
2 Objectives of this Study

The knowledge about cyanobacteria in Kenyan waterbodies is often drawn from studies which were mainly conducted in the 1970s and 1980s. Cyanobacterial toxins and possible producers which are a hazard for animal and human health have not been studied in Kenyan waterbodies. To close existing gaps this study focuses on the cyanobacterial communities, the production of toxin and the possible impact on freshwater and alkaline-saline waterbodies in the East African Kenyan Rift Valley and the closely related Lake Victoria Basin. The objectives are:

- Investigation of the quality and quantity of cyanobacterial species (I, II, III, IV, V),
- Estimation of the types and production of cyanobacterial toxins (I, II, III, IV, V),
- Determination of the toxicity of strains of *Arthrospira fusiformis*, *Anabaenopsis abijatae*, *Spirulina subsalsa* and *Phormidium cf. terebriformis* (IV, V),
- Investigation of a possible impact of the toxins on the environment (II, III, IV, V),
- Determination of the phylogenetic relationship of strains of *Arthrospira fusiformis*, *Arthrospira indica*, *Spirulina subsalsa* and *Phormidium cf. terebriformis* (VI).