KENYA - Western Kenya site

PRESA

Balancing competing interests for ecosystem services in the Lake Victoria Basin

Since fishing is a major business in the lake region, interventions that mitigate soil erosion and pollution in river basins are necessary to secure the future of the fishing industry.

Watershed management at the highlands not only protects the environment but can help secure clean water supplies for households. (Photo © PRESA)

PRESA - Pro-poor Rewards for Environmental Services in Africa is working at sites in Kenya, Tanzania, Uganda and Guinea to facilitate fair and effective agreements between stewards and beneficiaries of environmental services. Voluntary, conditional and negotiated agreements can reward poor farmers for good land use practices, while ensuring a clean and sustainable supply of environmental services for local and global communities.

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Poor land management, deforestation and pollution are threatening the livelihoods of 30 million people dependent upon Lake Victoria for fishing, transport, irrigation and electricity generation.

The PRESA (Pro-poor Rewards for Environmental Services in Africa) project is focusing on the Nyando and Yala river basins in Kenya, whose catchments are the cause of most of these problems. The two rivers drain into Lake Victoria after meandering through high density farming zones in western Kenya, ranging from highland tea plantations to lowland pasture.

PRESA partners intend to connect groups that depend on the lake with groups whose activities influence the lake's health, through reward or transfer schemes for environmental services.

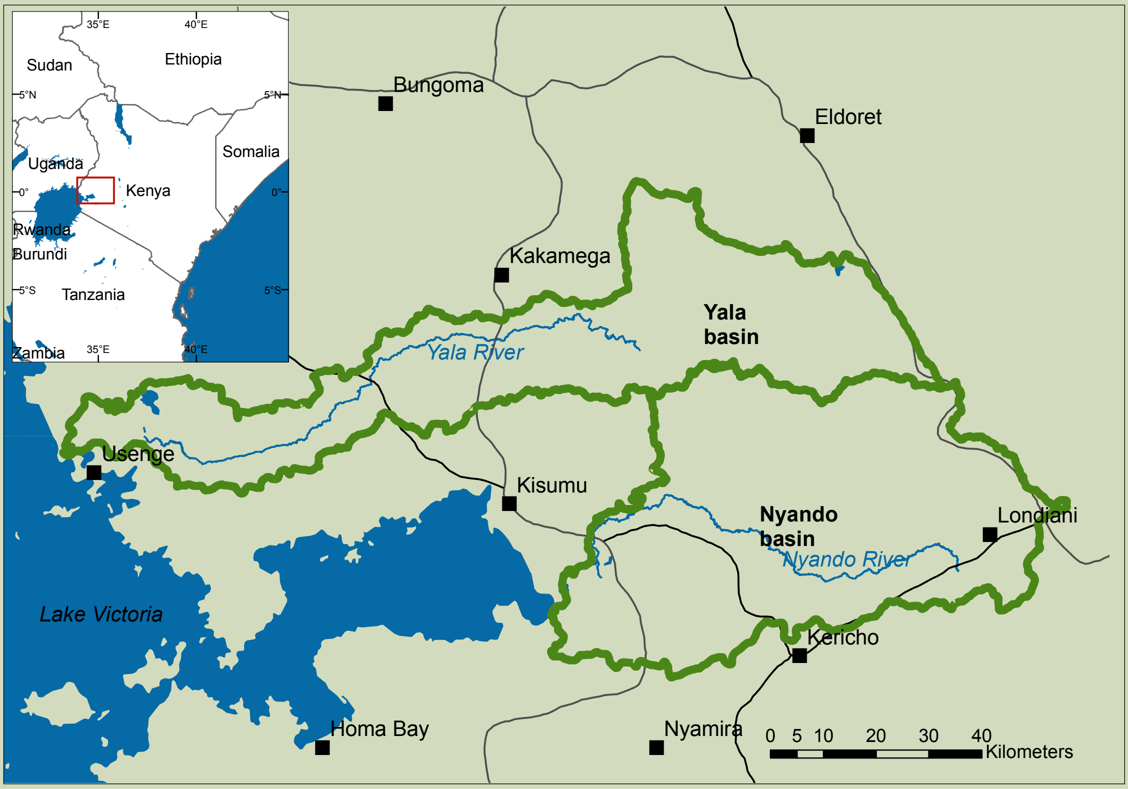
An ecosystem in danger

Agricultural and industrial activities are polluting Lake Victoria with vast amounts of soil and chemicals. Fertilizers contribute to the prolific growth of the water hyacinth and other weeds that deny fish of oxygen. Since fishing is a major business in the lake region, interventions that mitigate soil erosion and pollution in river basins are necessary to secure the future of the fishing industry.

Deforestation has reduced water inflows so much that Lake Victoria is slowly shrinking. Ironically, reforestation projects in the highland catchments are worsening the situation. Fast growing exotic trees such as Eucalyptus - which were planted to control soil erosion - absorb so much ground water that the flow of springs into rivers is negatively affected.

Ongoing activities

Rewards for environmental services are not new to the Nyando and Yala Basins. Between 1974 and 1985, the Kenyan government and the Swedish International Development Agency (SIDA) paid farmers to construct cut-off drains



Nyando and Yala River basin catchment areas. (Map © M. Mäkelä - World Agroforestry Centre)

Partners

- Kenya Agricultural Research Institute (KARI)
- United Nations Environment Programme (UNEP)

Stakeholders

- Communities at the lower and upper Nyando and Yala Basins
- Local authorities
- Water Resources Management Authority
- Provincial Administration
- Kenya Forestry Service
- National Agricultural Livestock Extension Programme

to manage runoff from steep slopes. This helped reduce land degradation across the basins.

The ICRAF-run TransVic Project (1999 – 2004) identified the River Nyando as a major source of pollution from the Kenyan side of Lake Victoria. With the help of Ministry of Agriculture extension officers, TransVic analysed the cultural and economic factors influencing land use practices that cause degradation.

In 2001, the East African Community launched the Lake Victoria Basin Commission (LVBC) which has a development programme expected to harmonize policies regarding the management of the lake and its catchment area. The programme emphasizes on poverty eradication and the participation of local communities through sustainable development practices cognisant of the environment.

From 2004, ICRAF and the Kenya Agricultural Research Institute (KARI) have run an integrated ecosystem management project with a focus on rehabilitating large areas of degraded and abandoned land. The research team combined field surveys and satellite imagery to create detailed maps of degraded land in the river basins of western Kenya. From those maps, they conducted research on the best ways to regenerate the scarred landscape.

More recently, a 2008 study of the Nyando and Yala Basins by scientists from ICRAF and the United Nations Environment Programme (UNEP) found no evidence that sediment loss is an inevitable side-effect of high agricultural production. There were low productivity areas that were releasing more sediment into the rivers than highly productive areas. Reducing sediment yield may therefore be more a matter of general farm management than the planting of crops.

Opportunities and challenges for PRESA

The Kenya Ministry of Agriculture and UNEP are building on research by ICRAF and other scientists to control ecosystem degradation in the western Kenya landscape. PRESA will make use of past research experiences to disseminate knowledge on sustainable land management methods.

PRESA emphasizes the participatory approach to ecosystem management for the benefit of the predominantly small-scale land holders in the Nyando and Yala basins.

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