

Limnology in relation to fisheries in Tanzanian waters.

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Introduction

The study of limnology is important to understand ecosystem dynamics and the ecological basis for fish production in the Lake Victoria which is important for fisheries resources use, planning and management.

Physical, chemical and biological parameters are important and known to influence fish population production. Energy fixed by primary producers, e.g. algae, is transferred to higher trophic levels, e.g. fish. Factors which influence the dynamics of phytoplankton and zooplankton population, e.g. nutrient availability and uptake, growth rate, species composition and biomass, ultimately affect fish production. The commercial fisheries of Lake Victoria consists mainly of piscivorous *Lates niloticus* (L.), algivorous *Oreochromis niloticus* (L.) and zooplanktivorous *Rastrineobola argentea* (Pellegrin).

Parameters to study

- Nutrient dynamics/ levels in the lake, e.g. nitrates, phosphates and silicates.
- Dissolved oxygen, transparency, temperature, conductivity and chlorophyll
- Phytoplankton, zooplankton and microinvertebrate species composition and abundance.

Conclusion

Data to be obtained from this study will complement the fish stock assessment data and help to explain what has been observed, e.g. distribution patterns and abundance of fish stocks in different depths of the lake. This is very important in resource use, planning and management instead of depending on catch-effort data only. Before starting data collection, further training in collection, processing and analysis of data is requested.