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Message from **the Regional Director**

Dear Readers,

In the Nile Basin, the need for reliable energy, sustainable water resources management and greater resilience to climate change continues to shape our development priorities. These challenges extend beyond national boundaries, making regional cooperation essential to finding practical and lasting solutions.

At NELSAP-CU, our work remains focused on translating this cooperation into investments that respond to the needs of our Member States and the communities they serve.

The Regional Rusumo Falls Hydroelectric Project, now supplying electricity to Burundi, Rwanda and Tanzania, demonstrates what countries can achieve through joint investment. Beyond completed projects, we continue to support the preparation and advancement of regional infrastructure, including the South Sudan–Uganda Power Interconnection Project, the Angololo Water Resources Development Project between Kenya and Uganda, and the Ruvyironza Multipurpose Water Resources Development Project in Burundi.

These investments reflect a common objective: improving access to essential services, strengthening economic opportunities and supporting the sustainable management of shared resources.

As highlighted in this edition, regional electricity interconnections are also becoming increasingly important to Eastern Africa's energy future.

Our work in water resources management is equally important. Changing rainfall patterns, floods, droughts and growing demands on shared water resources require stronger monitoring systems, reliable information and coordinated planning. Investments in early warning systems, catchment management and multipurpose water infrastructure are essential to helping countries anticipate risks and respond more effectively.

Recent regional engagements have reinforced another important lesson: identifying development priorities is only the beginning. Transforming them into investments requires sound technical preparation, sustained institutional coordination and financing. We must therefore continue strengthening partnerships and mobilizing resources to advance projects that offer shared benefits.

I extend my appreciation to our Member States for their continued commitment and guidance, and to our development partners for their financial and technical support. I also acknowledge the dedication of the NELSAP-CU team and the national institutions working with us to advance our regional programmes.

As you read this edition, I hope the stories offer insight into both the progress being made and the work that remains. Our measure of success is not simply the number of projects prepared, but the difference these investments make in the lives of the people we serve.



Dr. Isaac Alukwe
Regional Director, NELSAP-CU

Bridging the Power Pool: How NELSAP-CU Is Helping Build Eastern Africa's Electricity Market



Kyenda Power station in Kasese Photo by Irigoga Charlotte

Eastern Africa is moving towards a future in which electricity generated in one country can be traded or wheeled across borders and used hundreds or even thousands of kilometres away. But a regional electricity market cannot run on agreements and trading platforms alone. It needs the interconnector networks, substations and national grids capable of physically moving that power.

NELSAP-CU is contributing to this through the preparation and coordination of cross-border transmission infrastructure connecting countries within Eastern Africa and creating opportunities for electricity trade with Southern Africa.

This is the ambition behind the Eastern Africa Power Pool (EAPP): an interconnected regional electricity system through which countries can increasingly buy and sell power across borders. Much of this is captured under the Eastern Africa Power Pool Master Plan 2014 and are already under implementations.

According to Eng. Jacob Manyoun Deng, Power Program manager at NELSAP-CU, countries across the region are increasingly being connected through cross-border transmission infrastructure, with further interconnectors planned or under development. At the current pace of implementation, he projects more comprehensive regional electricity interconnectivity by 2045.

Several countries are already trading electricity across borders, including Ethiopia and Kenya, Uganda and Rwanda, Burundi, Rwanda and Tanzania, and Kenya and Tanzania.

These exchanges demonstrate why interconnectors matter. Beyond moving electricity, they create opportunities for countries to make better use of available generation, strengthen security of supply and expand regional power trade.

Connecting East and Southern Africa

The ambition extends beyond Eastern Africa. NELSAP-CU has also supported the preparation of transmission infrastructure intended to connect the Eastern Africa Power Pool with the Southern African Power Pool (SAPP).

One of NELSAP's most significant power interconnection initiative is the Zambia-Tanzania-Kenya (ZTK) Power Interconnection, a 1,552-kilometre, 400 kV transmission corridor stretching from Isinya in Kenya, through Tanzania, towards Kabwe in Zambia.

The corridor brings together the Kenya-Tanzania and Tanzania-Zambia interconnections and is intended to enable power transfers between Eastern and Southern Africa. NELSAP-CU also supported preparation of the 400 kV Iringa-Mbeya transmission line in Tanzania, another section of this north-East-south transmission backbone.

Once fully interconnected, the infrastructure would provide a physical bridge between EAPP and SAPP, widening the area across which electricity can potentially be exchanged.

Connecting South Sudan to the regional grid

Another important connection is being addressed through the South Sudan-Uganda Power Interconnection Project (SUPIP), coordinated by NELSAP-CU on behalf of the two countries.

The planned interconnection will establish a physical electricity link between Uganda and South Sudan and provide South Sudan with access to the wider EAPP interconnected system.

"SUPIP represents more than a bilateral transmission link. It is a strategic building block for achieving a fully interconnected Eastern African electricity market, enhancing regional energy security, system stability and electricity trade," explains Eng. Jacob.

Once connected, South Sudan could access electricity from other interconnected countries and, as its own generation capacity develops, potentially export electricity into the regional system.

From transmission lines to electricity trading

Building the lines, however, is only part of the equation. The EAPP is working towards operationalizing a Day-Ahead Market, which would allow participating utilities to buy and sell electricity for delivery the following day.

For NELSAP-supported projects such as SUPIP, this emerging market means an interconnector must be ready not only to carry electricity, but to support scheduled and reliable cross-border transactions. This requires synchronized grids, coordinated protection and control systems, reliable SCADA and communications, accurate cross-border metering, sufficient transmission capacity, and harmonized grid codes and operating procedures.

As Eng. Jacob explains, these systems will be essential for SUPIP, which forms part of the North – South Electricity Highway, to support scheduled electricity flows between Uganda and South Sudan and enable South Sudan to participate effectively in the wider EAPP market.

Eastern Africa is therefore not yet one electricity market, but important pieces are falling into place: countries are already trading electricity, cross-border infrastructure is expanding, and the mechanisms for a more organized regional market.

Can Irrigation Take Some of the Risk Out of Farming in Burundi?

For a farmer, a good harvest depends on more than how much rain falls in a season. Sometimes, it comes down to whether water reaches the crop at the few critical weeks when it needs it most.

Burundi's 2026 farming season demonstrated that vulnerability. During the country's main agricultural season, which runs from February to May and contributes about half of annual production, a dry spell in late March and early April affected beans at the flowering stage. The Northern Lowlands were particularly hard hit, with FEWS NET later estimating bean losses of nearly **40-50 percent** in the area. Other crops performed better, helping keep overall national production closer to average, but many affected households entered the following months with reduced food stocks.

This matters in a country where nearly **86 percent** of the population engages in smallholder agriculture. There is also limited room to simply expand farming: With farmland already limited, expanding cultivation is not always an option. According to FAO's Burundi country case study, more than 40 percent of agricultural households cultivate plots smaller than a quarter of a hectare..

The challenge, therefore, is not only how to cultivate more land, but how to make existing farmland more productive and less vulnerable when rainfall arrives late, stops at the wrong time or is poorly distributed.

That is where reliable access to water becomes important.



The Ruvyironza Multipurpose Water Resources Development Project (PRODERER), currently under preparation in Burundi, proposes the development of irrigated agriculture across approximately **14,674 hectares.** The project is also exploring water supply, small hydropower generation, flood control and restoration of degraded catchments.

For food security, however, the important question is not simply how many hectares can be irrigated. It is what reliable water could change for the farmer: Can crops withstand a critical dry spell? Can a small plot produce more reliably? Can farmers reduce their dependence on rainfall arriving at exactly the right time?

Irrigation alone cannot solve food insecurity. Farmers still need productive soils, affordable inputs, storage, functioning markets and reliable information. But in a country where farmland is limited and rainfall variability can quickly affect a household's harvest, better water management could remove one important layer of risk.

For Burundi, producing more food may therefore not only be about finding more land to cultivate. It may increasingly depend on making the land already being farmed and the water available to it work more reliably.

40–50%

Estimated bean losses in the Northern Lowlands in the 2026 main season (FEWS NET)

~86%

Of Burundi's population engaged in smallholder agriculture

>40%

Of agricultural households cultivate less than a quarter of a hectare (FAO)

The 2026 main season: Feb–May, about half of annual production



Late Mar–early Apr dry spell: beans at flowering

- The Northern Lowlands were hit hardest
- Other crops did better, keeping national production closer to average
- Many affected households entered the following months with reduced food stocks

PRODERER · IN PREPARATION

14,674 ha

Proposed irrigated agriculture under the Ruvyironza Multipurpose Water Resources Development Project

ALSO BEING EXPLORED

- Water supply
- Small hydropower
- Flood control
- Catchment restoration

What could reliable water change for a farmer?

1. Can crops withstand a critical dry spell?
2. Can a small plot produce more reliably?
3. Can farmers depend less on rain arriving at exactly the right time?

Irrigation alone cannot solve food insecurity.

Farmers still need productive soils, affordable inputs, storage, functioning markets and reliable information. But better water management could remove one important layer of risk.

Producing more food may depend on making the land already farmed, and its water, work more reliably.

South Sudan Moves Closer to Regional Power Integration as SUPIP Marks Technical Launch



Government and African Development Bank reaffirm commitments to accelerate the flagship interconnection project.

South Sudan's ambition to join the Eastern Africa Power Pool (EAPP) received renewed momentum on 27 October 2026, following the official technical launch of the South Sudan-Uganda Power Interconnection Project (SUPIP), a regional infrastructure investment expected to connect the country's electricity network to the wider Eastern African grid.

The launch, officiated by Hon. Benjamin Ayali Koyongwa the Undersecretary of South Sudan's Ministry of Finance and planning, brought together representatives of the African Development Bank (AfDB), South Sudan Electricity Corporation (SSEC) Managing Director Hon. Eng. Joseph Kor Ajak, Ministry of Energy and Dams Undersecretary Hon. Eng. Madhieu Achuil Mawien, and the Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) Team led by Eng. Jacob Manyoun Deng.

At the centre of the discussions was a shared commitment to accelerate a project that remains a priority for South Sudan's energy development and regional integration.

More Than an Electricity Connection

SUPIP is being coordinated by NELSAP-CU on behalf of South Sudan and Uganda. The project is intended to establish a cross-border electricity transmission link between the two countries, providing South Sudan with a physical connection to the wider EAPP interconnected system.

For South Sudan, this would create opportunities to access electricity traded through the regional network, strengthen its transmission infrastructure and, as domestic generation capacity develops, potentially participate in electricity exports.

The proposed transmission corridor will also accommodate fibre-optic telecommunications infrastructure, extending its potential contribution beyond electricity transmission to improved digital connectivity.

These opportunities make SUPIP an important investment for a country seeking to strengthen its infrastructure

and expand its connections with neighbouring economies.

Government and AfDB Commit to Accelerating Progress

During the technical launch, South Sudan's Ministry of Finance reaffirmed the Government's commitment to expediting implementation, recognizing SUPIP as a flagship infrastructure project with the potential to support further infrastructure development in the country.

The Government acknowledged that implementation had fallen behind the original schedule and expressed its expectation that the technical launch would provide renewed impetus to outstanding activities.

The African Development Bank similarly reaffirmed its readiness to advance the project, committing to expedite the internal processes required to support progress.

The Bank also expressed confidence in the teamwork, coordination and preparedness demonstrated by the implementing institutions.

The participation of SSEC, the Ministry of Energy and Dams and NELSAP-CU manifested the importance of continued coordination between the national institutions responsible for implementation, the regional coordinating agency and the financing partner.

Turning Commitments into Implementation

For NELSAP-CU, which coordinates the project on behalf of the two countries, the technical launch provides an opportunity to build on the preparatory and coordination work already undertaken and support progress towards implementation.

The immediate priority is to follow through on the commitments made during the launch, advance the remaining institutional and technical processes, and maintain close coordination among the implementing agencies and the Bank.

While the launch does not mark the completion of the transmission infrastructure, it represents an important institutional milestone for a project whose benefits depend on timely implementation.

Once operational, SUPIP is expected to provide South Sudan with a connection to the regional electricity network, support cross-border power trade and create opportunities for wider infrastructure development.

For South Sudan and Uganda, the next measure of progress will be how quickly the commitments made at the technical launch translate into action on the ground.



From Stockholm, NELSAP Brings the Conversation Back to Results.

There is a recurring question cutting across conversations on financing, climate resilience, regional institutions and transboundary cooperation: how do we make the benefits of cooperation visible?



In the Nile Equatorial Lakes region, countries share rivers, lakes, aquifers, ecosystems and many of the risks associated with them. But they also share the benefits that come from developing these resources cooperatively.

World Water Week provided an opportunity to move that conversation beyond the language of water management and into something more tangible: electricity generated, revenues earned, communities reached, climate risks reduced, investment mobilised among others.

Rusumo: putting numbers behind cooperation as of 2026.

1 Financial Returns

USD **8.03** million — Revenue from electricity sales to three national utilities

USD **49.6** million — Projected cumulative revenue from power sales

2 People

1.1 million beneficiaries

51% women

3 Climate Dividend (Rwanda)

5 thermal power plants decommissioned

About **21%** reduction in carbon emissions over five years

4 Regional Benefits

- Stronger electricity supply and grid stability
- Regional integration
- Socioeconomic benefits for communities

Rwanda — Burundi — Tanzania

These are not just project statistics. They show the return on cooperation.

During a high-level discussion on the benefits of transboundary water cooperation, supported by GIZ and partners, experiences from river basins in Africa, Europe and Asia demonstrated how cooperation can produce benefits far beyond the water sector.

NELSAP-CU brought the Nile Equatorial Lakes experience into that conversation through the Regional Rusumo Falls Hydroelectric Project.

Developed jointly by Burundi, Rwanda and Tanzania, the 80 MW hydropower project demonstrates what becomes possible when neighbouring countries choose to develop a shared resource together.

Electricity sales to the three national utilities generated USD 8.03 million in revenue, while cumulative revenues from power sales are projected at approximately USD 49.6 million. Beyond the balance sheet, the project has strengthened electricity supply and grid stability, supported regional integration and delivered socioeconomic benefits to communities in the three participating countries.

Approximately 1.1 million people have benefited from the project and associated development interventions, 51 percent of them women.

The climate dividend is equally important. In Rwanda, the additional renewable electricity supply contributed to the decommissioning of five thermal power plants, with carbon emissions reducing by about 21 percent over five years.

These are not simply project statistics. They help answer a much larger question confronting river basin organisations: **what is the return on cooperation?**



Making an invisible benefit visible

That question resonated well beyond the Nile Basin. Experiences presented from the Okavango, Lake Chad, Sava and Mekong basins showed cooperation delivering different forms of value from improved flood forecasting and ecosystem protection to regional financing, economic opportunities and rebuilding trust across borders.

However, an important challenge emerged from the discussions: many of these benefits remain poorly documented or communicated outside the water sector.

The Stockholm discussions pointed towards a more deliberate approach: measure the economic, social and environmental benefits of cooperation; examine the costs countries avoid through cooperation; and communicate those results differently depending on who needs to hear them.

Partnerships have to move from paper to implementation

Stockholm also created space for conversations about what is required to sustain this work.

In a bilateral meeting, the Nile Basin Initiative and the Danish Hydraulic Institute discussed how to operationalize the Memorandum of Understanding signed in August 2025. The discussion moved beyond the agreement itself towards joint project development, technical collaboration, proposal preparation and resource mobilisation.

The common denominator was implementation.

As climate pressures intensify and investment needs increase, cooperation cannot remain an abstract regional aspiration. It has to produce systems that work, projects that attract financing and infrastructure and services that improve people's lives.

Interview with NBI Regional Hydrological Coordination Expert



As the Nile Basin heads into the October-November-December 2026 season, a strengthening El Niño combined with a positive Indian Ocean Dipole is driving one of the strongest wet signals seen since 2023, and 1997 before it. After a dry JJAS season that left lakes, rivers and reservoirs across much of the basin below normal, this shift brings welcome relief but also renewed flood risk to catchments still poorly conditioned to handle it. We sat down with the NBI Regional Hydrological Coordination Expert -Eng. Calvince Wara -to unpack what this means, and for whom

1. When heavy rain falls somewhere in the Nile Basin, what happens next? How does a hydrologist work out what that rain could mean for rivers, lakes and reservoirs?

The first thing we do is locate the rain in the basin's hydrological geography, because the Nile isn't one system – it's several linked systems that behave very differently. Rain over the Ethiopian Highlands feeds the Blue Nile and peaks the annual flood in Jun-July-August-September (JJAS); rain over the Equatorial Lakes region – Uganda, Rwanda, Burundi, western Tanzania, western Kenya – recharges Lake Victoria, Kyoga and Albert and dominates in March-April-May (MAM) and October-November-December (OND); rain over southern Ethiopia sustains the Baro-Akobo-Sobat system into the White Nile. So the same rainfall total means something completely different depending on where it falls and which season it falls in.

From there Hydrologist look at what the catchment can actually do with that water. We pull real-time data from our Regional Hydrological Monitoring network – river gauges, lake-level stations, satellite altimetry on places and simulations through the forecasting systems: the Nile Basin River Flow Forecasting System for seasonal outlooks, the Eastern Nile Flood Forecasting and Early Warning System for 10-day catchment-scale forecasts, and the Nile Basin Flash-Flood Forecasting system for 48-hour community-level warnings.

But this isn't a desk exercise done by one hydrologist working alone. Ahead of every season, NBI convenes the Regional Expert Working Group (REWG) on Hydrology, which brings together the Heads of National Hydrological Services from every Member State along with regional technical partners from IGAD Climate Prediction & Applications Centre (ICPAC) and Lake Victoria Basin Commission (LVBC). The REWG meets pre-seasonally specifically to jointly interpret what a regional climate signal – like the ICPAC GHACOF and national outlooks – actually means hydrologically on the ground: how a given rainfall probability translates into river flow at a named station, a lake-level trajectory, or a reservoir-filling scenario, and what that implies for a specific community, sectors of the economy or Member State. National experts bring the local knowledge of catchment condition, infrastructure state and recent hydrological behaviour that a purely regional climate model can't capture; NBI brings the basin-wide simulation tools and the transboundary picture that no single country can see on its own. The Outlook you read is genuinely co-generated in that room – not handed down from a regional centre and rebranded nationally.

Critically, we don't just look at the rainfall forecast in isolation – we look at the starting condition. A catchment that's been dry for months behaves completely differently to the same rainfall than one that's already saturated. That's actually the central story of this OND season: we're moving from a JJAS that left soils compacted and drainage silted, into rains that could otherwise be described as good news, but which those same catchments are poorly conditioned to shed quickly.

2. We often hear "above-normal rainfall" and immediately think floods. Is that always the case? What else determines whether heavy rainfall actually becomes a flood?

No, and this is one of the most persistent misunderstandings we deal with. Above-normal rainfall is a necessary ingredient, but flooding is really a story about what happens to that rain once it hits the ground. Antecedent soil moisture matters enormously – the same storm on parched, compacted soil after a drought can run off faster and more violently especially in urban centres where most areas are paved -than on soil that's already absorbing water in a normal wet season, because dry soils that have been baked and compacted lose some of their infiltration capacity. Drainage condition matters – channels that silted up during months of low flow can't carry the same volume they could when properly maintained. Rainfall intensity and timing within the season matter as much as the seasonal total; a wet season with several intense multi-day bursts produces a very different flood risk than the same total spread evenly. And reservoir and lake starting levels matter – a lake that entered the season already low has buffering capacity to absorb inflows before it becomes a flood risk downstream, which is actually one of the more encouraging aspects of this particular OND outlook for Lake Victoria, Kyoga and Albert.

This is exactly why we're framing this OND 2026 season as a "recovery signal rather than a surplus" for much of the basin – the wetter conditions are badly needed after a dry JJAS, but the transition itself, precisely because the ground isn't conditioned for it, is where the flood risk concentrates.

3. There is also a lot of public discussion about El Niño and the rains it may bring. What does El Niño actually mean for the Nile Basin? Does it mean every country should expect heavier rainfall, or can its effects differ across the Basin?

Nothing close to uniform, and this is a critical nuance. El Niño's signal over the Nile Basin is really an Equatorial Lakes and southern Ethiopia/Kenya story, reinforced this year by a positive Indian Ocean Dipole – the classic combination we saw in 1997 and again in 2023, commonly referred to as "analogue years" both remembered as much for the floods as the relief. For Uganda, Rwanda, Burundi, western Tanzania and western Kenya, this combination drives a strong enhanced-rainfall signal, in our current outlook assessed at roughly 75-80% probability of above-normal conditions in that core equatorial zone. But move north into Sudan, northern South Sudan, and central/northern Ethiopia, and OND simply isn't their main rainy season to begin with – it's climatologically the recession period following the JJAS Nile flood peak. So El Niño's wet signal barely touches their annual water balance, and those areas should expect continued water scarcity, not relief. That's why every seasonal outlook we issue has to be basin-differentiated rather than a single basin-wide headline – treating El Niño as "wetter everywhere" would be actively misleading for roughly half our Member States.

4. What does the Nile Basin Seasonal Hydrological Outlook tell us that an ordinary weather forecast cannot? How should someone reading the latest outlook make sense of it?

The weather forecast tells you what will fall from the sky. A hydrological outlook tells you what that rainfall does once it's on the ground and moving through a river, lake or reservoir system – which is really the information people and institutions need to act on.

We translate rainfall probability into an actual river-flow forecast at a named gauging station or catchment, a projected lake-level trajectory over specific months, or a discharge forecast at a hydropower intake. That's the difference between knowing it will probably rain a lot and knowing, for example, that Lake Victoria is likely to rise by roughly 1.2–1.5 metres between October and February, or that a particular river is expected to peak within a specific window.

And it isn't a single-source product. It starts from ICPAC's regional climate outlook. The Nile Basin Regional Expert Working Group (REWG) on Hydrology then takes that regional signal and, working directly with the National Hydrological Services of the riparian countries, converts it into basin- and country-specific hydrological implications,

recommendations and advisories. So when you read a country chapter, you're reading a consensus position of that country's national hydrological service, cross-checked against the regional picture and basin-wide simulation models.

My advice to anyone reading the latest outlook is to resist treating it as a single national number. Look for your specific catchment or lake system, read the country chapter covering your area, and pay close attention to the "implications" rather than just the rainfall percentage. And take the dry-spell warnings seriously – this season, even in the wettest zones, we're flagging possible dry spells of up to ten consecutive days, which matters enormously for rainfed agriculture timing even within an overall wet season.

5. The Nile crosses national borders. Can rainfall or changing river flows in one country affect communities or infrastructure in another days or weeks later? Can you give us a practical Nile Basin example?

Constantly, it's really the defining feature of working on a transboundary basin. A clear example from this season is rainfall over western Tanzania, western Kenya, Uganda, Rwanda and Burundi, which raises Lake Victoria and increases outflow through the Victoria Nile into Lake Kyoga, then Lake Albert, before becoming the Albert Nile and crossing into South Sudan, eventually contributing to White Nile flows towards Sudan and Egypt.

Our current forecast has Lake Kyoga's level climbing by roughly 2 metres between October 2026 and February 2027, driven by that upstream cascade. The lag between rain falling in the Equatorial Lakes and the discharge change being felt in South Sudan is measured in weeks, not days.

Another example is the Baro-Akobo-Sobat system, which drains southern Ethiopia and feeds the Sobat River into the White Nile in South Sudan. Continued above-normal rainfall over southern Ethiopia this OND is expected to extend the flood-risk window for lowland Gambella communities and contribute to sustained White Nile flows downstream.

This is precisely why transboundary data-sharing agreements matter operationally – an early warning generated from a rain gauge or lake-level station upstream needs to become an actionable alert downstream before the water physically arrives.

6. Who should actually be using the Hydrological Outlook — a farmer, dam operator, disaster manager, government or community — and what decisions can they make differently when they have this information early?

Every one of those audiences, but each is reading it for a different decision. A reservoir or hydropower operator uses it to balance storage capture against flood-control buffers. This season, the advisory is to optimise storage capture without compromising those buffers, particularly after the deficits built up during JJAS or MAM.

A disaster risk reduction authority or Red Cross Society uses it to pre-position response and evacuation capacity in known hotspots before the rains intensify, rather than after the first flood hits. An irrigation farmer or pastoralist uses it for planting and grazing decisions, but critically needs the dry-spell warning as much as the wet-season headline. A ten-day dry spell at a critical growth stage can still cause significant impacts even during an "above-normal" season.

A national government or water ministry uses the Outlook for bigger structural decisions – drainage rehabilitation budgets, contingency stock positioning and identifying which districts need flood-response plans updated now rather than in three months. And for communities, the information needs to reach them through channels they can access – radio, local leaders and mobile alerts.

7. NBI talks about moving from hydrological information to action. In your experience, what is still the biggest challenge: predicting what may happen, communicating it clearly, getting the information to the right people, or acting on it in time?

Honestly, our prediction capability has improved enormously – the network of regional and national stations, the satellite altimetry, the 10-day and 48-hour forecasting systems, the European Centre for Medium-Range Weather Forecasts (ECMWF)-driven streamflow forecasting services like GloFAS (Global Flood Awareness System) and GEOGLOWS (GEOGlobal Water Sustainability) provide a powerful cyberinfrastructure for global hydrological modelling framework by leveraging massive decadal hindcast datasets (historical forecasts re-run with the current model version), these platforms allow researchers and water managers to identify systematic model errors and perform automated bias correction to significantly improve local forecast accuracy. Therefore, the seasonal outlook process itself, all give us a genuinely strong technical picture months out.

Where we still lose the most value is in the last mile: getting a forecast that exists in a technical bulletin into a form that changes what a specific person does on a specific day. That's why this year's basin-wide advisory explicitly calls for multi-channel dissemination because different communities trust and access different channels, and a single dissemination method reliably misses someone.

The second-hardest part is acting in time on information that describes a probability, not a certainty. That psychological and institutional pivot, from drought contingency to flood preparedness in the space of one season, is genuinely difficult to execute at speed, and it's exactly the discipline our Executive Director is asking of Member States in this OND 2026 Advisory.

Guest Contributor | Michel Nkurunziza

Michel Nkurunziza is a Rwandan environmental and climate journalist with The New Times, whose reporting covers climate change, environmental conservation and issues affecting the Nile Basin. Having participated in NELSAP-CU's media training programmes, he continues to contribute to public awareness and understanding of the region's shared environmental challenges.

In this edition, Michel explores plans to designate Rwanda's Rugezi Wetland and its surrounding landscape as a national park, highlighting the importance of protecting biodiversity, safeguarding water resources and sustaining the ecosystem services on which communities and the wider Nile Basin depend.

Rugezi Wetland: From Biodiversity Haven to Proposed National Park

By Michel Nkurunziza



Drone view of Rugezi Wetland. Photo; courtesy

Plans to turn Rugezi Wetland into a biodiversity park are gaining momentum, as a recent comprehensive survey reveals the scale of biodiversity supported by one of Rwanda's most important wetlands.

Rugezi is a critical habitat for wildlife, with **741 species recorded** during a recent comprehensive biodiversity survey during the 2024 by the Rwanda Wildlife Conservation Association (RWCA).

The survey identified more than **400 previously undocumented species** and covered plants, mammals, birds, reptiles, amphibians, fish and insects.

Rwanda Development Board (RDB) has announced that more than 30 experts have begun studying the establishment of the proposed **Rugezi, Burera and Ruhondo National Park,** as well as a separate Kivu Islands National Park.

The experts specialise in biodiversity, business, economics and community livelihoods. They are working with representatives from RDB, the Rwanda Environment Management Authority, Rwanda Forestry Authority, Water and Sanitation Corporation, and Rwanda Water Resources Board, while RWCA is conducting a feasibility study.

More than a biodiversity hotspot



Grey crowed cranes in rugezi wetland. Photo; Courtesy

Rugezi Marsh, covering **6,736 hectares,** is a Ramsar-protected site in northern Rwanda, renowned for its rich biodiversity and crucial ecosystem services. It was designated a Ramsar site in 2006, meaning it is of international importance under the Ramsar Convention on Wetlands.

But Rugezi's importance extends beyond the wildlife it supports.

The wetland feeds water into the Twin Lakes of Burera and Ruhondo. Lake Ruhondo drains through the Mukungwa River, a tributary of the Nyabarongo, forming the Akagera River before flowing into Lake Victoria and the Nile system.

Located in Rwanda's Northern Province, Rugezi therefore lies in the headwaters of the Nile River and plays an important role in the region's water system.

The marsh also regulates and stores water and directly feeds and sustains the Ntaruka hydropower plant.

Its importance to Rwanda's energy system became particularly clear when the wetland dried up because of human activities that disrupted water supply for hydropower generation, contributing to a nationwide power shortage. The country was spending more than **Rwf 65 million** a day on fuel to power diesel plants.

Government measures to prevent further agricultural activities that were causing water levels to fall helped restore the wetland. Its successful restoration gained international recognition, including a Green Globe Award in 2010.

A refuge for Rwanda's wildlife

The latest biodiversity survey provides a clearer picture of what the wetland now supports.

Rugezi is an important habitat for the **grey crowned crane**, which is classified as Endangered on the International Union for Conservation of Nature (IUCN) Red List. According to RWCA data, the number of grey crowned cranes recorded in the wetland increased from **71 in 2017 to 378 in 2026,** representing about a quarter of Rwanda's crane population.

The survey recorded **127 bird species,** including 28 newly documented for Rugezi Marsh, bringing the total number recorded in and around the marsh to 222.

These include the Endangered grey crowned crane and Vulnerable Albertine Rift endemic Grauer's Swamp Warbler, as well as the Lake Victoria endemics Carruther's Cisticola and Papyrus Yellow Warbler.



Grauer's Swamp Warbler Photo by Seth Inman gishwati swap.



Carruthers's Cisticola Photo by Roger Clark

Among the newly documented species is the **Rwenzori Nightjar,** an Albertine Rift endemic whose observation during the study marks the first documented record of its distribution beyond Rwanda's montane rainforests.

However, the survey did not record some papyrus-dependent species previously known to inhabit Rugezi Marsh, including

the Papyrus Gonolek, Papyrus Canary and White-winged Swamp Warbler. Their absence highlights the need for stronger regulation of papyrus cutting, restoration of papyrus stands and continued landscape conservation.

Hundreds of species documented

The discoveries extend well beyond birds.

The survey recorded **53 mammal species,** including 51 newly documented for Rugezi Marsh. Among them were 22 bat species, representing 40 per cent of known bat species in Rwanda. Jackals, genets, serval cats, otters, mongoose and a variety of rodents were also documented.

One key record is Harrison's giant mastiff bat, which is classified as Vulnerable on the IUCN Red List. Two otter species (African Clawless Otter and Congo Clawless Otter) are Near Threatened, while Delany's swamp mouse is Vulnerable.

Researchers also recorded **197 plant species,** including 109 newly documented in Rugezi Marsh. Eight are endemic to the Albertine Rift, while three are globally threatened.

At least **149 arthropod species** were recorded, including 49 butterfly species, with the number expected to increase as further analysis is conducted.

The survey also recorded 82 aquatic macroinvertebrate species, including 29 species that indicate good water quality. The aquatic moth Paraponyx dimunitalis was recorded for the first time in Rwanda.

Three fish species, 14 amphibian species and 13 reptile species were also documented. Eight of the amphibian species and 10 of the reptile species were newly documented for Rugezi Marsh.

What comes next for Rugezi?

The findings come as Rwanda considers the future protection of the wider Rugezi, Burera and Ruhondo landscape.

The proposed national park is now being studied by experts in biodiversity, business, economics and community livelihoods, alongside government institutions and RWCA.

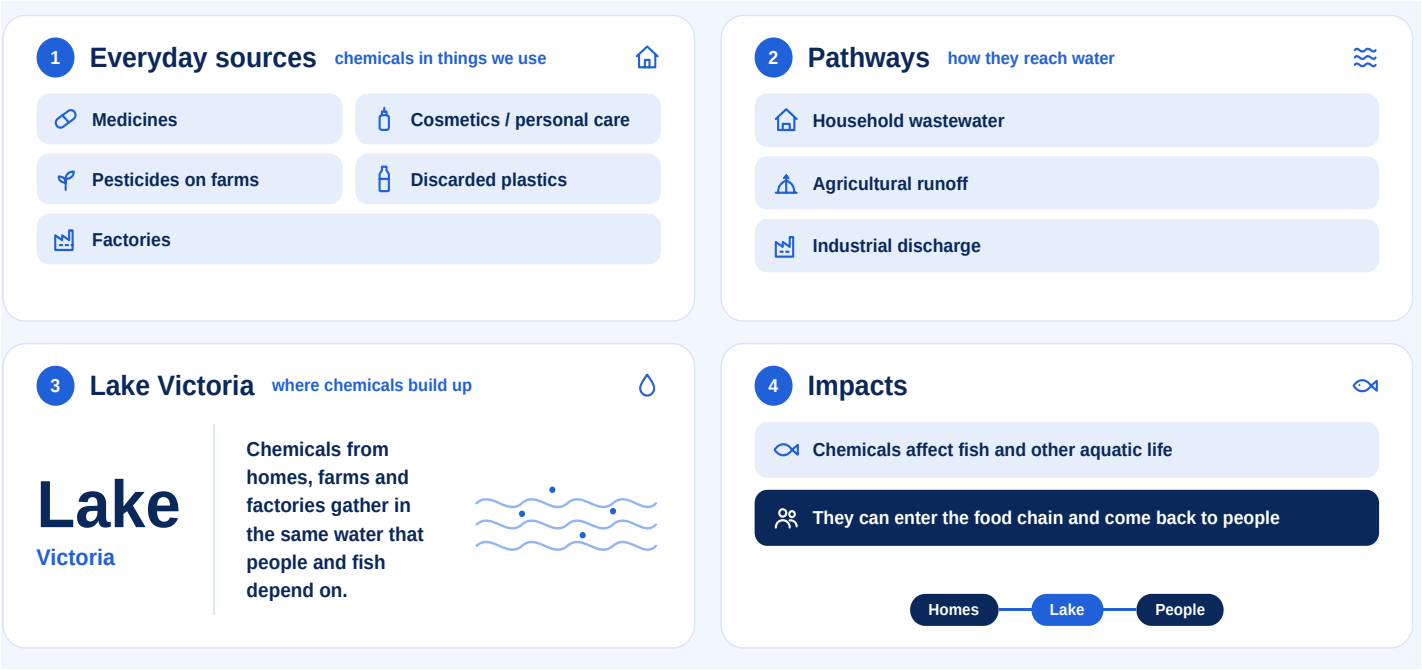
For Rugezi, the discussion goes beyond protecting an area rich in wildlife. The wetland regulates and stores water, supports hydropower generation, feeds the Twin Lakes and forms part of a river system that eventually connects to Lake Victoria and the wider Nile.

Its history has already demonstrated what can happen when that ecological function is disrupted. Its recovery, and the hundreds of species now documented within it, show what can return when the wetland is protected.

As plans for its future protection take shape, Rugezi presents a wider lesson: conserving a wetland is not only about protecting the species that live there, but also about protecting the water, energy and ecosystems that depend on it.

The Invisible Chemicals in Our Everyday Lives: What Happens When They Reach Lake Victoria?

The medicine we take when we are sick, the cosmetics we apply, the pesticides used to grow our food and the plastics we discard are all part of everyday life. But what happens to the chemicals in these products after we use them?



For communities around Lake Victoria, the answer matters. The lake supports more than **45 million people** across its basin and is one of the world's largest freshwater fisheries, producing around **1 million tonnes** of fish annually. It provides water, food, income and livelihoods to millions of households.

During the inaugural Lake Victoria Basin International Conference and Exhibition (LVBICE 2026) in Kisumu, Kenya, Prof. Francis Orata Omoto raised concerns about chemicals of emerging concern (CECs), substances that can enter the environment through wastewater, agricultural runoff and industrial activities but are not always routinely monitored or regulated.

These include pharmaceutical residues such as antibiotics and diabetes medications, chemicals found in personal care products, pesticides, industrial compounds such as PFAS (Polyfluoroalkyls Substances) and PCBs (Poly-Chloro Biophynyls), and microplastics.

Unlike plastic bottles or floating waste, many of these pollutants cannot be seen. Some can persist in the environment up to about 8 years, affect aquatic organisms or enter

food chains, depending on the chemical and level of exposure.

Prof. Orata highlighted untreated sewage entering Lake Victoria, citing Homa Bay as an example, and raised concerns about contamination of fish and the limitations of conventional water treatment methods in removing certain pollutants.

This raises an important question for households: **Could substances we use every day eventually return to us through the water we drink or the fish we eat?**

The potential pathways exist, although the actual health risks depend on which chemicals are present, their concentrations and how people are exposed. Understanding those risks requires regular monitoring, research and effective water treatment.

The professor called for greater attention to pollution prevention, including reducing waste, reusing and recycling materials, and improving waste treatment and disposal practices.

For the Lake Victoria Basin, protecting water quality begins long before pollution reaches the lake. It involves how households dispose off medicines and waste, how farms manage chemicals, how industries handle wastewater and how towns treat sewage.

The chemicals we use may be part of everyday life, but what happens to them after use should concern us all.



Some of the waste brought by the waves from Lake Victoria near the Kagera entry point. Photo by Davis Buyondo



Photo Credit: Joshua Lanzarini

Africa Has a Water Vision for 2063. What Does It Mean for Us?

From safer drinking water to reliable electricity and food security, Africa's new water vision seeks to make water central to the continent's development

What does water have to do with the price of food, the electricity reaching our homes or the safety of communities during floods?

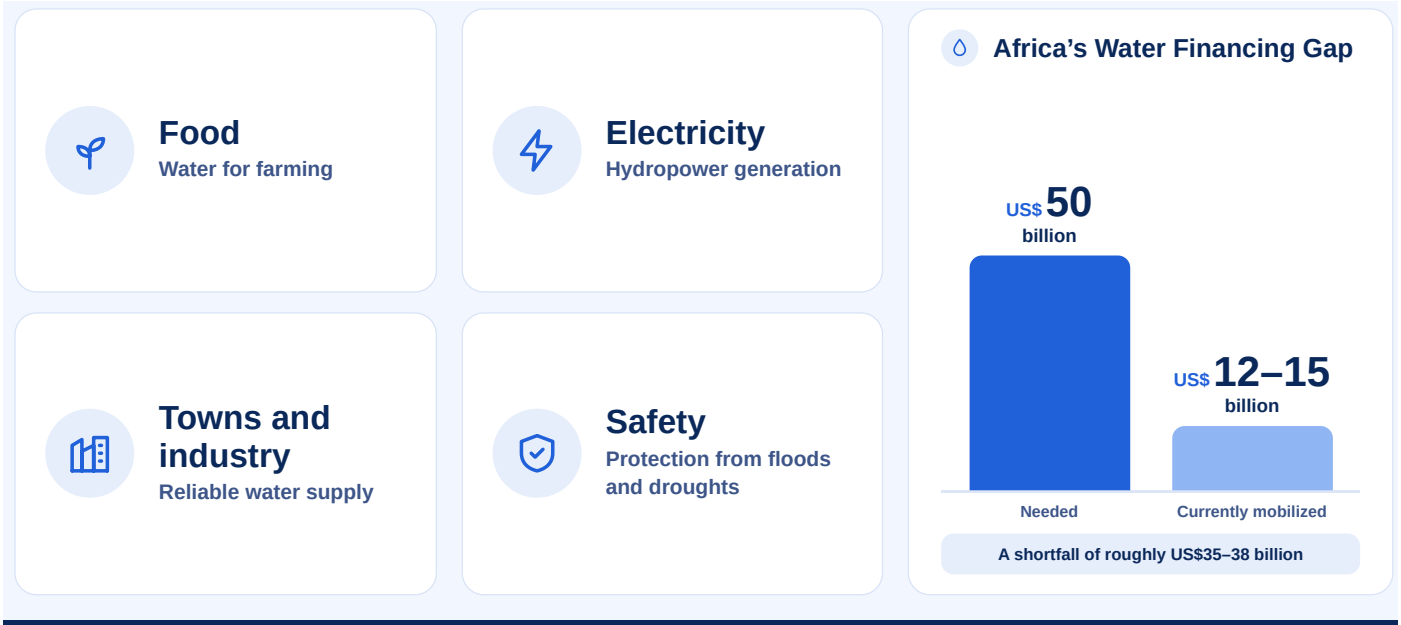
Quite a lot.

Farmers need reliable water to grow food. Hydropower plants depend on river flows to generate electricity. Towns and industries require dependable water supplies, while millions of households need protection from floods, droughts and waterborne diseases.

These challenges are at the heart of the **Africa Water Vision 2063,** a continental policy framework endorsed by African leaders in February 2026.

Its ambition is straightforward: a water-secure and resilient Africa where everyone has access to safe sanitation, water resources are sustainably managed, and countries work together to support economic development.

Why another water vision?



Water security requires investment, cooperation and action.

Africa has long recognized the importance of water to development. The challenge has been translating commitments into investments and services that reach people.

The financing gap illustrates the scale of the task. According to GIZ, Africa requires an estimated US$50 billion annually to achieve its water and sanitation goals but currently mobilizes approximately US$12–15 billion.

The new Vision therefore places greater emphasis on financing, accountable institutions, climate resilience and cooperation over shared water resources.

It also recognizes that water cannot be managed in isolation. Decisions about irrigation affect food production. Water storage influences electricity generation and flood management. Pollution in one part of a river basin can affect communities downstream.

Why is 2033 important if the Vision is for 2063?

Waiting until 2063 to measure progress would be too late.

That is why African countries are developing the first implementation plan covering 2026–2033. The plan is intended to identify priority actions, programmes, financing requirements and institutional responsibilities for the coming years.

At Cairo Water Week 2026, discussions on Vision are focusing on what it will take to move from continental commitments to implementation.

The practical questions are important: Which investments should come first? How will they be financed? Who will implement them? And how will countries measure whether communities are benefiting?

What does this mean for the Nile Basin?

The Nile connects countries whose water needs and development priorities are closely linked. Managing these shared resources requires cooperation in planning, investment and information sharing.

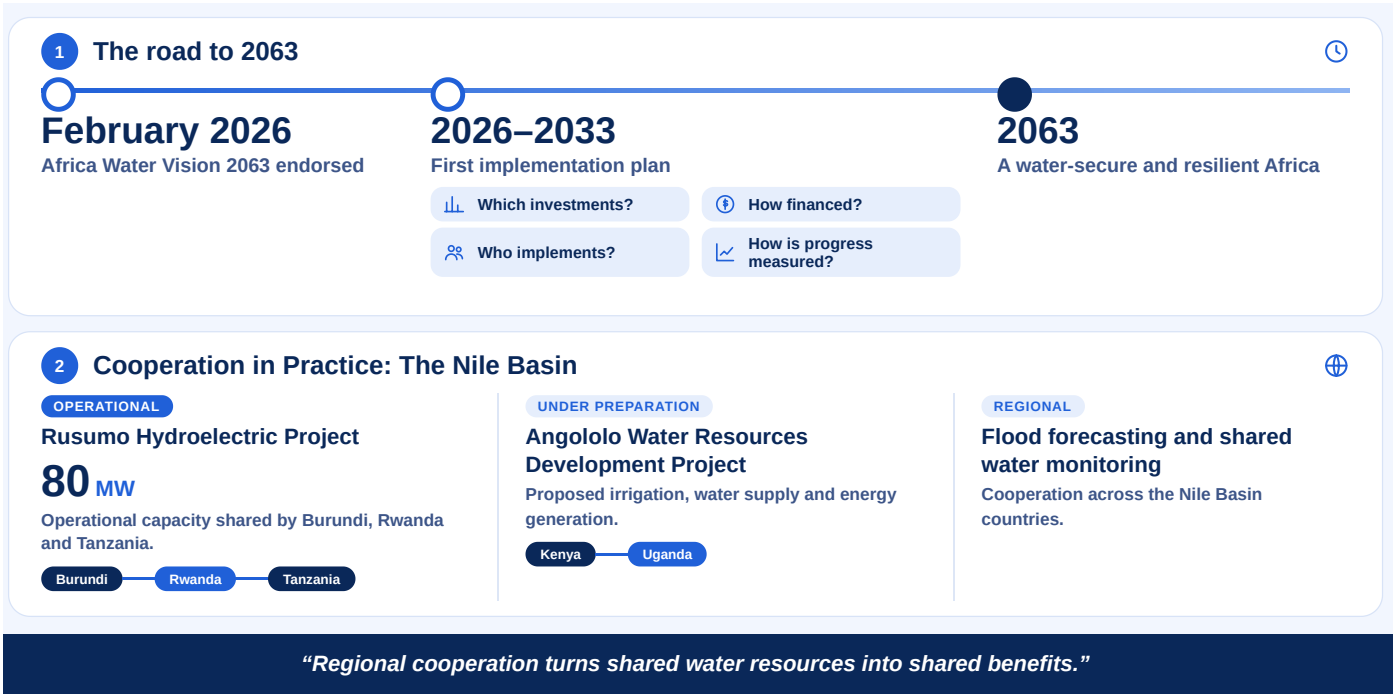
Through the Nile Basin Initiative and its subsidiary action programmes, countries are already pursuing investments that illustrate these principles.

The Regional Rusumo Falls Hydroelectric Project, for example, provides 80 MW of installed generation capacity shared among Burundi, Rwanda and Tanzania. The Angololo Water Resources Development Project, under preparation between Kenya and Uganda, proposes investments in irrigation, water supply and energy generation.

Regional flood forecasting and hydrological monitoring initiatives also demonstrate how countries can benefit from sharing information about water conditions that cross national boundaries.

These projects are not presented as outcomes of the new Vision. Rather, they illustrate the kinds of regional cooperation and investment that its implementation seeks to encourage across Africa.

What happens next?



"Regional cooperation turns shared water resources into shared benefits."

The success of Africa Water Vision 2063 will depend on what happens between now and its next milestones.

A credible implementation plan, sustained financing, capable institutions and cooperation among countries will be essential.

For communities across the Nile Basin, the real test will be practical: more reliable water supplies, better protection against floods and droughts, productive agriculture, stronger energy security and healthier ecosystems.

The year 2063 may seem far away. But the investments and decisions that will determine Africa's water future are being made today.

Four Nile Basin Countries Advance Regional Peatland Conservation Initiative

Burundi, Rwanda, Tanzania and Uganda are working with NELSAP-CU and GIZ to strengthen a regional climate investment proposal targeting shared peatland ecosystems in the Kagera Basin.



Four Nile Basin countries have taken another step towards coordinated peatland conservation and climate resilience, following regional consultations on the proposed PEAT-WISE initiative held in Dar es Salaam, Tanzania, on 4–5 November 2026.

PEAT-WISE, which stands for Peatland Emission Avoidance Through Transboundary Watershed Investments Supporting Sustainable Ecosystems and Livelihoods, seeks to support the conservation and restoration of an estimated **84,566 hectares of peatlands** across the Akanyaru-Cyohoha-Rweru and Sango Bay-Minziro transboundary landscapes.

The proposed initiative could also strengthen climate resilience for more than **three million people,** while supporting sustainable livelihoods in communities that depend on these ecosystems.

From Scientific Research to Regional Investment

The initiative builds on scientific assessments undertaken through the DIAPOL-CE project, which examined peatland carbon stocks, ecosystem services and climate-related risks.

These findings provide a technical basis for identifying conservation priorities and developing coordinated interventions across national boundaries.

Peatlands store significant amounts of carbon and help regulate water systems. When degraded, they can lose these functions, contributing to greenhouse gas emissions and increasing environmental risks for surrounding communities.

For the four participating countries, PEAT-WISE presents an opportunity to move

beyond individual conservation efforts towards a coordinated approach that combines ecosystem protection, restoration and sustainable livelihood opportunities.

Strengthening the Pathway to Climate Financing

The initiative follows a decision by the Nile Basin Council of Ministers in December 2025 in Bujumbura, Burundi, authorising NELSAP-CU to pursue access to Green Climate Fund financing through the Project-Specific Assessment Approach (PSAA).

The Dar es Salaam consultations focused on strengthening country ownership, reviewing the proposed interventions and refining the project concept. If successfully developed and financed, PEAT-WISE could provide a framework for protecting shared peatland ecosystems while supporting climate resilience and livelihoods across the Kagera Basin.




Burundi


DR Congo


Egypt


Ethiopia


Kenya


Rwanda


South Sudan


The Sudan


Tanzania


Uganda

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