

DEFORESTATION PUSHING BOUNDARIES



SPECIAL REPORT

Lake Victoria, the world's largest tropical freshwater lake and a lifeline for millions, is in peril. Pollution, overfishing and unchecked human activity are choking its waters, destroying breeding grounds and depleting fish stocks, while communities that depend on the lake face an uncertain future. For seven weeks, starting December 20, *Weekend Vision* is running weekly stories examining this ecological crisis and what must be done to save Lake Victoria before it is too late. In this segment, **Herbert Musoke** and **Gerald Tenywa** examine how deforestation is pushing Lake Victoria into an ecological crisis and what experts recommend to fix the problem.

In May last year, a cyclone hit Kalangala district. Rose Nakawungu, a member of the district disaster committee, says it lasted about eight minutes.

Helen Nakimuli, the Kalangala District Woman MP, says the cyclone left three people dead, 28 injured, and destroyed houses and food crops in Kizzi, Mwena, Kalangala and Bugala villages.

Experts attribute the cyclone to deforestation, which has stripped Kalangala of natural windbreaks, leaving communities exposed.

"Cyclones have always existed, but forests on the lake shores were barriers. Now that we've cleared those barriers, the winds move uphill and destroy everything in their path," Joseph Byaruhanga, the senior environment officer of Kalangala district, says.

Deforestation in Kalangala has reached alarming levels, driven by commercial agriculture, charcoal



An aerial view of encroachment on Lake Victoria in Kalangala

burning, and settlement expansion.

According to district records, forest cover plummeted from 54% in 1990 to just 22% by 2015.

"Every tree cut down exposes the soil to erosion, increases runoff into Lake Victoria, and destroys natural windbreaks that protect communities from disasters like cyclones," Byaruhanga says.

The introduction of oil palm plantations in 2005 accelerated this decline. While initially confined to Bugala Island, the crop has spread to other islands, replacing indigenous forests with monoculture farms.

"In Mugoye sub-county alone, forest cover dropped from 61% to 30% in just two decades, while oil palm expanded to 37%," Byaruhanga says.

This shift has not only stripped the land of biodiversity, but also disrupted ecological services such as carbon sequestration and rainfall regulation.

Charcoal production adds another layer of destruction. With declining fish stocks and limited alternative livelihoods, many residents resort to cutting trees for fuel and income.

The rapid deforestation is threatening the survival of Africa's largest freshwater lake, exposing it to severe ecological degradation and risking the livelihoods of millions who depend on its resources.

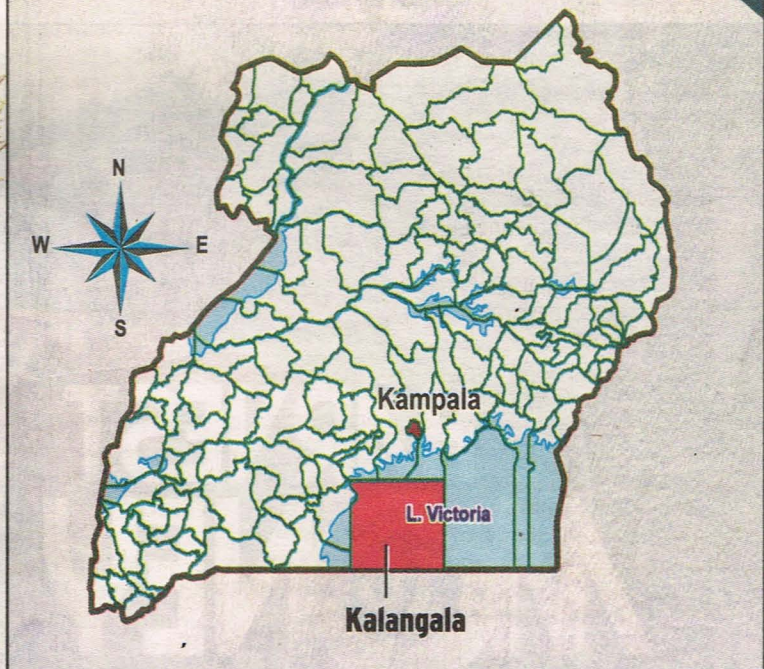
OIL PALM EFFECT ON LAKE

With oil palm cultivation, a 200m buffer zone was instituted to control runoff and prevent sedimentation of the lake. The buffer zone was designed to preserve part of the forest cover, ensuring continued access to resources



A palm fruit bunch. Oil palm plantations were introduced in Uganda in 2005

GRAPHIC BY BRIAN SSEKAMATTE

Location of Kalangala district

such as medicinal herbs, maintaining habitats for wildlife and protecting fish breeding areas. However, this buffer zone was not fully respected.

"We have been growing oil palm for over 20 years, leaving a buffer zone of 50m, which we believed was enough for the lake," Edward Kaweesi, the chairperson of Kasekulo village in Mugoye sub-county, says.

When the lake overflowed, Kaweesi says their farms were affected.

Farmers now have to move further inland to leave the required 200m buffer zone. However, Kaweesi says

some farmers have small plots that when they move further inland, even by 50m, they will hardly have any land left, making it difficult to meet obligations such as loan repayments. Farmers take loans in terms of fertilisers and maintenance costs.

Uncontrolled oil palm cultivation has led to deforestation, to the disadvantage of communities and other economic activities. Wildlife habitats have been destroyed, which is why monkeys and snakes now invade residential areas.

Kalangala earns revenue from

SH213M

STATISTICS FROM THE TOURISM MINISTRY INDICATE THAT IN 2020, TOURISM GENERATED SH213M FOR KALANGALA DISTRICT'S TOTAL REVENUE.

OF LAKE VICTORIA

tourism, especially owing to its fauna and flora. But with such destruction, the tourism industry has been affected.

Beyond disrupting other economic activities on the islands, uncontrolled oil palm cultivation is also degrading the lake ecosystem.

Many farmers use fertilisers which are washed into the lake when it rains, leading to algal blooms.

When large blooms die, bacteria decomposing them consume vast amounts of oxygen, creating oxygen-poor (hypoxic) zones, block sunlight needed by plankton and release toxins that poison aquatic organisms.

"Such changes cause fish to migrate or refuse to breed, thereby reducing the fish stock in the lake and low catches," Kaweesi says.

Ignorance is yet another threat to the lake.

"People think the lake can never fill — *Enyanja tenoga* — so they keep dumping garbage continuously," Byaruhanga says.

However, he says the lake is shallow, only about 40m deep, thus every act of pollution contributes to ripple effects such as overflowing its boundaries or flooding during heavy downpours.

WHY IS THE LAKE NOT BEING PROTECTED?

These lapses are happening despite laws meant to protect the lake and forests, which Byaruhanga blames on weak enforcement occasioned by a lack of resources.

"People are earning huge sums from oil palm. As a department, we have seven officers who must oversee 84 islands that make Kalangala district. We have only one motorcycle to monitor and enforce laws across multiple islands. Our lives are also at risk — sometimes even tying a string for demarcation can lead to confrontation," he says.

Byaruhanga also laments a growing disregard for environmental laws.

"Some developers refuse to follow guidelines for eco-friendly projects. Even when we escalate cases to regional police, enforcement fails because of influence peddling and corruption."

Impunity is another obstacle. "Some individuals hide behind the names of powerful people to justify illegal activities. Law enforcers back off because they fear repercussions."

RECOMMENDATION

Richard Ssebandeke, the Kalangala chief administrative officer, says the district has key departments that have always come up with ways on how the lake should be protected.

"Given the fact that the lake is shared by East African countries, each country has laws and policies on protecting the lake. However, through the Lake Victoria Fisheries Organisation, the partner states have started harmonising laws since the effects are felt by all," he says.

Ministries like that of agriculture should regulate agrochemical and fertiliser application, while that of water and sanitation should oversee usage and protection of the lake, Ssebandeke recommends.

He adds that authorities like the National Environment Management Authority that oversees the sustainable use of the environment are equally key players in saving the lake.

This culture of intimidation has crippled efforts to safeguard the environment," Henry Lubulwa, the deputy resident district commissioner of Kalangala, says.

WAY FORWARD

Protecting Lake Victoria is not just the Government's job; it is everyone's responsibility.

"We need continued sensitisation and education of the masses through talk shows, barazas and media about what is needed to be done to preserve and conserve the environment, which requires support in terms of finance, human resource and equipment, among others," Byaruhanga says.

Strict enforcement and collaboration are key to restore forests in the islands for the sake of Lake Victoria.

"We've joined forces with all stakeholders to protect



Ssebandeke

A palm tree plantation along the Lake Victoria shore line



forests and Lake Victoria. Anyone caught cutting trees is arrested and prosecuted. We have over 10 cases in court. We're also working with the National Forestry Authority to limit licences in forested areas and promote replanting," Byaruhanga says.

Enforcement officers need better facilitation.

"We need modern technology, reliable engines, safety gear and digital locators for accurate data and evidence collection. Without these, enforcement is nearly impossible," Byaruhanga says.

To save the remaining forests from being cut down to make charcoal for domestic use, communities can opt for the use of briquettes.

"We have been conducting training for our members and the general public on how to make briquettes from waste such as paper and peelings. This not only provides alternative fuel, but also can be used to generate income," says John Stephen Musoke, from Ssesse Oil Palm Growers savings and credit co-operative society.

Isha Katwesige, an assistant commissioner for forestry at the environment ministry, says there is a need for capacity building in the communities surrounding the lake on the benefits of sustainable forest management practices.

He advocates the adoption of a sustainable approach to energy by encouraging the community to plant their own wood banks or wood lots on their ranches or plots of land.

"These initiatives will allow them to rely on renewable energy sources, reducing pressure on natural forests and promoting self-sufficiency in fuel wood and timber, among others," Katwesige says.

WATER A MIRROR OF EVENTS ON LAND - EXPERT

While Uganda earned the tag: "the Pearl of Africa" because of its beautiful forests, wetlands, as well as lakes and the source of the Nile, the environment has suffered from destruction. At the turn of the last century, forests covered about half of Uganda's landscape. The forest cover declined from 45% in 1900 to 24% in 1990 and 9% in 2015. In recent years, the forest cover has slightly increased to 13.3% in 2019.

In a similar manner, Uganda's wetlands have also declined from 15% in 1994 to 8%. Although the wetland cover is increasing, Uganda is still playing a catch-up game.

As Uganda loses its forests and wetlands, pollution is also increasing from wastewater in urban areas, as well as industries and silting from the agricultural landscape. As a result, large water bodies such as Lake Victoria are turning green.

Dr Callist Tindimugaya, the commissioner of the directorate of water resources management at the environment ministry, says water is the mirror of what is taking place on land. He says the destruction of trees, as well as unsustainable agriculture are leading to siltation of Lake Victoria.

In addition, the wetlands that act as a filter, cleaning out the water before it enters Lake Victoria, are being reclaimed for agriculture and urbanisation.

"But can we use these resources for sustainability? Whether we do or not, the water in the river or lake will show the results," he says. "We need to work together to protect the environment because we need water for irrigation and generation of hydroelectric power and water."

The water, which is brown or green in any water body, means taking a dangerous path, Tindimugaya says.

The destruction of forests along the shores of Lake Victoria and other bodies, according to Aggrey Oluka, an environmental officer at Nexus Green Uganda, has a big impact on biodiversity.

"Because of climate-related impacts, people who are doing farming are now running towards the shores, not only Lake Victoria, but also on other surface water bodies. Automatically they are going to create natural vegetation around there. One of the effects is, it increases the silting of these water bodies," Oluka says.

He explains that natural forests

hold soils together.

"If they open up such lands near the shores, soil is loosened, and any movement of water will wash the soil to the water bodies, including Lake Victoria. And once there is silting, which leads to an overgrowth of aquatic organisms like algae, oxygen reduces and marine life is interrupted."

This investigation was done in partnership with the African Centre for Media Excellence. Engage with us on email: news@newvision.co.ug WhatsApp: +25677460776



Byaruhanga