance survey:

- (1) Thickness of the sedimentary layer in the reservoirs?
- (2) Characteristics of the sediments?
- (3) Are the reservoirs suited for an investigation into spatial variation of soil loss in the Kruger Park?

Methods

Reconnaissance survey covered:

26 reservoirs in central and northern region (remote sensing from car)

14 reservoirs in southern part with sampling in 7 reservoirs

Fig. 1: Reservoirs in the KNP
(Data source: KNP-GIS, modified)

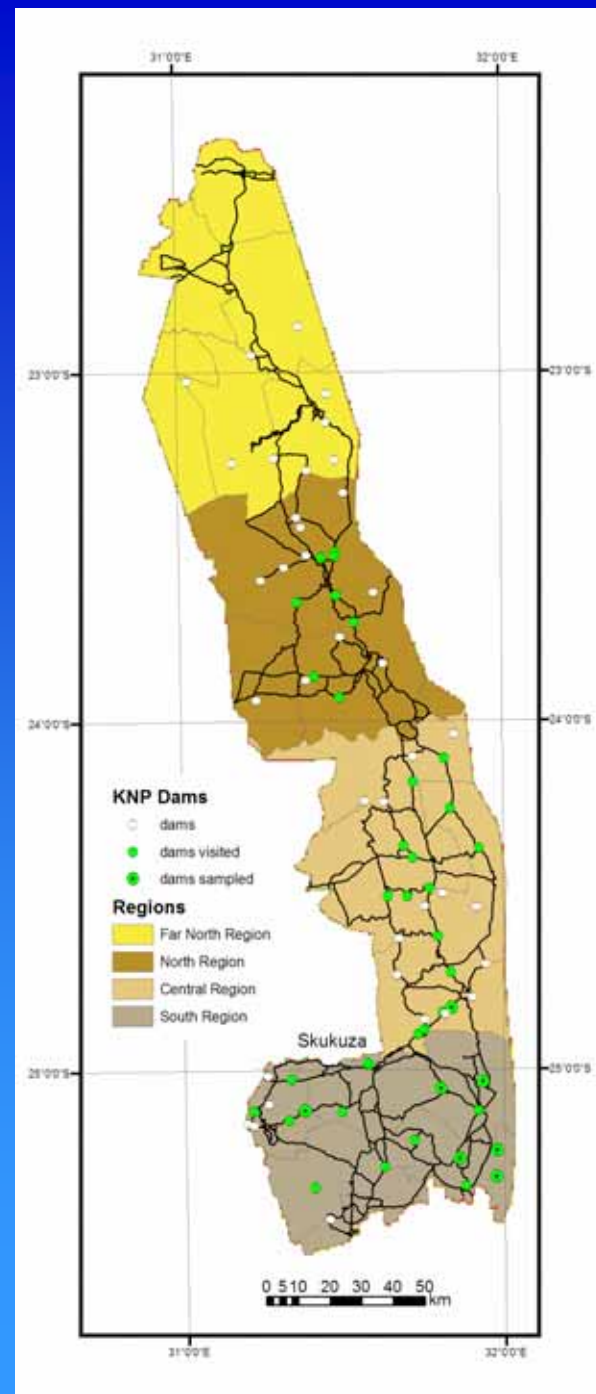
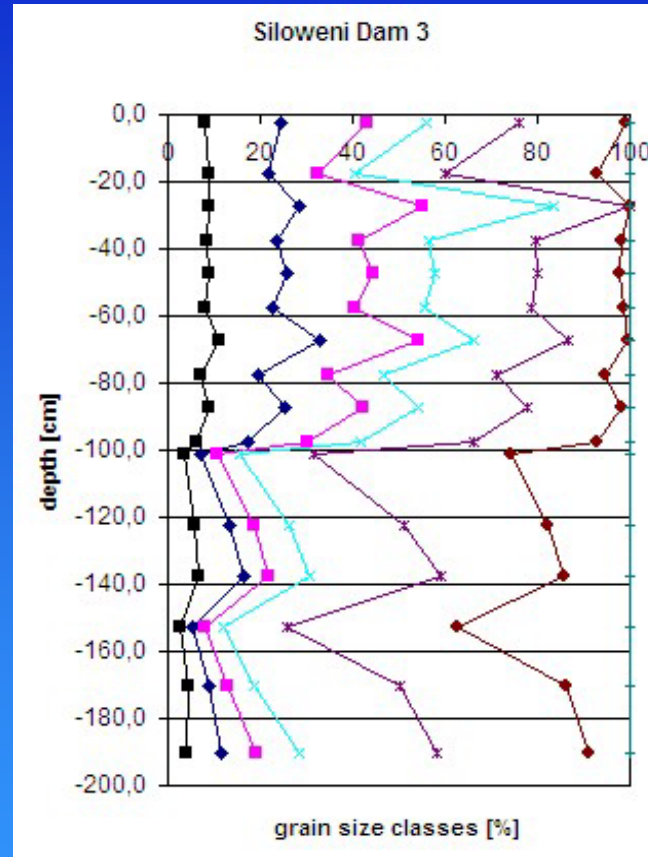
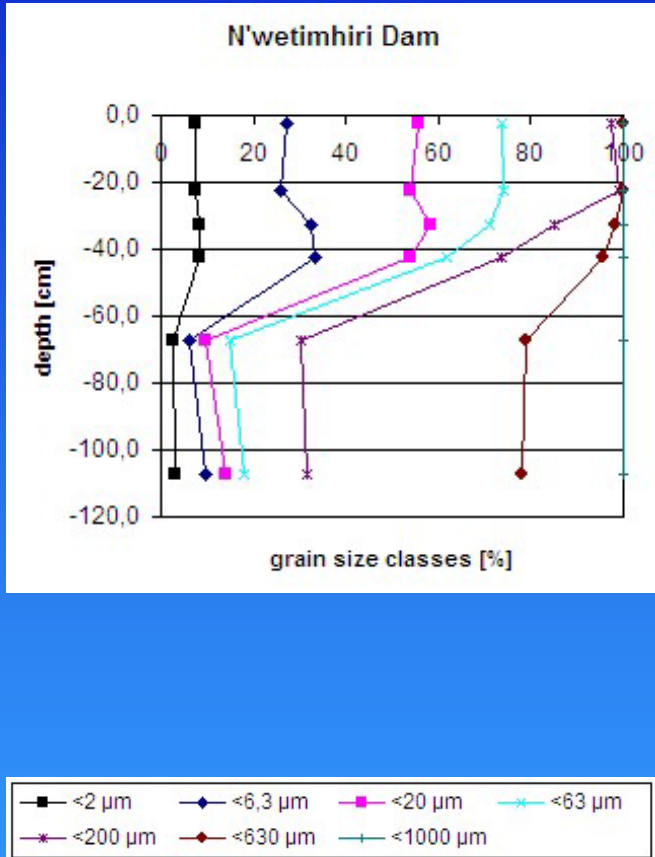




Fig. 2: Sampling scheme at the Siloweni reservoir
(Image source: Quickbird 2004-11-18, DigitalGlobe 2009)

Results



fine post-damming sedimentation

underlying pre-damming fluvial sedimentation

Fig. 3: Grain size distribution (cumulative plots) in profiles from selected reservoirs in the southern part of the KNP

Results

Key questions of reconnaissance survey:

- (1) Thickness of the sedimentary layer: 0.4 – 1.5 m
- (2) Characteristics of the sediments: strongly turbated
- (3) Suitability?
yes: will yield mean annual soil loss for catchment areas (comparable to USLE type assessments)
value for soil loss and sediment management in KNP
and soil erosion management benchmarking outside of KNP