

Drowning in development: Kampala and its recurrent flooding crisis

Dear Tingasiga: Every rainy season, Kampala transforms into ponds and lakes. Streets that hum with cars, boda boda motorcycles, and market vendors become rivers of brown water. This flooding is not an occasional disaster. It is a predictable seasonal reality that has worsened over the past three decades, reshaping daily life for millions of residents and posing one of the most pressing urban challenges in East Africa.

On March 6, the dark heavens in the afternoon broke loose in one of those sudden events that reminded me of the joy of listening to heavy raindrops playing drums on the corrugated iron roofs in the 60s and 70s. What was different was the aftermath of that downpour. Severe flooding. Cars floating. Wet interiors of buildings. Maddening traffic jams. Chaos. A strange sight for one who knew Kampala more than half a century ago.

Kampala used to sit on seven hills in central Buganda, rising above the northern shore of *En-yanja ya Nalubaale* (Lake Victoria.) One has lost count of how many hills this city's unplanned urban sprawl has now claimed. The city's geography used to favour drainage: hills shed water naturally and the surrounding wetlands (swamps) act as enormous natural sponges, absorbing rainfall before it could accumulate in populated areas. The rulers and managers of the ancient Kingdom of Buganda, then the British Protectorate of Uganda, and their early post-independence successors, understood the need for an inviolable ecosystem that worked with the efficiency of a world-class orchestra.

This natural advantage has been systematically dismantled by rapid, largely unplanned urbanisation. Kampala's population has ballooned from 245,000 in 1966, to one million in 1996, and to an estimated 4.5 million in 2026. It is one of the fastest-growing cities in Africa, with an annual growth rate of about five percent. That growth, and the greed of the wealthy and politically pow-

erful, have consumed the very wetlands that once protected it.

Kampala's wetlands once covered approximately 30 percent of the metropolitan area. Today, credible estimates suggest that figure has fallen to below 10 percent. Some point to even greater losses. What were once contiguous wetland systems that channelled and absorbed storm water were progressively filled in, built over, and degraded by industrial, commercial, and residential development. Former buffer zones are now densely populated informal settlements or industrial plots, completely impervious to rainfall.

When the skies open, water that would have naturally seeped into wetland soils now rushes across concrete and compacted earth, overwhelming drainage channels that were designed for a fraction of today's urban footprint. The drainage infrastructure itself compounds the problem. Kampala's formal drainage network dates largely to the colonial era, designed to serve a much smaller, less dense city of 95,000 people in 1950. Many channels are undersized by modern standards, and decades of inadequate maintenance have left them choked with solid waste. Garbage accumulates in drains faster than they can be cleared, reducing the capacity of the network to a fraction of its theoretical design. This degraded system fails quickly and dramatically in the face of a downpour that lasts a mere two hours. Flooding, a relatively rare event in my youth, now occurs multiple times each rainy season.

The human cost falls most heavily on the poor, who disproportionately occupy the valley bottoms and low-lying areas that flood first and drain last. Informal settlements have become synonymous with frequent flooding. Beyond the temporary inconvenience and disruption, floodwaters destroy household and commercial goods and food stocks, collapse poorly constructed structures, inundate pit latrines, triggering outbreaks of typhoid, cholera and other gastrointestinal dis-

Reversing that trajectory requires not only engineering and investment but humility, a political will.

Nicholas Sengoba
Plainly speaking



eases. Children miss school. Adults lose working days. The cumulative economic toll on low-income households is substantial, perpetuating cycles of inescapable poverty.

These major floods cause drownings and deaths from collapsed structures. These deaths represent a failure of urban governance that has accumulated over generations of inadequate planning, enforcement, and investment, under the watch of our better-educated and internationally exposed generation.

Attempts to address the crisis have been fitful. The Kampala Capital City Authority (KCCA), established in 2011, has undertaken several drainage rehabilitation projects with support from the World Bank and other development partners. The Greater Kampala Metropolitan Area Urban Development Programme (GKMA-UDP), a 5-year, \$566 million endeavour, has invested in enlarging key drainage channels, including sections of the Nakivubo channel that runs through the city centre. A Kampala businessman's renewal and redevelopment project to transform the Nakivubo Channel into an efficient, pleasant, and commercially viable city within the city is mired in controversy.

Wetland restoration initiatives have been launched with considerable fanfare, and Ugan-

da's National Environment Management Authority (Nema) has periodically undertaken enforcement actions against illegal wetland encroachment. Yet these efforts have struggled to keep pace with the scale of the challenge. Enforcement of building regulations in flood-prone areas remains inconsistent, partly because so many vulnerable residents have no other affordable option for housing.

Climate change threatens to make the situation worse. East Africa's rainfall pattern is projected to become more erratic, with more intense downpours concentrated in shorter periods, the perfect conditions for overwhelming urban drainage systems. Lake Nalubaale (Victoria), which exerts a significant influence on local weather patterns, has been rising in recent years. This has reduced the gradient available for stormwater to drain away from the city. Without transformative investment in upgraded drains, retention ponds, flood barriers, drastic wetland restoration and urban tree planting, Kampala will continue to drown in development.

Kampala's flooding crisis is a story about the collision between explosive urban growth and fragile natural systems — a story that is shaped by human behaviour, not by God or nature. Those who report that heavy rains cause flooding need to reconsider that belief. Those who ask God to intervene in this human-made catastrophe mock Him, for it is us who have ruined his awesome creation. It is us who have ignored the scientific knowledge that God has freely given us to help humanity provide safe and sustainable guardianship of our fragile planet. We are the ones who cause flooding.

The wetlands that once buffered the city from its own rainfall were sacrificed incrementally, one building permit, one informal plot, one filled drainage channel at a time, each decision driven by greed, arrogance, and short-term thinking. Reversing that trajectory requires not only engineering and investment but humility, a political will, and long-term vision to protect the natural infrastructure on which the entire city depends. Until that happens, Kampala will continue to drown in the consequences of its unplanned growth.

Dr. Muniini K. Mulera is a paediatrician and neonatologist.