

detergent into the lake. Agricultural practices in the upper catchment (primarily cattle farming) have caused increased nutrient loads and some of the pesticide load into the lake. Lake Naivasha has a history of destructive invasive species. The most destructive current problems are the common carp (*Cyprinus carpio*), which now accounts for 90% of fish landings, and the water hyacinth (*Eichhornia crassipes*), which reduces light penetration and primary productivity in the lake.

Ongoing research is being conducted in Lake Naivasha through partnerships between North American and European Universities with Kenyan institutions and stakeholders. The University of Western Ontario, through Drs. Charlie Trick and Irena Creed, is working under an International Development Research Council (Canada) grant to investigate and propose solutions to the Ecosystem Health of the area. Researchers at Leicester University (led by David Harper) have been studying aquatic ecology at Lake Naivasha since 1985. ITC in the Netherlands (including Robert Becht) developed a water balance model of the lake and its basin in the late 1990s and continue to collaborate with Kenyan partners. In Kenya, researchers from Egerton University in nearby Nakuru are collaborating with the University of Western Ontario team, as well as conducting other projects. Other local and overseas universities have conducted research in the area, as have the Kenya Marine and Fisheries Research Institute and the Kenya Agricultural Research Institute.

Possible End-Users:

In addition to the researchers mentioned in the previous section, research on Lake Naivasha would be of interest to the following stakeholders: the Lake Naivasha Riparian Association, the Lake Naivasha Growers Group, Kenya Electricity Generating Company (KenGEN), Kenya Wildlife Service, the Lake Naivasha Management Implementation Committee, Ministry of Water Development, Department of Public Health, National Environmental Management Authority, Department of Environment of the Naivasha Municipal Council, Naivasha Business Association, tour owners and land owners within the basin.

Site Conditions:

The Lake Naivasha basin is bordered by the Nyandarua Mountains to the east, the Mau Escarpment to the west, Mount Longonot to the south and the Eburru Hills to the north. The basin lies within the range of the Intertropical Convergence zone, and the climate is semi-arid. Rainfall is about 680 mm annually but varies at different locations within the basin. There are two rainy seasons (long rains from April to June and short rains from October to November). Soils are silt loam to clay, with a humic topsoil in some places. Papyrus (*Cyperus papyrus*) around the lake reduces nutrient, sediment and silt loads but now covers less than 10% of its former extent.

Monitoring and Data:

Meteorological, hydrological, physicochemical, biological (algae, flora and fauna surveys), land use and land cover, GIS and remote sensing from the Lake Naivasha basin are available.

Publications:

Publications by GWEN members are in preparation. The following articles provide background information about Lake Naivasha:

Becht R, Odada EO, Higgins S (2005) Lake Naivasha: Experience and lessons learned brief. *Managing Lakes and Basins for Sustainable Use: A Report for Lake Basin Managers and Stakeholders*. pp. 277-298. Kusatsu: International Lake Environment Committee Foundation (ILEC).

Harper DM, Mavuti KM, Muchiri SM. (1990) Ecology and management of Lake Naivasha, Kenya, in relation to climatic-change, alien species introductions, and agricultural development. *Environmental Conservation* 17: 328-336.

Otiang'a Owiti GE, Oswe IA. (2007) Human impact on lake ecosystems: The case of Lake Naivasha, Kenya. *African Journal of Aquatic Science* 32: 79-88.