

Climate Change affecting fisheries in Lake Victoria

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Lake Victoria is the second largest fresh water lake in the world only after Lake Superior in North America. It is the source of livelihood for millions of people living on the shores. Lake Victoria plays a major ecological role and a climate regulator in the East African region. Climate variability exhibited due to climate change has greatly impacted the activities of the fishermen in Lake Victoria in the recent past. Changes in the winds and the hydrological patterns cycles resulting from climate change has affected the lake environment hence negative effects in the fishing industry. Although the lake water quality is a function of several factors, increase in floods in the catchment areas have contributed to sedimentation and eutrophication which is blamed on the proliferation of water hyacinth.

Water hyacinth interferes with navigation as well as fish breeding. It hinders navigation by clogging the engines of the water vessels making it impossible for them to operate. It also creates anoxic conditions which are not favourable for some species of fish like tilapia but at the same time creates a very good environment for breeding and growth of cat fish. This brings about imbalance in the food webs and food chains in the lake ecosystem.



Part of Lake Victoria covered by water hyacinth photo taken at Seka Beach, Homa Bay County

The changes in fish population and biodiversity has affected the lives of fishermen by reducing the productivity of fishing activities. According to Florence Adoyo one of the women leaders at Kigoda Beach in Rusinga, County of Homa Bay, the fishing industry is on a constant decline. As compared to the previous decades in which the fishermen would have enough catch for the day, currently, fishermen toil all through the night without having enough catch to put food on the table.



Fishing boats anchored at the lake shore at Sindo Beach, Homa Bay County

Mr. Peter Mireri who is a specialist in environmental conservation explained that the negative effects are due to the changes in temperature that affects fish breeding in the Lake Victoria. He further pointed out that the survival of the fish species is dictated by the environment and water quality. *“Tilapia is highly sensitive to changes in water quality and prefers high oxygen levels compared to what is required by cat fish. Nile perch also prefers deep waters, a characteristic makes it difficult for it to survive in the heavily sediment shallow parts of the lake”* he said.

Due to the complex response dynamics of the lake systems in the hydrological cycle, it has been suggested that management of the lake requires a holistic approach which requires the participation of all the stakeholders. Leaders such as the members of county assembly, the members of parliament and the governors should ensure that they have environmental conservation in their agenda. This will enable them to formulate policies and establish laws that can contribute to environmental conservation, increase resilience and adaptation to climate change.
