

Uganda on the road to water crisis

Some parts of Uganda are already water-stressed and experts warn that as early as 2020, the entire country could be in a similar situation if there are no interventions taken



In the run-up to World Water Day, *New Vision* is publishing daily features highlighting key issues in the sector and what the public can do to save our environment and water resources. Today **Gloria Nakajubi** looks at how access to safe water is a rising problem

It is 4.00am and residents of Kotido municipality in Kotido district cannot fall for the temptation of the sweet morning slumber. Long queues, with mostly women and children, dot the town's water points. But even after begrudgingly jumping out of bed, there is no assurance that you will go back home with water.

Access to safe water remains a major challenge in some parts of the country and in Karamoja, it only gets worse.

"It starts flowing at 7:00am and by 9:00am, the taps run dry," says Beatrice Yei, a resident of East Division.

At some water points, residents have to line up from morning to evening. While those who cannot wait have to walk long distances to other sources of water.

Kotido started experiencing a water crunch after local sources started drying up with the onset of dry season and the persistent break down of the generator used to pump the resource into the town.

The district water engineer, Gasper Okidi, says the town has six shallow wells from which water is pumped but only two are functional.

"The system is not functioning well. The generator keeps breaking down and needs to be repaired, but we don't have money," Okidi says.

Systems indicate that in the next two decades, the scenario in Kotido will have engulfed the whole country if interventions are not put in place today to combat environmental degradation.

In the next 22 years, Uganda's current water per capita of 2,300 cubic metres per person per year will have dwindled to just about 1,000 cubic metres. This, as explained by Albert Orijabo, the assistant commissioner at the Directorate of Water Resource Management, basically means there will be less water available per



Long queues are a common sight at the few safe water sources in both rural and urban areas in Uganda

individual per year.

"The 1,000 cubic metres is your resource package. This is what you have for agriculture, hydro-electric power generation, infrastructural development, environment management and domestic use," he says. When translated in litres, 1,000 cubic metres is equivalent to one million litres.

According to the World Health Organisation (WHO), one needs at least 20 litres of water per day for basic domestic use. This brings the WHO figure to about 7,300 litres a year per person. An average Ugandan family with about 10 people, therefore, requires 73,000 litres annually for basic hygiene and sanitation alone.

It is important to note that without the other aspects such as agriculture, industry and environment management, domestic life can hardly be sustained.

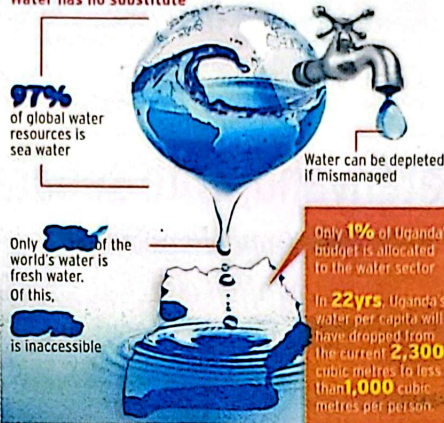
Nicholas Kilimani, in his 2015 study *Vulnerability to climatic variability: An assessment of drought prevalence on water resources availability and implications for the Ugandan economy*, anticipates a water crisis a little early. He argues that by 2020, the country will be water-stressed.

Water-stress is defined by the Food and Agriculture Organisation as widespread, frequent and serious restrictions on use, growing conflict between users and competition for water, declining standards of reliability and service, harvest failures and food insecurity.

The researcher explains that since Uganda largely relies on rainfall to replenish its water resources, the country

Fact file

Water has no substitute



is increasingly becoming vulnerable as the rains become unpredictable.

Such variations have implications for the availability of water resources, especially for those water sources whose recharge is derived from it. This he argues is a serious threat to water availability through the reduction in the recharge of both surface and ground water sources.

As Joseph Ssemanda, a water expert with Water aid Uganda, explains if the current environmental trends such as deforestation, wetland degradation are left unchecked, the water sources will most definitely become vulnerable to pollution and eventual depletion.

He is quick to cite such examples as River Rwizi that is a life-line for Mbarara and neighbouring districts. "Just

imagine if River Rwizi dries up and yet the area has one of the major plants of Coca-Cola and it is also a known for livestock. This is already a crisis."

According to data from the Ministry of Water and Environment, 30% of Ugandans in both rural and urban areas do not have access to safe water.

Access to safe water is defined as the percentage of people within 1km (rural) and 0.2km (urban) of an improved water source.

"If we have 30% of the population in the rural areas without water, we are basically looking at hundreds of thousands that do not have access to safe drinking water," Lydia Mirembe, the communications and knowledge adviser at the International Water and Sanitation Centre (IRC), explains.

The competing demands for

Care for water

- Keep off wetlands
- Protect the forests; unregulated tree cutting is recipe for disaster.
- Recycle waste water such as water used for laundry to water your orchard
- Adopt water harvesting technologies such as building water dams
- Mulch to reduce soil erosion is key
- Appreciate the key role of wetlands
- If you want water flowing in your taps, you must protect the environment.

water according to Ssemanda, continue to grow, hence increasing the pressure on the available resources.

"If you drill a water source for humans in Karamoja without providing for their cattle, chances are that they will leave the water for the animals," says Ssemanda.

Though figures indicate a 70% access to safe water in both the rural and urban areas, there is a 15% of these water sources that are not functional all the time. Just about 85% of the water sources are functional all the time.

The situation is not any different in urban areas where there is an improved system of water supply. From sh300m four years ago, the cost of water treatment by the National Water and Sewerage Corporation (NWSC) has shot

up to close to sh1b.

Wetlands up for grabs
The area under wetlands in the different river basins is on the decline.

According to the Uganda Wetlands Atlas 2016, the extent of decline varies from over 53.8% in the Lake Victoria basin to 14.7% in the Lake Albert drainage basin. This is of concern because of the value of wetlands as an ecosystem.

The ecological and regulating value of wetlands include erosion prevention, moderation of extreme flows, sediment traps, climate modification, soil formation, maintenance of water tables in surrounding lands, and as centres of biodiversity and wildlife habitat.

As expressed by Mirembe, unless people appreciate the key role that wetlands play in the ecosystem, the cost of accessing safe water will continue to skyrocket and this is a burden that will eventually borne by the user through increased water bills.

Poor water management

Poor water management as explained by Orijabo, is contributing to disease, malnutrition, reduced economic growth, social instability, conflict, and environmental disaster. A total of sh8b was last estimated to have been lost during the past onset of floods in Kasese district.

When water resources are not properly managed, according to experts, especially in the face of population explosion, the cost of mitigation becomes quite high and unsustainable.

According to Ssemanda, there is a need for redistribution, especially of industries to reduce unbearable pressure exerted on one particular water source. "The Government should deliberately interest investors to set up industries out of Kampala. This will reduce the pressure that is being mounted on Lake Victoria," he says.

An economic assessment of the impact of climate change in Uganda according to the Ministry of Water and Environment report (2015), estimated that taking no action against climate change adaptation could cost government between \$273b and \$437b over a period of 40 years from 2010-2050.

Rapid population growth, uncontrolled environmental degradation and pollution, increased urbanisation and industrialisation continue to pose a big threat to Uganda's natural water resources.

Unfortunately for the 37 million Ugandans, most of the water uses have no substitute.