

The rising waters of Lake Turkana: a story of friend turned foe

Why we need to understand changes in water and climate patterns to take the right actions



Increased irrigation and other abstractions within the basin may help to counterbalance increasing water levels due to climate change.



It may be possible to partly reproduce seasonal inflows to Lake Turkana that can maintain fish and hydropower production in the basin



Soil and water conservation and reforestation measures can significantly reduce the risk of landslides and mudflows

Challenge

Lake Turkana and its river basins, including that of the Omo River, are vital for the people, economies and wildlife of both Kenya and Ethiopia. The Omo River delta and Lake Turkana are rich in biodiversity, support endangered species such as flamingo, and its fish are important to the local economy.

The region around Lake Turkana is vulnerable to drought. It was, therefore, a surprise to many when devastating floods hit lakeside settlements in 2020, damaging the livelihoods of thousands of people, destroying homes, and affecting wildlife.

However, a recent study by the UNEP-DHI Centre, on behalf of the United Nations Environment Programme (UNEP), indicates that such floods may become a more regular occurrence in years to come. It found that climate change could increase the likelihood of both drought and flooding around Lake Turkana due to erratic precipitation,

Solution

Studies, such as the UNEP-DHI Centre study, can be a critical first step in identifying and quantifying the root causes of flooding.

The study sought to: Establish a joint scientific understanding of the lake and its river basins, set up a monitoring system for Lake Turkana and its river basins, evaluate scenarios to tackle the specific issues and hotspots identified, combining water resources developments, rehabilitation and adaptation measures, and climate change projections as well as implement pilot demonstrations for ecosystem rehabilitation.

Based on detailed scenario modelling, the work undertaken generated elements to support dialogue and water diplomacy between the two nations. This included the identification of possible initiatives that could help mitigate the effects of climate change, such as the building of barriers around the lake to help prevent flooding.

‘Through this study, we are able to demonstrate how to use scientific evidence to validate or challenge prevailing theories and to show that win-win scenarios can be achieved via close collaboration, both at the technical expert and decision-maker levels. UNEP is now in a better position to support cross-border dialogue between Ethiopia and Kenya. The local authorities involved in the project strengthened their ability to study environmental issues in their catchment and the root causes of those issues. They also learnt how to test the benefits of different solutions..’

Joakim Harlin,
Chief of Freshwater Ecosystems United Nations Environment Programme (UNEP)



Contact: info@dhigroup.com



Visit: www.dhigroup.com



More: [link to online story](#)