

Human activities have led to the deterioration of the quality of water

Mbarara residents drawing life out of River Rwizi



In the run-up to the World Water day, *New Vision* is publishing daily features highlighting key issues in the sector and what the public can do to save the environment and water resources.

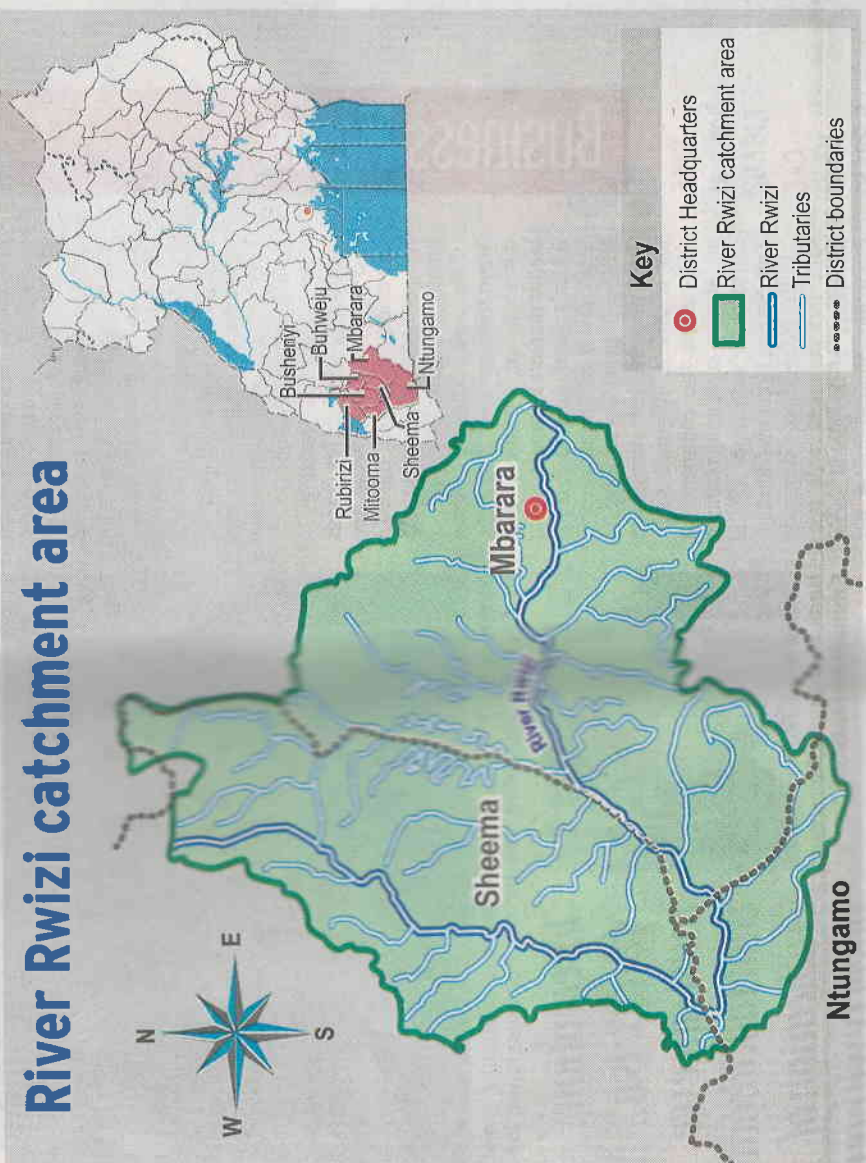
Today **Gloria Nakajubi** and **Abdulkarim Ssendendo** look at how to save River Rwizi in Mbarara district

"All the water that we use in Mbarara comes from River Rwizi. It is the lifeline of this place and if water is life, then there is no life in Mbarara without River Rwizi," said the town clerk, Edward Lwanga.

With a total population of 195,165 residents up from the 69,363 (Census 2014), River Rwizi is increasingly bowing to the pressures that come with a population explosion.

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River Rwizi catchment area



WAY FORWARD

Jeconious Musingwiire, the western region National Environmental Management Authority's focal person, said the only way out is through restoration, especially of the wetlands and afforestation.

"This is a natural eco-system. We cannot have substitutes for trees or wetlands," he said.

The district, he said, has come up with sub-catchment management zones to promote sustainable use of the water resource.

The district is also engaged in community sensitisation on soil and water conservation. Some of the interventions regarding water conservation include encouraging the construction of contour trenches and side ditches.

Deliberate eviction of people from the wetland is the other option that needs to be enforced according to the town clerk, Edward Lwanga.

"This is a major river and construction must happen

Lwanga said there are hundreds of people who flock to the district during the day to do business.

"This is like the capital city of this region. Every person that comes in needs water in one way or another," he said.

Covering a total land area of 8854sqkm, River Rwizi flows through 11 districts, before draining into the world's second largest fresh water lake, Lake Victoria.

River Rwizi is the lifeline of south western Uganda. However, it is likely to be no more if the residents continue with their environmentally unhealthy practices on the natural resource.

"People have almost built in the river. Others are farming on the riverbanks and diverting the waters to their farms. The wetlands are no more. Basically, the river has been left vulnerable," Lwanga said.

Wetlands capture and store water, releasing it into the river channel over time. They also trap and settle sediments, a process known as cleansing, especially during high flows.

According to a 2015 study titled *A shared water risk assessment for vulnerable water basin: River Rwizi in Uganda* by P. Songa, J. Rumohr and R. Mwasola, all the water demand trends examined were increasing, mainly as a result of population growth and increasing urbanisation.

"Total water demand in the catchment was projected to grow from 28 million cubic metres per year in 2011 to 95 million cubic metres by the year 2055," the report stated.

The main economic activities as highlighted in the study are subsistence and commercial crop agriculture, livestock rearing, fish farming and tourism through Lake Mbuuro National Park.

There is also a growing trend of local

industry, especially brick making, sand mining, motor vehicle washing, repair garages, use of reeds for making baskets, mats and art pieces and wide-spread growing of eucalyptus trees.

The region is also host to two major beverage manufacturing plants; Coca Cola Lid and Nile Breweries. These are high water demand industries, but also a source of livelihood for many people.

Heavy degradation of the catchment caused by poor agricultural practices, urbanisation, deforestation, overgrazing and specifically wetlands degradation are increasingly putting River Rwizi on the brink of a water crisis.

In an earlier interview with *New Vision*, Moses Toko, the quality control officer at National Water and Sewerage Co-operation (NWSC) in Mbarara, said human activities on the river and its sources have caused the levels of water to drop from the original five metres to 0.5metres.

Toko said human activities have also led to the deterioration of the quality of water. This has since increased the cost of water treatment. However, as earlier explained by the experts, this cost is eventually borne by the residents in form of increased water bills.

The reclamation of swamps has led to continued breaking down of the water pumps as silt and other sediment collect at the intake points.

"There is a high risk of a water crisis in this area. If you do not wake up and fill your jerrycans early, there is sometimes no water flowing from the taps," said Jeconius Musingwire, the western region National Environmental Management Authority's focal person.

Fact file

Water has no substitute

97% of global water resources is sea water

Only **3%** of the world's water is fresh water. Of this,

87% is inaccessible



Water can be depleted if mismanaged

Only **1%** of Uganda's budget is allocated to the water sector

In **22yrs** Uganda's water per capita will have dropped from the current **2,300** cubic metres to less than **1,000** cubic metres per person.

"This is a major river and construction must happen at least 100 metres off the riverbanks. But people have built as close as 20 metres and will want to frustrate all efforts to move them," he said.

People, Lwanga argued, need to appreciate that this river is the lifeline of Mbarara.

"If it ever dries up, life will just be unbearable," he added.

Sam Apedel, the corporate and public affairs manager at National Water and Sewerage Co-operation, said the body has since been forced to adopt alternative water sources such as gravity sources with points at Rubindi, Kinoni and Nyihanga.

Underground water has

also become another viable alternative, through drilling boreholes. They have also built a weir (dam) to literally dam the river to curtail shortages.

In the long term, the country is planning to have water drawn from River Kagera, which still has a good water flow. According to Apedel, this will be used to serve the different towns from Isingiro up to Mbarara, a distance of about 46km.

were developed with limited inter-sector co-ordination, resulting in competing water needs. New industrial demands also tend to be supported at a high level politically, which puts pressure on water resources managers," read the report, adding that industrial demands that are large in comparison to the available resource at a given location have the potential to significantly affect the availability of the resource at that location, but also further downstream.

'extremely vulnerable'.

Highlighted in the Songa and others report, water supply risk is largely due to poor decision-making (unreliable data), insufficient seasonal river flows in the dry season, poor surface and groundwater quality and limited alternatives for water supply.

According to the report, there is a lack of co-ordination in the delivery of water services, lack of environmental assessment projects in the catchment, capacity to implement regulations due to limited institutional capacity and a lack of co-ordination in resource development.

"The majority of national level development plans, such as for irrigation or domestic water supply,

The district has resorted to rationing the water due to the competing demand.

Sam Apedel, the corporate and public affairs manager at NWSC, said at full capacity, they produce a total of 16 million litres for Mbarara per day. However, during the dry season, they are forced to produce between 13 million and 14 million. This is against the 18 million litres daily demand.

According to Musingwire, the highest threat has been registered in basins which are supposed to handle water and discharge it into the river, especially in Nyakishana and Omugaju sub-counties in Buhweju district. This coupled with the fact that capturing potential of wetlands in the lower lands has been compromised, makes the river