

Scientists find cancerous metals in Lake Victoria

By Agnes Nantambi
and Gerald Tenywa

Scientists have encountered high concentrations of heavy metals in Lake Victoria that are linked to different ailments, including cancer and disruption of different organs in the human body.

They named lead, copper, zinc, manganese and iron as the heavy metals that exceeded the internationally acceptable levels, according to scientists under the National Fisheries Resources Research Institute (NaFIRRI).

The heavy metals encountered in some areas of the lake have a higher concentration level than the internationally accepted thresholds. Nickel was below the internationally acceptable thresholds.

The study was conducted last year by NaFIRRI and it included taking samples from parts of Lake Victoria and analysis in Uganda's largest water source.

"All the sites examined were polluted as they receive urban effluents and agricultural waste through rivers flowing into the lake," said Robert Egesa, a research scientist at NaFIRRI. "We already have a lot of heavy metal and nutrient concentrations in the lake."

The study was part of the activities funded under the Lake Victoria Environmental Management Project (LVEMPII) aimed at strengthening institutional capacity for managing shared water and fisheries resources. Lake Victoria is shared by Uganda, Kenya and Tanzania and its catchment also includes Rwanda and Burundi.

Polluted areas named

Egesa said the sites examined included those that receive urban effluents such as Murchison Bay and Napoleon



The directorate of water resources boss, Florence Adong, gets a water sample to test the level of pollution in Lake Kachera. Photo by Agnes Nantambi

BETWEEN THE LINES:

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Gulf in Jinja, large drain agricultural catchments via river inflows of Bunjako Bay in Mpigi, Katonga, and River Kagera in Rakai and Berkeley Bay in Busia.

Other sources of pollution, he said, are washing cars directly in the lake including motorcycles battery leakages, run-offs and erosion where forest cover has been cleared.

Bunjako Bay, which drains the Katonga, the largest catchment in the Ugandan part of the Lake Victoria basin, had high levels of pollution, which in some cases exceeded those draining urban

areas. Others are those adjacent to agricultural catchments, such as Hannington Bay in Jinja and Kalangala.

Egesa said a team of scientists at NaFIRRI have also prepared a draft policy brief that provides recommendations for further research and policy guidance on the management of pollution needed to safeguard the social and economic benefits of the lake.

Dr Fred Wanda, a senior research officer at NaFIRRI, blamed processing industries and flower farms within the catchment of the lake as the leading sources of pollution. He also said artisanal gold mining, particularly in eastern Uganda, is also a source of pollution.

However, pollution with heavy metals does not cover the whole of Lake Victoria and pollution is restricted to what he called localised areas, where effluent enters the lake. He said people who take untreated water (not processed by National Water

and Sewerage Corporation) are at a greater risk.

Recommendations

Wanda recommended that NEMA ensures restoration of wetlands in the catchment of the lake and that the top Government watchdog should crack down on the polluting industries.

"NEMA does not have a policing arm and as a result most of the wetlands have disappeared," Wanda said. She said wetlands help to retain most of the impurities and clean them out before releasing the clean water into the lake.

Paul Mafabi, the commissioner for fisheries, said the National Environment Bill is proposing to establish an Environment Protection Force under NEMA to protect the environment. The environment force is under the Uganda Police Force in command and they are few compared to the task they are supposed to handle.

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