# Variation of physico-chemical parameters along a river transect through the Okavango Delta,Botswana

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**Abstract**

The Okavango Delta depends on water quantity and quality to sustain its ecosystem services. Whereas many studies have been carried out on its hydrology, few have been done on water quality in the delta. Water pH, electrical conductivity (EC), dissolved oxygen (DO), turbidity, total suspended solids (TSS) and dissolved organic carbon (DOC) were monitored at 10 sites along the Okavango–Boro–Thamalakane–Lake Ngami system almost fortnightly from June 2008 to June 2010. Water quality in the delta was generally good, despite high evapotranspiration rates which would normally produce very saline waters. Electrical conductivity and water temperature increased with distance from Mohembo to Lake Ngami, the former most likely due to evapoconcentration. In contrast, pH, DO, turbidity and TSS decreased with distance from Mohembo to Boro at the lower end of the seasonal floodplain, before increasing again to Lake Ngami. Dissolved oxygen and TSS most likely declined due to biological uptake and particle sedimentation, respectively. Strong and significant relationships were observed between TSS and turbidity and between DOC and EC, indicating that turbidity and EC could be useful proxies for routine estimations of TSS and DOC, respectively, in the delta.