

THE LAKE COCIBOLCA BASIN

Located in the Southwest of the country, Lake Nicaragua (also known as Lake Cocibolca) is the largest lake in Central America with an area of 8 250 km² (and volume of 108 km³). It is located 24 km from the Pacific Ocean and drains into the Caribbean Sea at San Juan del Norte via the Río San Juan. It is a freshwater lake inhabited by a variety of species usually associated with saltwater, such as shark and swordfish. The lake contains about 310 small islands, most of which are inhabited. The largest island, Ometepe, has two volcanoes: Concepción (1,610 m), and Madera (1,394 m). Lake Managua to the north drains into Lake Nicaragua via the River Tipitapa. The area is ecologically important for many rare and colourful birds.

The Cocibolca Lake has been classified as a high priority Conservation Area at a Regional level and its conservation status is marked as endangered. Cocibolca is one of the 40 largest lakes in the world by both surface area and volume. Its origins are both tectonic and volcanic. About 45 different rivers drain to the Nicaragua Lake; the total drainage area of the basin is 17 300 km². The average monthly evaporation rate is estimated to be 1200 mm. The run off to the Río San Juan is about 460 m³/s.

Main threats include aquaculture (aquafarms of the invasive tilapia), toxics from opencast mining, aerial fertilising, fumigation, and urban wastewater. Commercial fishing targeting large tooth sawfish has caused a large decline in populations since 1970. Meat from these fish is consumed domestically and exported overseas. Other threats include sedimentation from logging, road construction, and makeshift settlements in urban areas. Mining has caused the loss of aquatic and riparian habitats, and the disappearance of numerous species of fish, mammals, birds and invertebrates. Other important problems are: erosion, point sources pollution, polluted runoff, and toxic discharges from industry. Specific pollution pressures come from industrial and agricultural activities (Mining, Pesticides).

The lack of scientific information is a strong obstacle to evaluating different alternatives and projects in the area?

A strong interest in creating a better knowledge on this Lake is expressed in the Environmental Plan developed by the government for the 2006-2026 period. Special actions are to be undertaken in order to promote the integrated management of the river basin, and in order to examine the combined environmental impacts of water supply, irrigation, energy production, fishing and tourism.

TWINLATIN PROJECT

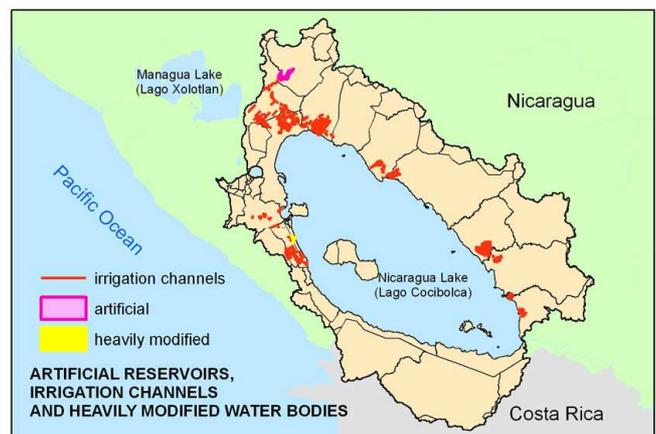
The Latin American and Caribbean region is highly heterogeneous in terms of climate zones, hydro-ecology, socio-political systems etc. Numerous problems in relation to water quality and water availability arise. Flooding occurs frequently and erosion and pollution pressures have also become major problems. Management strategies, legal framework and stakeholder involvement needs to be improved. Activities and research tasks will be conducted within several fields of IWRM; hydrology, modelling of pollution flow, impact assessment, socio-economic impacts, climate change effects, scenario analysis and action efficiency.

The project addresses the goals of the EU Water for Life, and builds on the methods and guidelines developed for the EU WFD.

Cocibolca Lake focus in Twinlatin:

- Water resources conservation program
- Work towards good quality drinking water

(ADDITIONAL INFO ON [HTTP://TWINLATIN.IVL.SE/INDEX.HTML](http://TWINLATIN.IVL.SE/INDEX.HTML))



ABOUT TWIN2GO

Twin2Go reviews, consolidates, and synthesises research on adaptive and integrated water resources management in basins around the world. The aim is to draw insights relevant to policy and research on issues around adaptive water governance in the context of climate change, and to make them transferable to other basins. Twin2Go further promotes sharing of research results with practitioners and high level decision makers through effective dialogue.