



Extent and drainage status of organic soils in the Lake Victoria catchment

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When considering peatlands and organic soils in the tropics, the huge areas in SE Asia prevail in public and scientific perception, whereas Africa has largely been out of focus. However, East Africa contains large areas of organic soils as well. They basically occur in the high altitudes of the uplifted flanks of the East African Rift System, isolated volcanoes and the Ethiopian highlands, in the Zambezian floodplains (e.g. Zambia), and in coastal environments (e.g. Mozambique and Madagascar).

We used a mapping approach that integrates old field data and maps, specialized landscape and peatland-related knowledge, and modern RS and GIS techniques to elaborate a comprehensive and rather reliable overview of organic soils (incl. peatlands) in the Lake Victoria catchment. Maps at a scale of 1:25,000 have been prepared for Burundi, Kenya, Rwanda, Tanzania and Uganda. The land use intensity has been estimated for all organic soil areas based on satellite and aerial imagery.

Feeding the Nile River, sustaining a fast growing and widely poor population and already facing climatic changes, organic soils of the Lake Victoria neighbouring countries are partially under heavy threat. We mapped 10,645 km² of organic soils for the entire area of which 8,860 km² (83.2%) seem to be in near natural condition. We assume slightly drainage and low degradation for 564 km² (5.3%) and intensive drainage and heavy degradation for 1,222 km² (11.5%). Degradation hotspot is Burundi with 522 km² (79.5%) of heavily drained and degrading organic soils. This area assessment has been quite conservative to not overestimate the extent of organic soils. A reserve of 5-7,000 km² of wetlands in the Lake Victoria catchment may include peatlands too, which needs to be confirmed in field surveys.

Considering the key role of peatlands and organic soils for water provision and regulation and their rapid degradation due to drainage and inappropriate use, this inventory might be a step towards organic soil protection, and the development (or rediscovery) of sustainable land use options for undrained or future rewetted areas.