Cross-border conflict & collaboration

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Trouble Don't Last Always.

This title of an old gospel song implies that change happens constantly. Nothing, not even trouble, is permanent. So making plans with only trouble in mind is futile. When dealing with challenges and danger, we should remember that things change and be prepared for what could come next. The Niles correspondents explore a variety of cross-border projects that aspire to mitigate current troubles in the Nile Basin, helping prepare the region for a future always vastly different from today.



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This is Sakimatwematwe

Today's Nile Basin conflicts are more than regional squabbles. Seen as opportunities and handled with the qualities of equity, wisdom and discernment, they may open up a path towards stability and sustainability.



he figure depicted on the cover of this issue of The Niles is called Sakimatwemtwe, or "the one with many heads". It is a symbol of equity, wisdom, and discernment for the Lega people in the eastern part of the Democratic Republic of Congo. The multi-headed figure encourages us to see all sides of an issue and have knowledge of everything going on around us. It speaks to our inability to act alone. To move forward and overcome current troubles, we need the support of others.

Let's apply this wisdom to today's crossborder troubles in the Nile Basin. A border refers to both, a line that separates and distinguishes between two entities, and the edge or boundary of something. In this sense, borders help us delineate our own limits and compare ourselves to others. These benevolent definitions see borders as tools for knowing oneself and the other, eventually reaching more understanding of both.

In reality, however, borders are regarded as mechanisms of separation. Crossing borders becomes, at times, defiance of the status quo. Unlawful crossing of these borders triggers conflict, even violence. This framework of understanding the world might have functioned in the past. Today, however, we face challenges that no single entity can overcome alone. Remaining stuck, for example, within our

national borders while facing issues such as food insecurity, environmental degradation, climate change, and its effects is outdated and dangerous.

While the distribution of water within and among nation-states is and will be at the root of many conflicts amidst growing populations and climate change, it also is a central pillar of renewable energy generation in the region and the transition to a green economy – a prime example of the close nexus between conflict management and transnational sustainability.

Looking at the world, and the challenges we face, through the lens of interconnectedness and interdependence offers a deeper and more exhaustive understanding. It also points out solutions. Therefore, as the Nile Basin Initiative (NBI) does, encouraging cross-border cooperation and joint projects is a firm step in this direction. NBI's approach to dealing with conflict starts with getting beyond positions and interests, and identifying the basic human needs across the basin through dialogue and cooperation.

As the proverb goes, "Trouble don't last always". Looking at conflicts in the basin from a cooperative approach, in other words, looking both inwards and outwards for opportunities and solutions, opens the door to overcoming current troubles. It also offers a blueprint for settling disputes, what role regional organisations can play, and how to move towards agreement on concrete mechanisms.

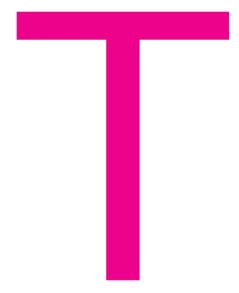
To handle trouble smoothly, we need to set up channels for communication and cooperation, both within and across borders, whether physical, mental or even imaginary. Sakimatwemtwe, with its many heads, is a reminder that completeness and accomplishment can only follow when the connections one has to others are honoured and utilised.

Be like Sakimatwematwe.

Coverpage Image: Lega, Three-Headed Figure (Sakimatwemtwe), 19th century. Brooklyn Museum, Museum Expedition 1922, Robert B. Woodward Memorial Fund, 22.486. Creative Commons-BY (Photo: Brooklyn Museum)

What unites Nile countries is more than what divides them

Rehab Abd Almohsen Cairo, Egypt International journalistic collaboration enhances networks, helps research and opens up new perspectives. At the end of the day, it makes for better articles



"This made a remarkable difference to my coverage."

hey said, "you never really understand a person until you consider things from his point of view," and I replied: "I never really understood the Nile problems until I visited some of the Nile countries and considered things from their point of view." For me, it all started in Ethiopia.

In 2018, I received an invitation for the Eastern Nile Technical Regional Office (ENTRO), one of the three centres of the Nile Basin Initiative (NBI), to attend a media training workshop in Bahir Dar, Ethiopia, a moment I had hoped for ever since the publishing of my first story on the Grand Ethiopian Renaissance Dam (GERD) in 2013.

It meant visiting the setting where the events in my story unfolded, a place I had never had a chance to see. It meant I would meet researchers from Ethiopia in-person to pose questions rather than speak with them online.

This made a remarkable difference to my coverage of the story. In my original writing on the GERD, I was determined to produce a "balanced" report, bringing together the

voices of researchers from the three countries and one independent source.

Back then, I didn't have access to resources from Ethiopia and Sudan. Still, with the help of LinkedIn and other tools, I managed to explain the tensions that followed the announcement made by Ethiopia to build what was foreseen as "Africa's largest hydroelectric power plant". Some of the fears that were voiced to me included: the worry that it would "slash the Nile's flow" and "drastically affect the downstream nations' agriculture, electricity and water supply".

Comments from Ethiopian researchers were critical. I spent a lot of time and effort searching for a source in neighbouring Nile countries, which would have been easier had I had journalistic contacts in the country. Meanwhile, there was apparent tension underlying the comments I received, although words like "cooperation" and having a "win-win" situation were mentioned by the researchers on a few occasions.

One hand cannot clap

he media workshop in Bahir-Dar was about cooperation in the context of tackling environmental degradation in the Eastern Nile Basin, linking journalists from Nile countries to each other and to researchers. The aim was to create more teamwork for stories, facilitate access to information, and highlight common problems in Nile countries and specific national issues.

One common theme emerged during a visit to Lake Tana, the source of the Blue Nile from which the majority of Egypt's water comes. There I saw what I thought were some small islands but were actually large swaths of water hyacinth or what we call Nile flowers.



Wubalem Fekade, the former Head of Social Development and Communication at ENTRO, explained the ugly effects, e.g. killing fish because of oxygen depletion, of this beautiful flower on the lake and its people, and the Nile in general. "It's a problem that needs a collective effort from all Nile countries to reach a real solution," he said.

After the workshop, I published a story about water hyacinth, but the real jump for me was that I published my first teamwork story about the problems of small farmers in the Nile countries with journalists from across the basin.

A Wetland is wealth, if we maintain its health

ne year later, I was invited by NBI to attend the 20th Nile Day Celebrations held in Rwanda and The Niles media training and editorial conference. There I first learnt about a transboundary wetlands project under the title "Biodiversity Conservation and Sustainable Utilisation of Ecosystem Services of Wetlands of Transboundary Relevance in the Nile Basin".

Luckily, I was a few days away from delivering a story about the stigmatisation of wetlands as a source of insects and diseases. I was interested in listening to Abdulkarim H. Seid, by then the Deputy Executive Director of the NBI, talking about a project on promoting healthy wetlands and restoring degraded ones to reduce the risk of disasters.

Wetlands are the most naturally productive ecosystems, nursing microbes, plants, insects, reptiles, birds, fish and mammals. It purifies water by acting as a natural sponge, absorbing a tremendous amount of water during floods,

thus helping avert disaster for communities. Meanwhile, during times of drought, they release the water which supports livelihoods.

This is why NBI established a NileWet Network Platform as a regional forum linked to the Ramsar Convention. According to Seid, the platform aims to strengthen collaboration between governments, technical experts, international NGOs, local communities, and private companies working on wetlands in the Nile Basin.

Predicting Floods and droughts

n 2020 when historical floods hit Sudan and other Nile countries, I got an insight into another cooperation and data sharing project that has been implemented by NBI, the Flood Preparedness and Early Warning (FPEW) project.

I talked to Modathir Zaroug, a Regional Water Resources Modeller at NBI, who said that one of the NBI's strategic goals is to tackle climate change and develop a Nile Basin river flow forecasting system. "We successfully developed a drought monitoring and forecasting tool, and we issue monthly drought bulletins, and we share it with our 3,700 stakeholders," said Zaroug.

The flood and drought portal is open to any of the Nile countries. "Anyone has access and can tailor the information in the tool," he said, adding that he received hundreds of feedback messages praising the project. "I think the project is having an effect," says Zaroug.

NBI's most considerable success from Zaroug's point of view is the working groups that have been formed among researchers in water quality, irrigation, navigation, groundwater and other fields. "The groups meet

repeatedly. The ties and friendships that get developed over time through those meetings enhance cooperation."

A fisher on Lake Tana, photographed during a journalist conference in Bahir Dar, Ethiopia, August 2018. Photo: The Niles / Dominik

Journalistic contacts

aroug's words reminded me of how much I miss meeting the friends and fellow journalists from the other Nile countries, as we used to have a meeting at least once a year before the Covid-19 pandemic ground all to a halt.

I know exactly what he is talking about: the frequent meeting was not only about the annual Nile Day celebrations or the media training; it was about creating a connection between us, the Nile journalists.

The training sessions and editorial conferences involved a lot of brainstorming, discussions, objections, agreements, comments and new ideas. As a group of journalists, we worked together, commenting on each other's proposals for the next issue of The Niles. The results exceeded my expectations.

I never thought I would write something like "Add crickets to your diet for more protein" or my commentary titled "How to report on dams without having seen one". And it was also entertaining and helpful to read the work of my colleagues, such as "Balancing development and conservation" or the article "Water hostilities"

These relationships developed through several meetings, many meals, shopping walks and chats on the sidelines of events. As they say, "teamwork begins by building trust" – but you need both time and effort to build trust.

Selam Muluegta / Addis Ababa, Ethiopia & Winnie Cirino / Juba, South Sudan

The many conflicts within the Ethiopia-South Sudan transboundary conflict



Kidnapping children, stealing cattle and killing are among the atrocities afflicting communities on the South Sudanese-Ethiopian border. It is hard for those struggling to survive in the region to imagine a life without fear and suffering.



round 300,000 people reside along the 847-kilometre border between the Gambella region of Ethiopia and the Akobo region of South Sudan, often facing risks of violence.

Many different ethnic groups inhabit the Ethiopia-South Sudan border region, including the Anuak, Nuer, Komo, Oppo, and Murle, belonging to the Nilotic and para-Nilotic groups of people. Besides, other ethnic groups from different parts of Ethiopia and South Sudan also live along the border. The three largest ethnic groups in the borderland region – the Nuer, Anuak and Murle – are ethnically polarised.

Akobo and Gambella in the Eastern Nile sub-basin region are areas of high poverty and food insecurity. Approximately 85 percent of the population of Akobo is food insecure, and poverty is severe. High levels of violence interact with poverty, and a lack of resources produce dire results for civilians. According to the 2021 Humanitarian Needs Overview (HNO), Akobo has pockets of communities ranked at the Integrated Food Security Phase Classification System (IPC) Stage 5 – representing famine conditions.

Meanwhile, conflict over natural resources is a significant problem, exacerbating poverty. The two regions are very isolated with poor communications and scant provision of services, a situation that limits development.

Information obtained from the Gambella regional state indicates that violent cross-border conflicts have been escalating for over a decade now, with an average of 15 violent clashes registered every year. Atrocities committed

in the area include kidnapping children, stealing cattle and killing.

In February, for example, a group of Murle gunmen from South Sudan raided the Dima refugee camp in the Gambella region of Ethiopia, killing one person and wounding two others. Data from the Ethiopian regional administration shows that between 2016 and 2021, Ethnic Murle were thought to have killed a total of 217 people, abducted 240 children, stolen 2,530 cattle and burnt many villages.

Traditionally, the relationship between the Nuer and the Anyuak was formed in part by differing livelihood sources. The Nuer are mobile pastoralists and depend heavily on cattle. In contrast, the Anyuak have mixed livelihoods sources, relying on agriculture and cultivation as well as livestock.

The Nuer have expanded their influence and geographical reach in both South Sudan and Ethiopia; areas that were previously predominantly Anyuak are now predominantly Nuer. This has resulted in instances of violence. In March 2015, Anyuak attackers burned down Nuer houses in Gambella. Tensions between Nuer and Anyuak have, however, until now, remained restricted, and the scale of violence has been relatively limited.

Illegal arms trafficking, money laundering and uncontrolled border trade are additional security problems in the region that have increased over the past three years.

Stealing cattle, kidnapping children

he cross-border conflict in the Ethiopia-South Sudan border area has been seasonal. As many of these communities are pastoralists, disputes are often ignited over grazing lands and access to water points, especially during the dry seasons.

The trend of kidnapping children and stealing cattle can be blamed on both cultural and economic factors, according to Agetu Adig, press secretary of Gambella regional state. For example, according to prevailing traditions of some ethnic groups, whenever a man is ready for marriage, he should demonstrate his bravery by kidnapping children or stealing cattle from another ethnic group.

Agetu also saw economic reasons as underpinning the current conflicts. Poverty

results from competition and environmental pressure and shocks, including floods and droughts. According to a 2021 study by the Danish Refugee Council (DRC), cattle raids are conducted by youth so they can sustain themselves and their families. From a livelihoods perspective, cattle are critical to the survival not only of pastoralists but also agro-pastoralists.

People also measure economic gains by the number of cattle a person owns. After all, livestock represents sources of income, food, and prestige for them. The Ethiopian government has frequently condemned the cattle raids and demanded the release of kidnapped children through mediation efforts with local government officials of both countries. Its efforts failed, and the Ethiopian government resorted to using defence forces to return 109 children out of 161 children.

Currently, there are frequent attempts to kidnap children in the area, said Agetu Bader, press secretary of the Gambella region. "After the kidnapping, they are often sold. The price of a child is worth more than the price of thousands of cattle," he added.

"A child is worth more than the price of thousands of cattle."

Weak border protection means more violence in Ethiopia

he situation remains highly volatile, security is scant, and most of Ethiopia's borderland remains unprotected. This has created opportunities for criminal actors to move freely back and forth across the border.

Ethiopia's Gambella State is one of the country's least developed regions. Frequent clashes in the area damage existing infrastructure while the ongoing risk of violence slows economic activities. Such factors have made life and farming unstable for local inhabitants.

Gnega Lo is a resident of Gambella. She is one of the mothers whose children were returned after being kidnapped by the Murle people for months. She says, "because of the frequent violent clashes happening in the area, I cannot lead a stable life".

The press secretary for the region outlines the heavy burden of those living with everyday risk: "Frequent cross-border conflicts have exerted a negative psychological impact on the

"They feel like they are waiting for their death." communities living in the area. Their life is being threatened because conflicts are inevitable. They feel like they are waiting for their death."

Dr. Samuel Tafesse, a researcher on peace and security from Addis Ababa University, said prolonged instability in the area would create a safe haven for illegal arms traffickers to operate freely. "Downplaying the existing cross-border conflict along the Ethiopia-South Sudan border will dismantle not only the national security of the country but also the security of the entire East Africa region," he said. "Ethiopia and South Sudan are in a geo-politically strategic region in Eastern and Central Africa. Ensuring the peace and security of these countries means ensuring the entire region's stability."

According to information from the Gambella region peace and security bureau, illegal arms traffickers made several attempts to transport arms to central Ethiopia from this region over the past few months.

Since the current government of Ethiopia came to power in 2018, several opposition armed groups have been created in different parts of the country to try to topple the regime. The Gambella region is one of the areas where different armed groups operate. These include the Benishangul Liberation Front (BLF), one of the armed groups operating in Benshangul Gumuz, where the Grand Ethiopian Renaissance Dam is under construction.

In addition, the Oromo Liberation Front (OLF), referred to as a terrorist organisation by the Ethiopian parliament, is fighting in areas close to the Ethiopia-South Sudan border. "Many of the border areas have remained in the hands of anti-government forces. The area is suitable for them to access arms, money laundering, and also to migrate to other countries," says Dr. Tafesse.

Because Ethiopia could not solve its political differences through dialogue, Prime Minister Abiy Ahmed began a military campaign against the Tigray People's Liberation Front (TPLF). After over 16 months, fighting has slowed, but Ethiopians are bitterly divided, and their country is wracked by suffering.

Besides the war in the northern region of Ethiopia, "Al-Shabab from Somalia are penetrating the centre of the country", says Dr. Tafesse, adding that there are also violent clashes in the country's border regions with Kenya, South Sudan and Sudan.

Violent conflicts also rife on the South Sudanese side

ince 2013, only two years following independence from Sudan, South Sudan has been in a state of civil war organised initially between supporters of President Salva Kiir and opposition leader Riek Machar. While a brief period of peace was reached in 2016, the agreement ended with violence in the capital. While a power-sharing deal was once again signed in 2018, the results have been insufficient to quell longstanding intercommunal grievances and tensions that are only exacerbated by ongoing tension in Juba and the failure to integrate smaller rebel groups into the peace process.

As a result of the weak presence of the South Sudanese state and its inability to provide security to local populations, violent conflict has continued and generated a severe protection crisis affecting 8.3 million people, with humanitarian conditions being characterised as 'catastrophic' or 'severe' across much of the country according to the United Nation's Office for the Coordination of Humanitarian Affairs (OCHA). The conflict in Ethiopia seems to have also indirectly weakened the implementation of a peace deal in neighbouring South Sudan.

The Ethiopia-South Sudan borderlands are beyond the reach of the South Sudanese government in Juba. Akobo County, as a predominantly Nuer area, is less directly affected by national dynamics. It is firmly aligned with the Sudan People's Liberation Movement/Army in Opposition (SPLM/A-IO) and South Sudan's First Vice President, Riek Machar. But, according to the press secretary of the Gambella region, the SPLM/A-IO cause frequent conflicts along the borders with neighbouring countries.

Inter-ethnic violence between the Lou Nuer and the Murle, or the Lou Nuer and Anyuak, and intra-ethnic conflict between the Lou Nuer and the Jikany Nuer is commonplace. Underpinned by a perception of cultural and ethnic difference, these violent conflicts are driven by resource competition, for example, over water and conflict over grazing land and cattle.

Access to water and pastures, for example, is central for local communities in Jonglei State, and the Lou Nuer are at a geographical disadvantage. Living in a water-poor area, they are



Homesteads in the South Sudan-Ethiopia border region. Photo: The Niles / Winnie

forced to move into the territories of other groups during the dry season, which can give both pretext and opportunity for conflicts over shared resources and cattle raiding. Over the past 30 years, this dynamic has been amplified by progressive warming and prolonged dry seasons in South Sudan, frequently bringing the Lou Nuer close to the Murle.

Movement between Akobo in South Sudan and Gambella in Ethiopia is an everyday occurrence, with most people travelling daily between the two countries. Manas James, a 26-year-old from Akobo, explained how the conflicts impact people living amid the uncertainty. The threat of violence disrupts cross border movement and, as a result, local livelihoods. "You are from a certain ethnic group, and you can't cross to the other side because you could get yourself killed. People cannot move freely," James explained. "When there is fear, then businesses cannot flourish."

Jay Adingor Alual, the Minister for Information, Culture, Youth and Sports in the Pibor Administrative Area, said that with a distance of 265 kilometres from Juba to Pibor, locals rarely source commodities from Juba. Instead, Ethiopia is their nearest market. But when violence erupts, borders are closed, meaning that locals lack access to essential goods.

Kang Yech is the former Deputy Town Mayor of Akobo. He underscored that many manage to coexist peacefully, saying that when their area is flooded, the community crosses to Gambella and settles for about three months, only returning when the water level has reduced. But he, too, fears the consequences of conflicts along the border. He blamed insecurities at the border on a lack of basic services and absent support from the government. He described the root causes as economic: "If a community person has a farm, he will not disturb another person because he has food, but right now, people are not farming because there are no seeds."

Unlocking cross-border opportunities

ransboundary cooperation is key to transforming the multitude of conflicts and their underlying causes. Ethiopia and South Sudan had already agreed to implement several joint economic development programmes disrupted mainly by violent conflict in both countries and lacking financial resources. In 2017 both nations signed several agreements to strengthen cooperation on security, trade, and development along the borders. Part of these agreements was the plan to construct roads linking Gambella to Paluoch through Pagak. The construction of another road that would connect Ethiopia's Dima to Jonglei's capital Bor was also part of the plan.

Such infrastructure projects are urgently needed to start up large scale livelihood activities targeting the youth. Poverty and conflict interact to generate a negative spiral in the Akobo-Gambella region. Poverty and hunger are among the reasons why youth conduct cattle raids, and fear of retaliation curtails farming and income generation opportunities. At the same time, boys experience continual pressure to earn money to pay dowry and get a bride, which is a minimum requirement for social respectability.

To break the cycle of local and cross-border violent conflict, the Eastern Nile Technical Regional Office (ENTRO), one of the three centres of the Nile Basin Initiative (NBI), conducted the BARO-AKOBO-SOBAT (BAS) Multipurpose Water Resource Development Study Project (BAS-MWRDS) and published its findings already in July 2017.

The Akobo-Gambella floodplains transboundary development programme is one of the three short-term projects proposed as part of the BAS-MWRDS. The three short-term projects are based on the sustainable development of water resources. They aim at providing inter-sectoral benefits and improving people's livelihoods in the sub-basin. The Akobo-Gambella programme is designed around solar pumping and the provision of water for various uses – potable water supply, sanitation, livestock watering, capture fisheries, aquaculture, small scale irrigation and capacity building.

"The main purpose of the programme was defined by the key stakeholders of the Baro-Akobo-Sobat sub-basin during the baseline workshop held in Adama in April 2016. The programme should help reduce transboundary conflicts associated with water, improve food security and lead to improved livelihoods," the study highlights. Once implemented, the programme is expected to support economic development and opportunities for livelihood

enhancement to support a generalised reduction in violent conflict and poverty and enable communities to become increasingly self-reliant. Since the study was published, little pro-

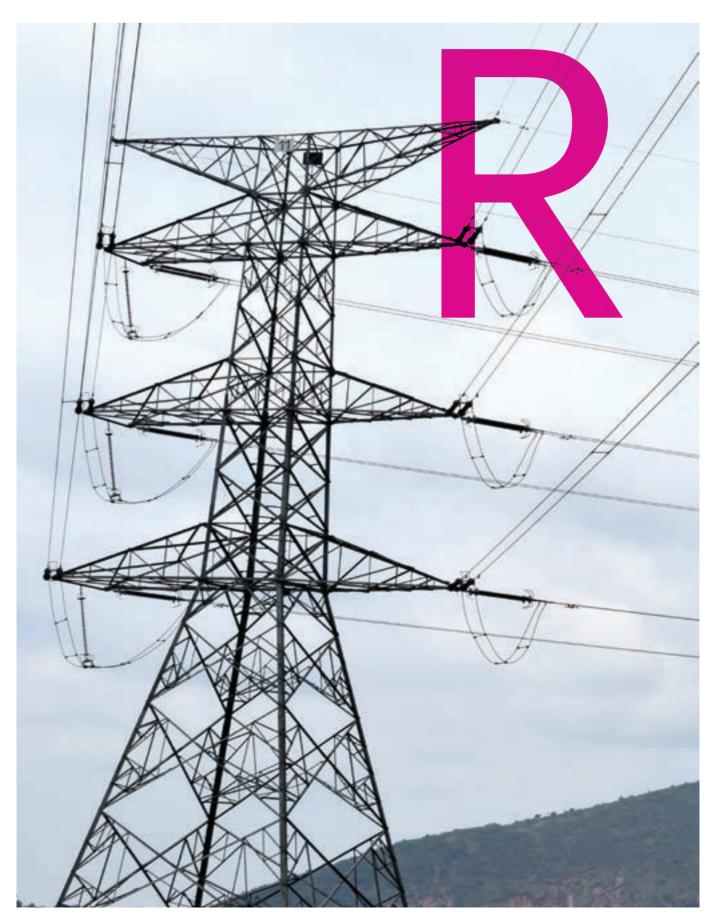
gress has been made with both countries en-

tangled in internal struggles. But in April, James Pitia Morgan, Ambassador Extraordinary, Plenipotentiary to Ethiopia and Permanent Representative of South Sudan to the African Union (AU), the Intergovernmental Authority on Development (IGAD) and the United Nations Economic Commission for Africa (UNECA) told the Ethiopian News Agency (ENA) that Ethiopia and South Sudan should revive opportunities for new heights. "Ethiopia and South Sudan have a common responsibility to ascertain the political, security, stability and peace in the Horn of Africa and also maintain economic development of the two countries, promoting economic integration in the Horn of Africa," he said.

"Ethiopia and South Sudan have a common responsibility."

Plans to interconnect Rwandan and Ugandan electricity grids could revolutionise day-to-day lives across the region – but the last political and practical hurdles still need to be overcome.

Lighting up Rwanda with help from Uganda



wandans living in the north-eastern border area with Uganda have closely watched the arrival of sky-high steel pylons in their villages. Both village and town folk are in little doubt about their purpose: the high voltage transmission lines have been built to carry electricity from Uganda to Rwanda.

The story is similar in much of western Rwanda, where locals say the overhead power lines are meant to transfer power from Rwanda to the eastern Democratic Republic of Congo. The transmission lines are all part of the regional electricity interconnectivity programme aimed at connecting Rwanda, DR Congo, Uganda, Burundi and Kenya, a programme under the auspices of the Nile Basin Initiative (NBI).

Once fully operational, the power system will connect the power grids of all these countries – meaning should there be a shortage in one region, a surplus from another country covers up the defi cit.

This explains why the project has been working to connect the national grids of Uganda and Rwanda over the last few years. This has been done by building and linking substations in both countries. These facilities receive electricity via a dedicated transmission line.

The regional grid linking Uganda and Rwanda will be served by two sub-stations located in Mbarara City and Mirama Hills, in Ntungamo, in southwestern Uganda. This will then connect to the Shango substation located in Nduba Sector, Gasabo District of Kigali in Rwanda.

Excitement in rural Rwanda

o get a snapshot of how much the imminent arrival of reliable electricity could mean for many Rwandan citizens, The Niles recently embarked on a journey cutting through villages and small towns across Nyagatare, Gatsibo, Gakenke, Nyabihu and Rubavu – the five northern Rwanda districts in which the regional power interconnectivity system transits.

On one Friday evening in March, arriving in Nyagatare, a border city near the Rwanda-Uganda frontier, a power blackout awaited us. For about an hour, the whole town was in darkness. The locals say that load-shedding is "normal" in this area.

The following morning, The Niles headed off to Ryabega town, still in Nyagatare District, using the highway to Kigali. Here, we gatecrashed a wedding ceremony with no music or sound system, despite visible power lines running along the road. The people at the party told us how electricity in the town is "usually on and off".

We then moved to Gatsibo District, this time heading deep into the countryside until we reached Nyahanga, a small trading centre. The incoming overhead transmission line runs through this small town. We encountered 21-year-old Fidele Myuvekuye. He was born here but works in Kigali.

In Nyahanga, it is only those with significant financial muscle that have electricity cables connected to their homes that are able to tap power off the national grid. The vast majority use small wick-and-paraffin lamps called 'Udutodoba'.

However, some lucky village folks have benefitted from the ongoing government and private sector schemes to supply solar panels to the most vulnerable homes.

Despite his recent change in life, Myuvekuye told The Niles that his childhood was one without electricity in this village. This perhaps explains his excitement about the new infrastructure being put in place.

The locals need power for lighting homes, charging their phones and being able to run small businesses, Myuvekuye told The Niles.

"Yes, there are solar panels in some homes, but they give low power. We cannot watch television. We hope our leaders will help us get reliable power very soon," he said. "It takes me ten to 20 minutes to find where to charge my phone."

We also met Patrionille Uwimana, 22, a single mother of two coming from her farmland. She rents a house without power. To keep connected, Uwimana spends part of her meagre income on paying for phone charging daily and on fuel for lighting at night. "As for television, like it is with others who have no power, we don't even think about that," she said.

Theogene Ntidendeza, 40, is well-known in the area because he rides a motorbike taxi. The father of three told The Niles while riding us to the transmission line running along a hill overlooking the village that he has no television or radio set at home.

"It is a challenge for my children who need light to revise and do homework," he said. Several parents told The Niles about how the lack of electricity affects their children's performance in school.

Our next stop, Ngarama trading centre, also found in Gatsibo District, is quite established compared to Nyahanga. We found Innocent Nzabandora, 40, a father of three who runs a welding business. He said his town has electricity, but not at his home, farther away.

"We have been told that this power line that passes here from Uganda will benefit us directly. We hear most of it will go to Kigali to run factories and that we will get the excess," he said, adding that he knows people keen to open small scale factories in the area but who are put off by the irregular power supply.

The regional transmission line indeed meanders up and down several hills in this country, whose moniker of "land of a thousand hills" fits aptly. From Gatsibo, the lines cut through many hills before they eventually terminate at the Shango substation, which is connected to the grid from Mirama Hills in Uganda.

A similar maze of overhead lines has been built on the Ugandan side. It runs hundreds of kilometres cutting through wetlands and skirting hills and valleys through Kampala, Mpigi, Mityana, Lwengo, Masaka and Mbarara. This dedicated line picks power from several hydroelectricity dams such as Nalubaale, Kiira, Bujagali and Isimba in Jinja along the River Nile.

At Mbarara city, a 220/IIO kilovolts substation has two 220 kilovolts line bays to interconnect with the Rwanda network at Shango

via Mirama Hills. The Shango substation was completed in December 2019, and so was the Mirama substation, which has been there for a while

These substations are a small piece of a giant puzzle to light up the region spearheaded by the NBI, an intergovernmental partnership that brings together ten countries that share the River Nile, namely Rwanda, DR Congo, Egypt, Ethiopia, Kenya, Burundi, South Sudan, Sudan, Tanzania and Uganda.

Pamela Byoruganda, the Principal Public Relations Officer at the Uganda Electricity Transmission Company Ltd. (UETCL), the national agency in charge of taking power around Uganda and beyond, told The Niles that both the Mbarara-Mirama Hills-Shango substations were completed and energised in 2018.

"The two countries are now working on the 'communication hardware' which will be crucial in configuring the electricity grids to ensure that they communicate on either side of the border," Byoruganda said.

An overhead transmission line
– part of the Uganda-Kenya
power interconnection grid.
Photo: The Niles / Ronald
Musoke

"The two countries are now working on the communication hardware."

Diffusing political tension

he regional electricity interconnection grid will most likely come in handy for countries like Rwanda, which have fewer hydropower electricity sources than neighbours like Uganda and could go a long way in boosting electricity supply and usage.

Many optimists also hope sharing resources like electricity could help repair political fractures witnessed over the last three years that saw the main border point at Gatuna closed. It was re-opened in March this year.

Whether the ongoing political battle between Rwanda and Uganda contributed to the delay in switching on the Mbarara-Mirama Hills-Shango substations, those involved with the implementation affirm it had no impact.

Rwanda and Uganda have been embroiled in a bitter fight which broke into the open in February 2019. Since then, in addition to accusing Kampala of planning regime change in Rwanda, it also alleges that the Ugandan government of President Yoweri Museveni has been sabotaging Rwanda's economy.

Kigali alleges Uganda sabotaged a planned railway line from the Kenyan port of Mombasa to Kampala, on to Kigali. Instead, Uganda preferred the railway line heading to South Sudan.

"Then we will be in one network."

There have also been reports that Uganda blocked the export of Kenya electricity to Rwanda and another portion of power supplies from Ethiopia.

Alloyce Oduor, the Project Manager for the NBI Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NEL-SAP-CU) Regional Rusumo Falls Hydroelectric Project, downplayed the suggestion that the conflict between Rwanda and Uganda is what is delaying the regional electricity interconnection scheme.

He said that the two governments have actually been pushing for quick implementation by facilitating the process.

Harnessing economic ties

hat is remaining," explained Oduor, "is coordination, harmonisation and synchronisation of the power system protection and telecommunication equipment because these two substations must communicate. They must exchange power system data."

"The protection systems must communicate as they protect the line. The control engineers in Lugogo control centre in Uganda and those at the national control centre at Gikondo in Rwanda must be able to visualise the take-off of power."

As of March 2022, the missing link to activate the system has been the Uganda-Rwanda section. The Kenya to Uganda link was completed back in the 1950s. Rwanda-Burundi is operational. Rwanda to eastern DRC is also in place.

According to the 2021 State of the River Nile Basin report, the Nile Basin is the only region in Africa without a functional regional power grid. However, this is expected to change with the forthcoming completion of several transmission lines.

The report notes that substantial progress is being made in establishing regional power grids and linking the Nile Basin countries to regional grids such as the Southern Africa Power Pool.

In the long term, demand for electricity in the Nile countries is set to increase rapidly. This is because of demographic trends and increasing access to electricity, as countries endeavour to achieve economic development and meet the Sustainable Development Goal (SDG) number seven – "Ensure access to affordable, reliable, sustainable and modern energy for all" – by 2030.

Interestingly, although the hydropower potential in the Nile Basin is estimated at

31,000 megawatts, by 2018, about 19 percent of it had been developed. But the report quickly adds that this figure will likely rise to 42 percent when new hydropower plants come into service.

This is why NELSAP-CU, one of the two investment arms of NBI alongside the Eastern Africa Power Pool with support from the United States Agency for International Development (USAID), is working towards the coordinated and smooth synchronised operation of the interconnected grid system in the Nile Equatorial Lakes region.

The previous timetable had been that the interconnection system was to be switched on this past February. Oduor revealed to The Niles that a new operational deadline has been set for mid-2022. "There were some challenges with contractors who underperformed, and all countries are aware of that," he said.

"The five countries – Kenya, Uganda, Rwanda, Burundi and DRC – will be interconnected. Look at it that way, [currently] Kenya-Uganda are in one island electrically, Rwanda-Burundi-DRC in one island electrically. The separation is Uganda-Rwanda which we want to close. If it's closed, then we will be in one network," explains Oduor.

In Kigali, like other regional capitals, the interconnectivity cannot come soon enough. The interconnection projects, like the Shango substation, are vital for regional power exchange and trading across borders and hence access to cheaper power sources. The system will strengthen transmission networks and reduce power losses to ensure the reliability of the electricity supply.

By October 2021, the cumulative power connectivity rate in Rwanda was at 67.1 percent of Rwandan households, according to data from the Rwanda Energy Group (REG). From these national statistics, 48.6 percent of households are connected to the national grid, and 18.5 percent access energy through off-grid systems, mainly solar.

Rwanda's electricity generation comes from different sources, including hydropower, methane gas and solar. Very soon, peat energy will be added as an 80 megawatts peat-fired power plant constructed for the cost of USD 350 million is turned on in a matter of weeks. Hydropower makes up approximately 46.8 percent of the total installed capacity. The most significant percentage will be from River Nyabarongo, which leads up to River Nile. It is followed by geothermal energy (26 percent), methane (14 percent), peat (7 percent) and solar energy (4 percent).

With the economy growing rapidly over the past two decades, the government must provide electricity to maintain the growth rates. Experts, however, point out that the country can generate electricity economically with local resources estimated to total around 1,613 megawatts. Therefore, the country utilises less than ten percent of its electricity potential.

The Rwandan government has divided the country into Kigali and satellite cities, a strategy to balance out the country's development. Kigali has three support cities Nyamata (southeast), Rwamagana (east) and Muhanga (south).

There are also what are referred to as secondary cities, basically regional development hubs. There is Nyagatare (northeast), Musanze (north), Rubavu (northwest), Rusizi (southwest), Huye (south) and Muhanga (south-central).

Kigali's satellite cities are designed to disperse the population and industry and ease life for those residing in the capital. It also aims to create affordable housing for more households.

Unlike Gakenke and Nyabihu districts, whose residents face the same challenges as those in Gatsibo, the availability of power and its impact needs no introduction when it comes to the border town of Rubavu on the DR Congo border.

It is a holiday destination with a vibrant hospitality industry, except for the COVID-19 pandemic, which heavily impacted it. The Congolese have poured into Rubavu in their thousands, with those that have finances living here while they work across in Goma.

The provision of power for this region appears to have been deliberate. There are various power stations which actually send energy to other regions. In fact, the Rwandan government data shows that Rubavu District has a 90 percent power access rate, the second-highest just after Kicukiro, which is located in Kigali.

But just like in other Nile Basin countries, the critical challenges to achieving energy security remain: the electricity supply in most Nile countries continues to be inadequate, unreliable and expensive. Power is generally too expensive for many low- and middle-income consumers.

With the availability of the Shango substation, it adds up to a total of 28 substations in Rwanda. The Rwandan government has set a target to have 44 substations by 2024. Similarly, the installed capacity currently is 225.5 megawatts, with a target of 556 megawatts in the same period.

Rwanda's private sector

wanda's Private Sector Federation (PSF), the umbrella lobby of the business community, is upbeat about the regional power project. Though power supply has increased locally in recent years, interruptions still exist.

It is this loophole the PSF hopes to rectify. Theoneste Ntagengerwa, the PSF spokesperson, said: "As the private sector, our desire is to always have a high supply of power without any interruptions."

"We expect that the impact of the regional power project will be two-fold: sustainability of supply and reduction in the cost of power. There are places, especially designated free economic zones and industrial areas where there is sufficient power supply."

"However, for our members operating in other areas, say, for example, in residential suburbs, the power is either on or off, or the power has a low intensity which affects their machines. We would want to see all machines operating smoothly."

Ntagengerwa added: "As the quantity of power increases since the supply from the regional neighbourhood is steady, we expect that it will bring the cost of electricity further down. Yes, power is relatively cheaper in Rwanda, but for us business people, the cheaper the raw materials and inputs, the less the cost of production, which eventually reduces the prices of final goods."

However, Dickens Kamugisha, the Executive Director of the African Institute for Energy Governance, a Kampala-based nonprofit that follows developments in the energy sector in eastern Africa, told The Niles recently that it remains to be seen whether the NEL-SAP-CU will achieve its objective of having countries within the Nile Basin pooling their electricity resources to end load-shedding, stabilise markets and give consumers alternative choices.

Kamugisha's reservations are partly informed by independent research.

According to a 2019 report titled, "Energy Infrastructure Investments in East Africa and the Relevance of the Energy Charter Treaty," James Nyamongo and Lilian Nyamongo noted that although the rapid development of regional energy infrastructure is necessary to achieve economic development and growth in East Africa, electricity demand projections vastly exceeding supply in Africa highlight the magnitude of the task at hand.

A 2011 report by the East Africa Power Pool and the East African Community (EAC)

concerning the regional power system master plan and the grid code study also observed that sub-regional countries have not coordinated their efforts in respect of their power systems and have instead been led by national demand.

Kamugisha told The Niles that while the EAPP-NELSAP-CU is important, "its future is not guaranteed, and it appears there are still many more obstacles than enabling factors. The EAPP through the NELASAP-CU may never succeed when power sectors are still weak at the national level."

"Unfortunately, the EAPP is not concerned with the national power sector problems. This is a big mistake on the part of the NEL-SAP-CU and NBI generally. So, the implementers of the EAPP are now faced with that reality on the ground."

"There is evidence that even if we started generating 10,000 megawatts today at the prevailing tariffs versus poverty in the country, the power access and consumption situation would not improve without fundamental reforms."

Although bilateral power exchange agreements already exist in the sub-region, the quantities exchanged are not substantial. It was also discovered that exporting countries are challenged by their systemic deficiencies in meeting their delivery commitments.

In 2006, the EAPP was adopted as a specialised institution by the Common Market for Eastern and Southern Africa (COMESA) with the aim of providing it with political clout, especially when negotiating financial contracts with donor agencies. The EAPP members are also partners in the Nile Basin Initiative.

But market liberalisation in the region has been slow as the reforms focus not only on economic benefits but also on political gains (as energy security is the state's responsibility).

There has also been a need to harmonise contracts in line with national and international standards and laws. In particular, the commercial rules of practice such as commercial frameworks, pricing, transaction settlements, and arbitration between power utilities have proved challenging, resulting in delaying the implementation of the project.

Kamugisha told The Niles that the NEL-SAP-CU and NBI need to make the EAPP attractive to countries with less power generation by, for instance, supporting the power sectors in such countries.

"There is also a need to reduce suspicion and mistrust in EAC to stop countries like Uganda and Rwanda from blame games," he said, stressing that "cross border projects require harmony among countries".

Relief as Kenya denies plans to construct Norera Dam

Kevin Ogutu / Nairobi, Kenya & Anthony Mayunga / Mara, Tanzania



"Give conservation and sustainable operations priority."

water resources authority in Kenya has eased tensions brewing between Kenya and Tanzania over the exploitation of Mara River waters by saying that the country has no plans to construct a dam in the Mara River Basin.

The Mara River rises in the Mau forests of Kenya, and flows through world-famous savannah rangelands; in Tanzania, it forms a floodplain wetland – the Mara wetland – before discharging into Lake Victoria in Tanzania. Around 65 percent of the river basin is located in Kenya and 35 per cent in Tanzania.

Chrispinus Wafula, Regional Manager for the Mara and Sondu sub-region at the Kenya Water Resources Authority (WRA), says there is no plan for the construction of the dams by the Kenya government in the next 20 years, despite proposals by the Nile Basin Initiative (NBI), Nile Equatorial Lakes Subsidiary Action Program (NELSAP). "The position right now is that the Kenyan government is not planning to construct Norera Dam within the Mara River Basin," says Wafula. Initial reports indicated that under the framework of NELSAP, the WRA had developed a water allocation plan for the Kenyan side of the basin.

WRA is a state corporation under the Ministry of Water and Irrigation in Kenya mandated to safeguard clean water by ensuring that there is proper regulation of the management and use of water resources to ensure sufficient water for everyone – now and in the future.

The statement from WRA officials sparked a sigh of relief, particularly for the people in the Republic of Tanzania living downstream of the Mara River. The plans to construct the Norera Dam in Kenya and the Borenga Dam in Tanzania, all within the Mara River Basin, stirred controversy amid warnings that the Serengeti-Mara ecosystem could face severe threats from increased human activity.

In 2019, the Nation newspaper reported Tanzania wanted the construction of two dams, Norera in Kenya and Borenga in Tanzania, halted to protect the Serengeti-Mara ecosystem, which is the heartbeat of the multibillion-dollar tourism sector in the region.

"The dams will lead to an adverse impact on the Serengeti ecosystem, including the loss of some species due to lack of water in the Mara River during the dry season," the paper quoted Constantine Kanyasu, Tanzania's Deputy Prime Minister and Minister for Natural Resources and Tourism as telling Parliament.

In May 2019, reports indicated that Kenya had vowed to proceed with the dam's construction. In response, Tanzania sought the intervention of the East African Community (EAC) ministerial committees on the issue of damming the Mara River, which has put it on a collision course with Kenya. WRA officials then said they would not go ahead with their plans. "As WRA, we have not yet received a proposal from NELSAP, which would be the first step towards constructing the dams. But even with the proposal, it cannot be guaranteed that the project will get a green light," says Wafula.

He says from the plans that NELSAP has since published, the biodiversity in the Mara River Basin would face an imminent threat never imagined before. "This is where ecological diplomacy comes in. While the project could have immense benefits, we already have our neighbour (Tanzania) that has raised concerns about the implementation of the project and even went ahead to stop it. The best Kenya could do, and which she has done, is to give conservation and sustainable operations priority," says Wafula.

The World Wide Fund for Nature (WWF), an independent conservation organization working to sustain the natural world for the benefit of people and wildlife, is among the voices that rejected the proposed construction of the dams from the word go.

According to WWF, the Mara River Basin is home to at least 473 freshwater species, including four mammals, 88 waterbirds, 126

freshwater-associated birds, four reptiles, 20 amphibians, 40 fishes, 50 invertebrate species and 141 vascular plants.

Its Mara River risk assessment report states that ten of the freshwater species in the Mara River Basin are threatened with extinction due to a combination of threats, including habitat loss, water pollution, over-abstraction and drought, and the presence of invasive non-native species and over-exploitation. The construction of the dams would worsen an already bad situation.

The plans for Kenya are quite elaborate and thus more harmful to the ecosystem. This includes plans for constructing the 10-metres high Norera Dam on the Mara River, mainly for irrigation, 30 kilometres upstream of the Serengeti, and the 65 metres Amala High Dam in the Mau forest, with provision for water transfer through a tunnel from the Amala River to the Ewaso Ngiro River for hydroelectricity generation by three dams (Oletukat Olenkuluo, Leshoto and Oldorko; which are 140, 57 and 30 metres high, respectively) and discharge of that

water to Lake Natron in Tanzania. The feasibility studies for these dams were all completed in 2016, except for Amala High Dam.

The Amara and Norera scheme

ccording to NELSAP, the Amara and Norera Water Resources Development Scheme would support 5,000 hectares of irrigated agricultural land and other productive uses such as livestock and aquaculture. Also, the scheme would support the development of a comprehensive potable water network covering rural areas, market centres and towns such as Longisa and Narok.

The scheme would also improve the downstream low-flow conditions in Kenya's and Tanzania's national parks. According to NELSAP, water extraction from the baseflow taking place downstream of the Amala Bridge gauging station would cease. NELSAP's feasibility studies suggest the scheme is viable. "A first stage development of Norera Dam alone, prior to the construction of the Amala Dam, has been shown feasible with the prerequisite that no transfer from Amala to Ewaso Ngiro South takes place," NELSAP communicated by email.

However, the "Amala transfer to Ewaso Ngiro South should not be implemented without the construction of Amala Dam, which will provide the benefit of regulating storage", according to NELSAP. If it would, it could have "a serious adverse impact on the potential for water resources development in the Amala valley and on the flow regime, primarily on the Amala River, and, secondarily, on the Mara River itself".

The so far available feasibility studies recom-mend that it is vital to carry out a comprehensive feasibility study for all components of the entire scheme before any further steps are taken. The study should include the potable water supply and water for productive sectors, building on the already existing studies and plans for the Norera Dam. This should be accompanied by a complete EISA study, a Resettle-

The Mara River in Tanzania. Photos: The Niles / Anthony Mayunga





ment Action Plan and an Environmental and Social Management Plan incorporating the entire scheme.

A direct threat to the Serengeti

cholar Dr. Eric Wolanski, a coastal oceanographer and eco-hydrologist at the James Cook University in Australia, teamed up with Mtango Mtahiko and Bakari Mnaya, both of Tanzania National Parks, to look at the impact of the Kenyan dams on the Serengeti. In their estimation, the Serengeti will die if Kenya dams the Mara River.

"The Kenya dams pose a direct threat to the Serengeti. The Norera Dam would release a minimum environmental flow (MEF) of 100 litres per second, only one-third of the Mara River MEF recommended by the Lake Victoria Basin Commission of the East African Community. That same water would then flow through 30 kilometres of intensive irrigation farming,

"The dams require more water for irrigation than is available."

and thus the Mara River would be dry on entering the Serengeti," reads their joint report.

The Norera Dam would receive 39 percent of its water from the Nyangores River; the two irrigation dams on the Nyangores (Mungango and Silibwet) would decrease the low flow by 100 litres per second. But this impact was not included in the Norera dam proposal and doubles the chances that this dam will not release the MEF.

"The Norera proposal is based on a mean annual flow calculated over 22 years of data, but in a dry year, the annual flow is only 51 percent of the mean flow, and thus in such a year, the operator has only half of the water expected. Being short of water, the Kenyan operator has either to release the MEF for the Serengeti and kill the irrigation fields and hurt the local community, or retain the water for irrigation and kill the Serengeti," the joint report further reads.

This, therefore, clearly becomes a local political decision. As such, Tanzania will have no say. The authors also take issues with the proposal that they claim has breached the World Bank Safeguard Policies. The proposal states incorrectly that the Mara River is not an international waterway and that the development does not affect the forests.

"The total annual storage and use would be II5-I85 percent of the annual flow in a drought year, and hence the dams require more water for irrigation than is available, leaving nothing for MEFs. The Amala High Dam would destroy the Mau forest, and this would further decrease the Mara River dry season flows. During the dry season in a drought year, there would be zero MEF for the Masarua swamp," they observe.

The damming of Mara River upstream and the proposal to divert Mara River water to Lake Natron raises questions about the future of flamingoes since about 75 percent lesser flamingoes are born around Lake Natron. The other issue is that if the wildebeests cannot use the Mara River, which is their only water resource in the dry season in a drought year, multiple studies suggest they will die.

The Mara Valley and Borenga project

he Mara Valley Multipurpose Water Resource Development Project is located in the Mara Region, downstream of the Mara River. A feasibility study, detailed architectural designs by the NBI and the preparation of tender documents were completed in December 2017. NELSAP submitted the documents to the Government of Tanzania to adapt these into national plans.

Tanzania would need an upward of USD 217 million to implement the 10-year-project and construct the Borenga Dam in the Serengeti District, within the Mara River Basin in Tanzania. The project would benefit residents in the Serengeti, Butiama and Tarime districts, areas with great agricultural potential that could be harnessed through irrigation.

In the three districts, 17 villages would have access to domestic and livestock water supply. Besides, 8,340 hectares of agricultural land could be irrigated, 2.85 megawatts of hydroelectric power could be generated, and the project would allow for improved drought and flood control in the communities living in the lower Mara (Masurura/Mara wetlands).

The NBI Coordinator for Tanzania, Ahmad Ngoda says the funds involved are huge, highlighting the need to have consensus. The residents in the project area, a region prone to floods from the Mara River, welcome any attempt to mitigate this ever-increasing risk for the communities living downstream of the Mara River.

Meaningful progress?

amwel Kitome, a resident in Nyiboko village, says the project that the Tanzanian authorities have halted was a promise that the local farmers would depart from rain-fed agriculture, which has disappointed farmers, leading to losses whenever rains start earlier or later than expected or when there is inadequate rainfall. "We were ready to give out parcels of our land for this project after we were told about its benefits. Everyone knows that rain-fed agriculture is becoming a more dangerous gamble by the day," he says.

Joseph Joshua, a resident of Borenga, says: "I don't understand why we can't make meaningful progress as a country regarding this project. We, the residents of Borenga and Marasochome, had made a lot of progress to the point that the educated men and women in

our communities were taken for a seminar in Kenya where they were inducted on the immense benefits of this project."

Bhoke Chacha Makaiga, a 40-year-old resident of Nyiboko, says that in 2017 he was among those who were actively involved in distributing questionnaires where locals would give their opinions on the proposed project. "We have a rich valley here, and the locals were ready for this project that would enable them to have all year production of crops. We incur heavy losses when floodwaters from the Mara River destroy our crops whenever the river breaks its banks. The dam was a great promise," he says.

In Kenya, however, it is a whole different story. Locals do not know the exact location for constructing the proposed Norera Dam. It is a story very few can talk about. "If you ask an average resident of Narok County where the Norera Dam was supposed to be constructed, chances are they will not know exactly where the location is," said an official in the County Government of Narok in Kenya who chose to remain anonymous because he is not authorised to speak to the press.

In 2015, NBI prepared the Mau Forest management plan detailing the project's preparation to conserve Maasai Mau and Trans Mara forest blocks. The main components identified: First was Land and Water Management which would cost USD 11.4 million. This would comprise interventions with an emphasis on improved land. The second was livelihoods diversification, poised to cost USD 39.7 million. This would focus on interventions with the potential to improve incomes and thus livelihoods. Institutional Strengthening, forecasted at USD 3.1 million, would focus on interventions for building the capacity of the implementing partners, government and community associations.

NBI/NELSAP contracted G. Karavokyris & Partners Consulting Engineers to analyse the transboundary Mara catchment, including hydrological analysis and sediment modelling to estimate inflows, soil erosion, and reservoir and sediment yield at the proposed dam sites, among other responsibilities. While their report initially gave the project life, the Mara River Basin ecosystem has become more fragile, caused by increased human activities over the years and climate change.

Transboundary solutions to safeguard the Mara Basin

reliminary Environmental and Social Impact Assessments (ESIA), compliant with international standards and environmental and social requirements of National Environmental Management Authority (NEMA), Kenya, and the National Environmental Management Council (NEMC), Tanzania, as well as with the World Bank's safeguard/policies may all have given the project the go-ahead, but we must appreciate that the Mara River as we know it now is not exactly the same as three or four decades ago. With time it may just be impossible to reverse the damage caused by the construction of a dam upstream," says Philemon Okello, a local environmentalist based in Kisumu.

The Mara River is a vital lifeline for wild-life and people's lives and livelihoods in both Kenya and Tanzania. Transboundary by nature, the river also represents a source of conflict between the two nations. People living along the Mara River and its basin area are increasingly facing water shortages, poor water quality and environmental degradation as a result of pollution, agricultural runoff, large-scale irrigation projects, and mining and other industrial activities. And what happens to the Mara River in Kenya impacts those reliant on it downstream in Tanzania.

The NBI through the NELSAP and the Lake Victoria Basin Commission (LVBC) under the EAC recognise the importance of Integrated River Basin Management (IRBM) initiatives for the conservation, sustainable and equitable use of shared freshwater resources. In recent years, the NBI with the support of the German Gesellschaft fuer Internationale Zusammenarbeit (GIZ) therefore worked with scientists to gather crucial data about who uses how much water, how, where and when.

NBI and GIZ hope that the social and scientific data on water use along the Mara River form the basis of a future transboundary water allocation plan and water treaty to ensure people and wildlife on both sides of the border can continue to rely on the Mara River's life-giving waters.

Tourism in Tanzania

A 2015 World Bank report on tourism in Tanzania shows that the country is endowed with a rich storehouse of nature-based tourist attractions. Tourism is focused primarily on renowned attractions in the "Northern Circuit" – the great plains of the Serengeti, the wildlife spectacle of the Ngorongoro Crater, and Mount Kilimanjaro, the highest mountain in Africa, as well as the island of Zanzibar with its lush tropical beaches.

"The tourism industry has emerged as a robust source of growth and an economic stabiliser in times of crisis. In just over a decade, annual tourist numbers have soared from about 500,000 in 2000 to over 1 million visitors in 2012. The sector generates the bulk of export revenues for the country, typically surpassing minerals and gold, is a reliable source of revenue to the government, and provides well-remunerated direct employment to over 400,000 people," reads the report.

Official statistics from Tanzania's updated gross domestic product (GDP) suggested that in 2013 tourism accounted for about 9.9 percent of GDP (equivalent to an amount of USD 4 billion in direct and indirect contributions).

But anything complicating the Serengeti ecosystem would put the brakes on Tanzania's tourism sector and, in turn, put the brakes on its economy, the report said. "A decline in tourism revenue would impact the exchange rate and consequences that reverberate throughout the economy," it said. "Apart from these obvious economic benefits, tourism can stimulate broader benefits to the economy – upgrades to infrastructure, conservation of natural habitats, and gender equity."

The Akanyaru Project: A boost to Burundi-Rwanda relations

Mugume Davis Rwakaringi / Kampala, Uganda & Fabien Niyonizigiye / Bujumbura, Burundi Locals eagerly await a new water project which promises to bring Burundians and Rwandans closer, improving local livelihoods and bilateral trade.



ince time immemorial, Burundians and Rwandans have lived as brothers and sisters. Intermarriages are commonplace, and family bonds span across the border. The two countries' languages are so close that they are mutually comprehensible.

But the neighbouring countries have eyed

each other with mistrust since 2015. That year, Burundian dissidents tried to remove the president – the late Pierre Nkurunziza – from office. The dissidents failed, and many fled the country. Nkurunziza accused Rwanda of backing the failed coup and harbouring the dissidents.

However, the almost seven years of hostilities between the two countries and the border closure have been an anomaly, considering their long, peaceful history and demographic similarities. Both countries' presidents now say they want good relations, and on March 7, Rwanda opened its border to Burundi again.

Bilateral and regional agreements and bodies also link the two countries. Both nations belong to the Economic Community of the Great Lakes (CEPGL), the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA), and the Economic Community of Central African States (CEEAC).

Rwanda and Burundi are also members of the African Union (AU)) and the United Nations (UN), which provide extensive channels for resolving disputes. Considering the more conciliatory stance taken by Burundi's president Évariste Ndayishimiye compared to his predecessor, future disputes will probably be resolved without causing renewed hostilities.

In this renewed climate of cooperation, there is fresh hope that relations between the two countries will be revived and the two neighbours can have better diplomatic, commercial and social ties. This would also pave the way for implementing planned cooperative transboundary projects, like the Akanyaru Multipurpose Water Resources Development Project.

"In addition to power generation, water supply and irrigation, the project will contribute to the development of other auxiliary water uses such as livestock development, employment creation, flood control environmental protection and watershed management, boosted agricultural production, social-economic development and ultimately poverty reduction," according to the Nile Equatorial Lakes Subsidiary Action Program (NELSAP), one of the three centres of the Nile Basin Initiative (NBI).

Mwasiti Rashid, the NELSAP Programme Officer for Water Resources Management and Development, says the project's location is "strategic" to blend relationships between the two neighbours. "First of all, one leg [part] of the dam will be in Burundi, and another in Rwanda. For this to succeed, the two countries have to work together – from the technical to the management level," Mwasiti says.

Leopold Nsengimana, a farmer in the Mukindo sector in the Southern Province of Rwanda, is glad at the prospect of reliable energy for his family. The father of three says it has always been difficult providing light for his II-year-old daughter to do her studies. "Sometimes I don't have money to purchase fuel which is a challenge for my child's education," Nsengimana says.

Nsengimana's children, including his 5-year-old youngest son, have to walk some three kilometres to fetch water for domestic use. "My heart remains unsettled when my two daughters (II and nine years old) leave home to fetch water, for you don't know what may befall them," Nsengimana says, adding he hopes the project will reduce the waterborne diseases that have long afflicted his family.

The Akanyaru River

he Akanyaru River is the main tributary of the Nyabarongo River. It rises in the western highlands of Rwanda and

"We hope that this project will offer a series of opportunities."



Burundi and flows east and then north, defining the border between the Southern Province of Rwanda and Burundi's Ngozi Province before joining the Nyabarongo River. The river's basin covers an area of 2,650 square kilometres and is part of the Kagera River Basin, which forms part of the Lake Victoria Basin.

The river is rich in biodiversity and hosts at least 54 bird species, such as the Malagasy pond heron, pallid harrier and great snipe. The lower extension of the river consists of significant though unconserved wetlands that are important for most human activities, mainly for farming and during the dry season, people cut and burn marsh vegetation for fertility.

The wetlands and swamps are primarily used for rice growing, maize, sugarcane, sweet potatoes and other vegetables. Besides, the river's fish provides food and income for the surrounding areas, and bricklaying is a significant economic activity where Akanyaru joins the Nyabarongo River. The Akanyaru River ecosystem and its rich biodiversity make it an interesting tourist destination.

The Akanyaru Project

he transboundary project was identified in 2012 by NELSAP and the governments of Burundi and Rwanda with an estimated cost of USD 191 million. It was among the projects approved by the Nile Equatorial Lakes Council of Ministries (NELCOM) meeting held in Entebbe, Uganda, on October 13, 2015.

Comprising of a 52 metres high dam with a storage capacity of 333 million cubic metres, upon completion, the Akanyaru Project is expected to supply water to 614,200 people and irrigate 12,474 hectares of agricultural land, directly benefitting 24,948 farmers. It will also generate 14.5 megawatts of hydropower. "The project is expected to supply energy to at least 141,000 homes and over 846,000 people in Rwanda and Burundi," says Mwasiti.

The project also includes the restoration of more than 1,700 square kilometres of degraded watersheds upstream of the dam and the reservoir in Rwanda and Burundi. Besides, it will also provide employment opportunities for both Rwandans and Burundians, especially those living along the river. "Here, we have many unemployed young people. We hope that

this project will offer a series of opportunities to unemployed people," Mwasiti explains.

A grant from the Sweden-Norway governments will fund the Akanyaru Multipurpose Water Resources Development Project through a partnership with the African Development Bank (AfDB) under the New Partisanship for African Development - Infrastructure Project Preparation Facility (NEPAD-IPPF) and the African Water Facility (AWF) at the cost of USD 2.3 million.

The funds will be used for feasibility, detailed design and preparation of tender documents, and the independent Environmental and Social Impact Assessment (ESIA) and Resettlement Action Plan studies. The governments of Burundi and Rwanda are to contribute ten percent as a commitment fee for the project.

Hopes are high

ean Bizumuremyi, the Chief of Burundi's Mparamirundi Zone in Kayanza, says: "We have heard that there is a project to protect the banks of Akanyaru River and its catchments. But the activities have not yet started. We are happy when this activity starts," he adds.

Longin Majambere, a resident of Cendajuru Hill of Kayanza Province in Burundi, hopes that he and his family will soon have access to clean and safe water. "If the project brings water, it will be a good thing. This will reduce some hygiene diseases. We don't have potable water."

Christopher Nkeramihigo, a resident of Gishubi, Gisagara District of Rwanda, says that he is equally pleased that safe and clean water will be available to families. He says: "This will help people, mainly girls, women and young boys, not to spend a lot of time as they go to collect water from distant places."

At times, Nkeramihigo says, his crops have been washed away by soil erosion when it rains and the Akanyaru River floods. Meanwhile, drought comes when the rains are over. "I believe that the dam will help prevent soil erosions so our food will not be washed away."

Celine Nzamukosha, a resident of the Muganza sector in Rwanda, agrees, adding that sometimes her crops have dried out for lack of water. "When we have water nearby, even if there is no system for irrigation, I can water my crops so I can always have enough food for my family."



The Akanyaru River.
Photos: The Niles / Mugume
Davis Rwakaringi

Over the years, people across the Akanyaru basin have only depended on rainfall to water their crops, but people could plant all year round with irrigation.

Joseph Nimfasha, the Director in charge of the Ministry of Environment, Agriculture and Livestock in Burundi, shares their excitement about the Akanyaru project, mainly because "the project will contribute to the promotion of agricultural productivity" and boost food security in both countries.

Very few families in Nkeramihigo's area have access to electricity. He says he believes that with energy available, there will be a creation of employment such as in welding workshops, milling plants and hair salons.

"Here we have many unemployed people, especially young people. We hope that this project will offer a series of opportunities to unemployed people. Even during the dry season, people are not busy. They can have a chance to make money," hopes Majambere.

Beyond the direct benefits, Nimfasha says, "the project will help enhance relationships between the two sister countries – the diplomatic, commercial and social relationships".

As a result of improved relations, Majambere says access to medical care will be easier, such as accessing the Butare regional hospital (in the Huye district of Rwanda).

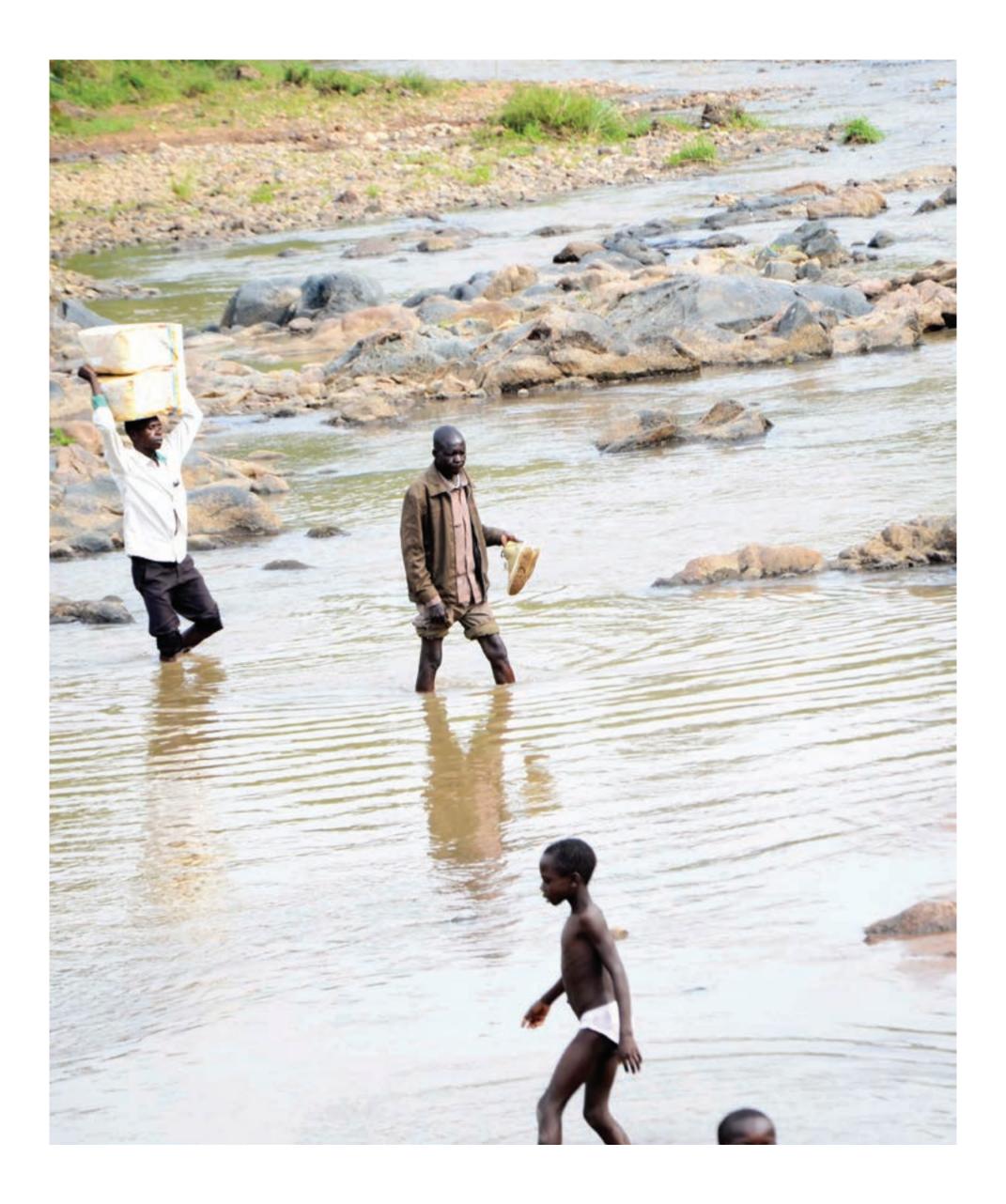
The way forward

wasiti says both Burundi and Rwanda governments have been asked to sign the Memorandum of Understanding (MOU) for the project's smooth operation.

An assessment was undertaken as part of the pre-feasibility studies, and critical environmental, socio-economic, policy, legal and institutional issues were flagged.

Both Burundi and Rwanda formally mandated NELSAP to prepare the project for full feasibility on their behalf, prepare a detailed design, the tender documents, an environmental and social impact assessment (ESIA) and a resettlement action plan (RAP).

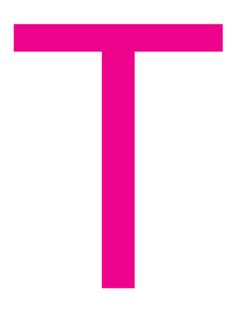
In August 2021, the NBI Secretariat announced that a funds mobilisation process is ongoing for the Rwanda-Burundi Akanyaru Multipurpose Water Resources Development project



Plans to build the Angololo Dam are widely applauded by people living in an area along the Kenya-Uganda border who look ahead to a new era of better trade and agriculture and reduced risk of floods.

The Angololo Project: Set to transform lives in Uganda and Kenya

Pius Sawa / Kisumu, Kenya & Juliet Kasirye / Kampala, Uganda



he hot sunny ride on a dusty road through the bushes of Osajai in Kenya's Teso North region leads you to a 50-meter-wide river called Malaba, which separates Kenya and Uganda. In Kabwin village, a group of men and women installs a manual pump in a new community borehole to save them from walking long distances searching for clean drinking water from other villages. The river water is dirty due to siltation and human and livestock activities.

While some men are harvesting sand from the middle of the river, others, including women and children as young as five years old, carry luggage on their heads, walking through the water to either side. On the riverbank, a few women are scavenging for green vegetables in the dry gardens, others fetching firewood. Young boys cross with cattle from the Uganda side to graze in the open fields on the Kenyan side.

The long dry season has left communities along the river to struggle for survival as the river is almost empty, with some areas filled with pebbles and sand, if not heavy mud. Women fetch water in jerry cans to water their struggling vegetable gardens every morning and evening.

The situation, however, is quite different when rains come. Then, most flat farms near the river are swallowed by water, rendering movement difficult. There is no bridge to cross the river. The water breaks the banks, sweeping away vegetables and cassava plantations.

The Malaba River, also known as Komiriai, Lwakhakha or Manafwa, stretches from Mount Elgon down to Lake Victoria, separating a group of people who speak the same language and share the same culture but who have different nationalities.

The river is the primary source of livelihood for communities in both countries. Smuggling goods across it is a significant illegal economic activity, as there is no formal migration office upstream, apart from the Malaba town border point.

For many years, the risky business has led the authorities in Kenya and Uganda to deploy police patrols along the river to arrest the smugglers and impound smuggled goods. Many have died in the river trying to evade arrest.

Sugar, wheat flour, energy drinks, cooking oil, and soap are the everyday items Ugandans get from Kenya, while Kenyans get textile, cereals, eggs, farm inputs and electronics from Uganda.

"We get our fish, pork, and vegetables from Uganda, and when the river is full, there is no way you can cross. Many people have been swallowed by this river while trying to cross, especially at night," said George Enamba, a resident of Kabwin village.

Many Kenyans who have died include men and women crossing to the Uganda side to buy cheaply locally made brew, popularly known as Chang'aa in Kenya or Waragi in Uganda. "Chang'aa is illegal in Kenya, but in Uganda, it is not. We cross there to drink, but you have to drink keeping in mind that you have a big river to cross", said Steven Wanjusi who has just crossed over from Uganda.

Farming along the Malaba River has been challenging during heavy rains. "There is no way to get vegetables when it rains because all these farms get flooded. So, we have to cross to Uganda, and when the river is full, you cannot cross," said Lillian Nanjala, a young mother whose farm borders the river.

Young men near the river harvest sand, which is risky and destroys the river, allowing water to break the soil and carry it away downstream.

"When the river is full, you cannot cross."

The Angololo Water Resource Development Project

here is good news for residents in Kabwin and Kalait villages following a multi-million cross-border project commissioned to transform lives and create employment in the area. Located on the transboundary Malaba River between Kenya and Uganda, the project falls within the Sio-Malaba Malakisi River Basin.

The USD 1.65 million project funded by the African Development Bank (ADB) was launched in July 2019, with both Kenya and Uganda contributing USD 150,000 each to facilitate the construction of a composite rock-fill concrete gravity dam that will generate electricity, provide piped water, as well as improve livestock and fish production that will serve the people of Tororo, Manafwa and Namisindwa districts in Eastern Uganda, and the people of Busia and Bungoma counties in Kenya.

Kenya and Uganda collaborated with the Nile Equatorial Lakes Subsidiary Action Program (NELSAP), one of the three centres of the Nile Basin Initiative (NBI), through the Sio Malaba Malakisi River Basin Management Project. NELSAP conducted pre-feasibility studies in 2010, with grants from Sweden and Norway. Following this study, the government of Kenya and Uganda requested NELSAP to add it to its national resources projects slated for further development.

The project coordinator, Eng. Sami Osman says the feasibility study, which commenced in 2019 and is expected to end this year, details the design and tender documents.

"The project will sustainably improve both countries' social-economic development," he said. "There will be water resources development and management, encompassing flood mitigation in the Malaba River, irrigation development, electricity generation, fisheries development, and domestic and livestock water supply."

Meanwhile, the Tororo District Water Officer, Leo Adongo Owora, says the project will help transform people's livelihoods in Angololo and Mera in Uganda and the surrounding communities in Kenya, allowing people to plant crops throughout the seasons.

"If the dam is built, it will solve water challenges residents grapple with. Water will be

stored in the multipurpose reservoir," he said. "The road constructed on top of the dam will enable people in cars and motorcycles to cross safely from Uganda to Kenya."

He added that the project would help mitigate floods that generally happen in March, April, September, October, and November.

The 30-meter high dam with a catchment area of 444 square kilometres and a reservoir capacity of 43 million cubic metres will provide 3,854 hectares with irrigation, generate 1.2 megawatts of electricity and connect 270,000 people in Kenya and Uganda to piped water.

Initially, six locations were identified for the dam construction. However, after thorough investigations by the consultant, only two possible locations remained. These include dam site five and dam site six. But the latest review of the feasibility study revealed that both Uganda and Kenya agreed that the dam is constructed at site five, which is precisely in Mera Sub-County in Tororo Uganda, and Osajai and Kamuriai location in the Teso north of Busia County in Kenya.

Resettlement plan

eople whose land will be used will be compensated to enable them to relocate to other places. Residents of Kabwin village already see this as an opportunity. "I see this project will change our lives. If I am paid the money, I will move away and invest somewhere and start a business. Those staying will have water in their homes, which will help them plant vegetables for sale through irrigation," says Robert Karani, a Kenyan sand harvester.

Another sand harvester, Moses Amai, hopes that he will abandon sand harvesting and get a permanent job when the project starts. "Here, we have no development. We rely on the sand and in a day, you can just manage one lorry. I know if the project comes here, we shall start earning good money. We welcome the construction of the dam."

But Lillian fears her family will not benefit once they are relocated. "They told us that we shall be moved from here, so my question is, if we move, how shall we benefit from the project because we may not get another land near to the project?"



The Malaba River. Photos: The Niles / Pius Sawa

Peter Kutosi from Uganda also voiced uncertainty: "Yes, we like the project, but we don't know if it comes. Will they chase us from harvesting sand, or they will allow us to continue?"

On his part, Edwin Ken is happy that once the water is connected to homes, he will not be taking cows to the river. "This dam will be a good thing. I am from Uganda, not Kenya, so if they can construct the dam and bring water to homes, our cows will not fall in the water and be taken away like it has been happening. I pray that the government starts constructing.'

Samuel Imaa, a resident of Bunekesa Zone in Bwasiba Parish, Namboko Sub-County in Namisindwa District of Uganda, is worried about his dead ancestors. "I have two pieces of land which the project will take. One is a customary land neighbouring the Malaba River in Tororo District, and the other piece of land is in Namisindwa District. One of the lands is a graveyard. I need a reasonable compensation to look for ample space to relocate the graves of my beloved ancestors."

In terms of bargaining, he added: "We shall not allow any middlemen to come and interact with us. Middlemen and politicians tend to interfere in project compensation negotiations to cheat vulnerable people."

"I need a

reasonable

compensation."

The Principal Assistant Secretary of the Tororo District, Jackson Osido, said there is a clear plan to sensitise the community social and commercial officers to guide the residents on how to utilise their money. The extension workers will also be taught modern agronomic practices to help them sustainably produce goods and services.

For Angololo residents who will be relocated after compensation, he said, they may choose to buy or hire land in the adjacent areas. "The land valuers are on the ground checking the assets for all the project affected persons. People living on the 444 square kilometres will be resettled and compensated according to their assets."

The resettlement action plan involves stakeholders from Kenya and Uganda in the affected areas of Tororo, Manafwa, Namisindwa, and National Environment Management Authority

(NEMA) in Kenya and Uganda to get the value of each compensation depending on the individual assets, including trees, livestock, houses, gardens, land acreage, etc.

Besides generating hydropower and supplying water, Joseph Papa requests a new tarmac road and bridge to boost the local economic growth in the area. The population often depends on dangerous smuggling for survival, and Osido said the dam would create a passage so that people go through the formal channels instead of smuggling. He urged the respective governments to "create a mini entry point".

Challenges

ccording to Eng. Osman, the project was slowed by the global Covid-19 pandemic. For the project to be implemented, the project implementation unit, with the help of NELSAP, will seek to mobilise resources from development partners such as the African Development Bank and the World Bank.

"There is a gap between one and two years to conduct donor-roundtables to get funds from the development partners to implement the study. We expect the construction of the dam to start either at the end of 2023 or the beginning of 2024," he said.

Once the preparatory studies are finalised, the two countries will form a project management unit to supervise the implementation of the project.

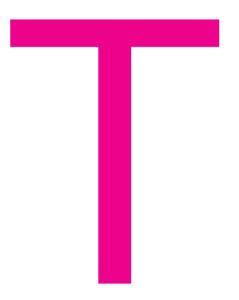
But for local people like George Enamba, excitement is mounting about the new era. "When we get electricity here, our children will start producing metal doors and windows. Mothers will not struggle to cross the river to look for vegetables on the other side because they will be growing a lot."

For now, Wanjusi said, he continues to risk his life crossing to Uganda to drink Chang'aa. "We go to Uganda to drink. That's all. But if the project comes, we shall have enough money to buy beer here, and young men will stop sneaking across and being arrested and jailed."

Busia. It will be submitted to the respective

Overcoming conflicts to cooperate on power generation

Sadiki Businge / Kigali, Rwanda & Ferdinand Mbonihankuye / Bujumbura, Burundi Rwanda, Burundi and Tanzania are in the final stages of completing a joint hydropower project, offering a welcome example of successful regional transboundary cooperation.



he Regional Rusumo Falls Hydroelectric Project (RRFHP) is a hydropower project under joint development by the governments of the Republic of Burundi, the Republic of Rwanda and the United Republic of Tanzania through the commonly owned Rusumo Power Company (RPCL).

The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU), the investment arm of the Nile Basin Initiative (NBI), coordinated the preparation and signing of several vital agreements by the three beneficiary countries and later the implementation of the project.

The three governments entered the joint development through a 'Tripartite Agreement' signed on February 16, 2012. The development objective of the RRFHP is to increase the electricity supply to the national grids of Rwanda, Tanzania and Burundi.

The project is located at Rusumo Falls, at the shared border of Rwanda and Tanzania on River Kagera. The power production facilities are located entirely on the south side of the bank of the Kagera River in Tanzania, while the substation is located on the northern side of the river bank in Rwanda.

The project has four components: a hydropower generation plant, transmission lines and substations, a 'Local Area Development Program' and a 'Livelihood Restoration Program' at a total cost of USD 468.60 million.

The World Bank financing of a total of USD 339.90 million – USD 113.30 million to each of the governments of Burundi, Rwanda and Tanzania – comes from the International Development Association (IDA), the World Bank's fund for the poorest. The African Development Bank (AfDB) provides USD 128.6 million for the transmission lines.

The project will boost reliable power supply to the electricity grids of Burundi, Rwanda and Tanzania, reduce electricity costs, promote renewable power, spur job-led economic development and pave the way for more dynamic regional cooperation, peace and stability among the countries of the Nile Equatorial Lakes (NEL) sub-region in East Africa.

The project's completion deadline is set for 2022 and is expected to produce 80 megawatts, with each country getting 26.6 megawatts. The additional power will benefit over one million people in the three countries: 520,000 in Burundi, 467,000 in Rwanda and 159,000 in Tanzania.

Despite political disagreements between the neighbouring countries Rwanda and Burundi, the project transmission lines will extend from the power generation plant at Rusumo to Gitega in Burundi, Kigali in Rwanda and Nyakanazi in Tanzania.

Dr. Robert Zwahlen, an independent Environmental Expert, who was on an onsite visit in October 2021, says the project has progressed well since his last visit in November 2019. "The project has made very considerable progress. The situation now looked very different from what had been the case on the occasion of the last site visit."

Boosting the local economy

ommunities in Rwanda and Burundi are already excited by the prospect of reliable energy. They also are pleased by the positive distraction from lasting political differences. Modest Nzirabayinya, the Vice Mayor in charge of economic affairs in Kirehe District, says the project has a twofold benefit to residents living near the Rwanda-Tanzania border post of Rusumo. "This project will give jobs to our citizens who used to depend on cross-border trade. But with employment, they will be able to invest in other kinds of businesses locally."

He said that the project would change the face of business, increasing electricity infrastructure in the area that largely depends on Tanzania for cross-border trade and relies on electricity to do business.

"For example, we construct the Rusumo One-Stop Border Post market, which needs a consistent power supply. Some sectors like Mpanga, Nashyo, and Mahama that have not seen electricity will be connected to the broader power extension plan and benefits." Nashyo is a key agricultural trade point in Kirehe, while Mahama is inhabited by over 70,000 Burundi and Congolese refugees.

The ongoing electricity projects in Kirehe District have attracted Jean Claude Havugimana to move from the Gicumbi District to start a new life in Rusumo town. As a casual labourer with two children, he anticipates that the hydropower plant will enable him to access electricity in his village, meaning he can start a welding workshop and buy a computer for his children to use for their education.

Rusumo village leader Jesse Kagabo also believes that when the power project is completed, his community will see development and business activities sprouting in the area, largely dependent on agricultural activities. "As a result of lack of electricity in this area, we could not have any industrial activities happen here, for example, grain milling or welding activities. But now this is possible when the power plant is completed," Kagabo said.

By January 2022, officials from Rwanda, Burundi and Tanzania, who visited the construction site of the Regional Rusumo Falls Hydroelectric Project, commended the project's progress. Rwandan Governor of the Eastern "This project will give jobs to our citizens."



Province, Emmanuel K. Gasana, said that, on completion, the project would impact the lives of citizens in all three countries. "We are grateful for our Heads of State who thought of this electricity project to improve and create jobs for citizens in the three countries," he said.

Reducing energy disparities

Burundi is also anticipating the effect of the Rusumo project that will make more than 26,000 new grid connections and an upgrade to 60 currently overloaded transformer stations to reduce energy losses and undistributed energy.

Burundi says the number of households with electricity connections will increase, thanks to the Rusumo Falls project. The Burundi Association of Consumers is among those welcoming the initiative.

Noël Nkurunziza, who represents the Burundi Association of Consumers, said that the project's contributions would reduce energy disparities in the country. Some 36 localities spread all over the 11 provinces of the country are all expected to benefit from the RRFHP.

"In addition, the urbanisation on the horizon and the associated economic activities to generate incomes for the population are unequal considering the current electricity demand. This means that the government must take the energy sector as its top priority because socio-economic development depends on it," Nkurunziza said.

Arthur Bigirumwami, a resident of Karusi Province, said that farmers have the opportunity to improve their agriculture activities using irrigation as well as supplying anticipated new markets when commercial businesses emerge using the improved access to electricity.

"We expect to increase agricultural production because we can grow anything even in the dry season. We will use an irrigation system. In the past, we only grew during the rainy season. When there was little or no rain, we did not get enough output, but now we

will always produce because of enough water for irrigation," he said.

Experts say that the RRFHP is one of a kind, pointing out that countries without conflict are better positioned to implement it. Patrick Nimpagaritse, a political scientist, says the project underscores how conflicts reduce the economic growth of the affected countries. "Tanzania is not involved in the conflicts, which is a good thing for the progress of the Rusumo Falls project," Nimpagaritse says.

Thomas Opande, the Lead Africa Energy Access Initiative at World Wildlife Fund (WWF), said conflict and division meant that the countries often focused on their own projects rather than effective cross-border ones. "The problem is that each country, due to the selfish interests of a few, wants to build its own power projects, which often fail. Working together to build one energy project has more benefits to tap into the regional market in these countries," Opande said..

Answering environmental and social concerns

he RRFHP will boost supplies of electricity in rural areas. However, the project could also unleash serious environmental problems without careful management.

According to Céléstin Havyarimana, an 'Integrated Environmental Science and Management' specialist, the project activities' consequences may have permanent impacts, such as the loss of vegetation, including trees and shrubs where transmission lines are built. This could lead to the destruction of animals' habitats and the permanent loss of portions of wetlands.

As the Environmental and Social Safeguards (ESHS) of the RRFHP are evaluated as high risks because of possible significant adverse impacts, contractors developed a detailed Environmental, Social, Health and Safety Management Plan (ESHS-MP) to be implemented during the construction phase.

Governmental institutions and local administration are involved in the implementation of

the ESHS-MP. Ministries in charge of environment, forestry and wildlife and their agencies (REMA Rwanda, the Ministry for Environment (MEEATU) in Burundi and the National Environment Management Council in Tanzania) as well as their decentralised units, are tasked with ensuring regular control of activities and compliance with the standards.

Besides environmental concerns, assessing and mitigating the impact on affected people, varying from loss of residential structures, business structures, loss of employment, loss of agricultural land and loss of marshland use, is an essential pillar of the project through the 'Livelihood Restoration Program'. Specifically, the project provided training and startup inputs to affected people in Rwanda and Tanzania in different intervention areas, including business and entrepreneurship skills, sustainable agriculture production and livestock development.

Alloyce Oduor, the NELSAP Project Manager for the RRFHP, said the project would directly benefit the people around the planned hydropower generation plant. As part of bringing immediate benefits to the community in the project site neighbourhoods (in Ngoma and Kirehe districts), the RRFHP has allocated USD 5 million to the people through the two district councils to implement different community development projects like irrigation, livestock, construction of new health centres and road rehabilitation through the 'Local Area Development Program'.

Karimunda Naser heads one of the 67 households affected by the Rusumo project in Rwanda and is a Livelihood Restoration Program beneficiary. "They gave us cows and taught us modern and profitable farming methods. We get manure and milk for ourselves and for sale, improving our livelihood. Our lives have been changed for the better," says the farmer, adding: "We are pleased with the Rusumo project, and it created jobs for many people. I think when it is completed, it will solve many challenges – people are looking forward."

Construction work on the Regional Rusumo Falls Hydroelectric Project (RRFHP). Photo: NELSAP-CU

Unresolved border dispute haunts local communities

Waakhe Simon Wudu / Juba, South Sudan & Scovin Iceta / Moyo, Uganda Trauma, pain and misery: Decades of disputes along the border between South Sudan and Uganda have overshadowed the lives of people from both countries.



uan Vicki Robina from Kajo-Keji in South Sudan and Dipio Kevin Gift from Moyo in Uganda are just two of many victims of the long-running border conflict that has shattered lives, families and communities.

For decades, the Kuku and Mà'dí people lived side by side, sharing socio-economic and cultural ties, bound by intermarriage and learning each other's language and culture. The stories of Robina and Kevin, aged 37 and 26 years, respectively, highlight years of psychological, physical and economic troubles caused by the two border points.

The boundary between Kajo-Keji and Moyo has been a 'soft' border, hardly enforced or contested during the pre-Comprehensive Peace Agreement (CPA) Sudanese civil wars. However, following the CPA and South Sudan's independence, the lack of definition of the border has been a driver of conflict, with particular contention for the area around Sunyu, a fertile crop growing area.

Historic differences of opinion are now leading to tension between South Sudanese Kuku and the Ugandan Mà'dí border communities. This tension has escalated with violent clashes in Kajo-Keji and Moyo. In 2014, one of the deadliest and most bloody conflicts broke out between the two communities. According to local officials, at least 20 people were killed, and 200 huts were torched.

Some Mà'dí youth went from house to house searching for Kuku residents. They beat anyone they found, setting their homes ablaze and looting their shops and other businesses. Hundreds of Kukus, many of whom had lived in Moyo for decades, were sent scampering for their lives.

Within the blink of an eye, the border town of Jale on the Kajo-Keji side of the border streamed with hundreds of horror-stricken people of all ages and from all walks of life. Pupils and students slipped away from their schools, running through bushy paths for fear of being clubbed by schoolmates and villagers

At the time of the violence, Robina's big family had settled in Moyo for years after escaping the 1983 Southern Sudan-Sudan conflict. All was well before 2014. Kuku people freely engaged in trading and were treated like citizens of Moyo. The area had become Robina's second home, and her parents and siblings felt they were there to stay. The conflict, however, turned their lives upside down.

Reprisals against the Mà'dí people left at least 2,500 residents in Moyo temporarily forced to flee to Adjumani, a neighbouring district. Few Mà'dí people residing in Kajo-Keji at the time had to run for their lives. Some of them were rescued by local authorities in Kajo-Keji and survived beatings. But many others were unlucky and lost both property and lives.

Dipio Kevin Gift, a mother of one, resides in the Lowi Quarter residential area in Moyo town, located around 15 kilometres from Kajo-Keji. It takes about 30 minutes by motorbike to cross from Moyo to Kajo-Keji. Dipio lost her brother on the side of Kajo-Keji during the revenge attacks turned on the Mà'dí people. Many Mà'dí youths, including Dipio's brother, had crossed the border to South Sudan to work in local construction in Kajo-Keji.

Anger, trauma, pains

round a decade later, locals live with unresolved trauma and anger. Efforts to talk and pursue justice remain elusive – preventing the two sides from resuming the former ties of friendship and economic opportunities.

To locals like Dipio, living on the Ugandan side, the opportunities and relations she used to enjoy have faded. "I don't have any courage to go to South Sudan and never dream of going," she told The Niles. "The trauma of my brother tortured me a lot."

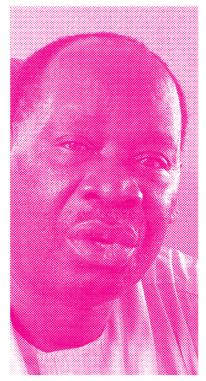
Others also have lingering trauma. Robina, a mother of three, told The Niles how her house in Moyo was set ablaze with all her possessions inside. She was forced to relocate her 62-year-old mother and some of her family members because of the imminent danger they were facing.

"My brother was cut with a panga. He was chopped on the head, then the forehead and then his hands were also chopped, and because he did not get help on time, he bled to death. He was not even taken to hospital," said Robina.

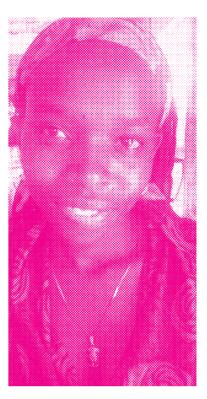
When things turned violent in Moyo, some Kuku people back in Kajo-Keji started revenge on some of the Mà'dí people residing in Kajo-Keji. According to eyewitnesses, locals on both sides used machetes, bows and arrows and sticks, among other weapons. The damages inflicted were on both sides.

Robina said that she and her mother could not move on after the violence. "To tell you the truth, I haven't forgotten up to today," she said. "It will take some time before I forget. It can skip off my mind, but if it comes back to me, I feel so hurt."









Started decades ago

he conflict in 2014 was caused by the shared border. The boundary dispute is not simply a failure of governments to define and demarcate this stretch of the international border but needs to be understood in the context of changing land values, patterns of decentralisation and local hybrid systems of land governance.

Henry Kala Sabuni, the former commissioner of Kajo-Keji County, who now heads the Central Equatoria State Commission for Conflict Resolution and Reconciliation, explained to The Niles that it started when authorities in Moyo decided to go and conduct a census in Sunyu, a small village in Kajo-Keji where Kuku people live.

"The Ugandan government was trying to make some enumeration for their census for Uganda," he said, adding that the local district council had some resolutions which extended the count to a part of Kajo-Keji, a village of Sera Jale Boma that was included in the map of Uganda.

"When Moyo district authorities sent their enumerators to register people from that village, the population of the Kuku community that belongs to the Republic of South Sudan often refused to be enrolled or registered as Ugandans. This brought about a problem between Moyo and Kajo-Keji," Kala explained.

Meanwhile, authorities in Kajo-Keji detained the officials from Moyo for illegal encroachment into South Sudan, Kala said. They were eventually released and, upon return to Moyo, the leadership of the Moyo District, led by the then Moyo District Chairperson Vukoni Jimmy Okudi, together with other politicians, mobilised some local youth who then started violently protesting the detention in Kajo-Keji.

Ever since the 2014 violence, the once free border crossings and contact between the Kuku and Mà'dí have not yet returned to normalcy,

According to Kala, the conflict in 2014 was not the first of its kind fought by the two

communities over land and border issues. At the tender age of 12, Kala claims he learnt from his grandfather, Sabuni, that in the 1940s seven people were killed in a conflict. However, it did not escalate because the person accused of having caused the murder of the seven people on the other side of the community was found guilty by a court and was executed as punishment.

Border conflicts also led to South Sudan's President Salva Kiir Mayardit and Uganda's President Yoweri Museveni meeting in the area in 2009 to try and resolve disputes between Kajo-Keji and Moyo. The governments formed a border committee to work out plans to demarcate unclear border points, but no tangible success has been registered over ten years later.

Growing populations, as well as political influence at the state leadership level, are critical drivers of the continuing border conflicts. In recent years, the respective country's leadership has strengthened local governance in Uganda and South Sudan. Institutions of new local government systems have been accompanied by sub-division of administrative units.

Many people in South Sudan and northern Uganda – like others around the world – see boundaries and borders as a potential source of clarity, security and conflict prevention, said a research report entitled "Dividing Communities in South Sudan and Northern Uganda", authored by Cherry Leonardi and Martina Santschi of the Rift Valley Institute. It said political and economic ambitions, and fears of discrimination or exclusion from land, promote more rigid boundaries, both at local levels and between groups of people.

For instance, in South Sudan, the report said in 1994, the Sudan People's Liberation Movement [South Sudan's ruling party] had formally committed itself to decentralisation. In 2004, the party held a conference of traditional leaders. It produced the Kamuto Declaration, which affirmed respect for "cultures" and the "roles and responsibilities of Traditional Leaders and Chiefs, particularly regarding the tenure and

ownership of land and other resources belonging to their respective communities".

In Uganda, on the other hand, the number of districts increased from 34 in 1990 to 112 in 2013, said the Rift Valley report. "While a variety of explanations have been given as to the extreme nature of district creation in Uganda, perhaps the most plausible is that new districts have been a source of electoral patronage for President Yoweri Museveni," the report said.

"These districts have been divided mainly on an ethnic basis, and their creation has reduced what were once ethnically heterogeneous districts to ones largely populated by only one or two major ethnic groups", it said, adding that they often sparked conflict in the process, enhancing the sense of divisions between different groups.

From left to right:

Iuan Robina Vicki speaking to The Niles at her residence in Juba on Feb. 27, 2022. Photo: The Niles / Waakhe Simon Wudu

Henry Kala Sabuni, former Commissioner of Kajo-Keji County, Central Equatoria State speaking to The Niles in Juba on the recurring border conflict in Kajo-Keji and Moyo, March II, 2022. Photo: The Niles / Waakhe

Williams Anyama, the Local Council Five (LCV) of Moyo District speaking to The Niles in Moyo on the state of the border conflict in Moyo and Kajo-Keji, March 14, 2022. Photo: The Niles / Scovin Iceta

Kevine Dipio Gift speaking to The Niles in Moyo on March 14.

Photo: The Niles / Scovin Iceta

"These districts have been divided mainly on an ethnic basis."



United Nations Mission in South Sudan (UNMISS) peacekeepers during a longdistance patrol to Kajo-Keji, Central Equatoria, Oct. 17, 2020, following heavy floods and reports of conflict. Photo: UN Photo / Isaac Billy

Other border conflicts

long the South Sudanese-Ugandan border, there has recently been a rise in conflicts between neighbouring communities in both countries. According to media reports, similar border conflicts continue to recur along a border point between Magwi County (South Sudan) and Lamwo District (Uganda). Radio Tamazuj had reported that in August 2015, Magwi County officials said 150 families left their homes in fear after Ugandan forces entered Pogee during a land dispute.

In December 2015, South Sudan and Uganda signed a memorandum of understanding to ease the border tension and allow the demarcation of the disputed approximately 470-kilometres-long boundary. Still, little progress has been made since then. In May 2018, South Sudanese soldiers halted road construction in Uganda's northern district of Lamwo.

"For us, they have to look for the way forward."

Meanwhile, South Sudan and Kenya are battling for a contested piece of land on their border. The oil-rich Elemi Triangle has been claimed by the two countries pitting a threat to diplomatic ties between the two countries. In recent years, the disputed area has seen clashes among local communities of the three countries which all border each other at that point: South Sudan, Kenya and Ethiopia. No permanent solution has been reached, and tensions continue.

Ice breakers

n the absence of a lasting solution to the problem from the states, interventions by some peace actors can help temporarily break the cycle of recurring conflicts.

The Nile Basin Initiative (NBI) is a regional governing body trying to forge cooperation among countries sharing the River Nile, including South Sudan and Uganda. The initiative attempts to halt some of the rising conflicts between communities sharing borders.

The Nyimur Multipurpose Water Resources Project, for example, is implemented through the Nile Equatorial Lakes Subsidiary Action Program (NELSAP), one of two investment programmes under the NBI that benefits residents in South Sudan's Magwi County and residents in Northern, Eastern and Northeastern Uganda, is among the initiatives that non-state actors can emulate to deescalate clashes.

The initiative aims to increase the locals' resilience in the targeted communities by changing socio-economic and natural conditions, including climate variability and climate change, which subsequently increases agriculture production in the long run. It also aims to stabilise border movements between the two countries and manage combined and joint land and water resources management.

The Nyimur project is a beacon of development in the beneficiary communities that accelerates the "development of remote areas and motivates cooperation between the involved countries," Mwasiti Ally Rashid, the NELSAP Programme Officer for Water Resources Management and Development, told The Niles.

"Apart from increasing cooperation between the two countries and security in the project areas, it will sustainably improve both countries' socio-economic development through water resources development and management for increased availability for multi usages including flood and drought mitigation, irrigation, electricity generation, fisheries development, and water supply," Rashid added.

Calls for intervention

eanwhile, in the Moyo and Kajo-Keji communities, the process of recovery from the violent clashes is slow, and anxiety remains high among many people from both groups.

"I just pray that it doesn't happen again," said Robina, emphasising the need for the two countries' leadership to address the problem genuinely.

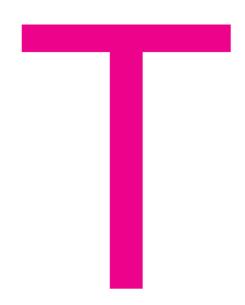
"The leaders might be far away, and their lives may never have been affected by this, but for us, they have to look for the way forward," Dipio said, urging the two governments to start discussions to ensure peace in the region.

According to the two countries' policies, the demarcation of the borders is the task of the respective national leadership. All efforts being made by local authorities, including dialogue and peace conferences, are at best temporary initiatives.

Anyama Williams, a senior Moyo District local government official, explained to The Niles that the solution to finally address the problem lies in a final decision and efforts by Juba and Kampala.

"The two governments are never committed to very clearly demarcating the border. They seem to be solving the problem by avoiding responsibility and pushing the burden to the next generation," Williams said. "The sovereignty and the territorial integrity of these two countries need to be defined. Let the borderline be known by everybody so that we have our respect restored."

Minziro: Tanzania's disappearing paradise



anzania has suffered severe deforestation, with approximately 400,000 hectares, about one percent of its forest, being felled every year.

The Global Forest Watch (GFW) details that Tanzania had 24.7 million hectares of tree cover, extending over 26 percent of its land area back in 2010. However, mainly because of energy consumption, settlement and economic activities, by 2020, it had lost 186,000 hectares of tree cover, equivalent to 67.7 million tons of CO₂ emissions, according to GFW. Even worse, a total of 180,000 hectares of land had burned in 2021, a fairly typical figure compared to previous years going back to 2001.

In the Kagera region, northwest of Tanzania, lies the highly celebrated Minziro Nature Forest Reserve – an outlier of the Guinea-Congo biome. Stretching from Senegal in West Africa through Central Africa and Uganda to Misenyi District, it is literally in danger of disappearing, a reality that residents blame on excessive wood consumption and encroachment into the wetland for farming and settlement.

Minziro forms a vital part of the ecosystem in northern Tanzania, both as a natural forest and a wetland. It maintains soil moisture and fertility, leading to high agricultural productivity.

William Kyaichumu, a 62-year old man, born and raised in Minziro village, has seen dramatic change over the last 30 years. "It was paradise," he said, adding that it is now "slowly disappearing".

Kyaichumu says families used to go on holiday in the area. "This place is invigorating,

you only breathe fresh air, and all the surrounding is green forest."

He explains that even the passageways were covered, and bulldozers struggled to make roads. Not now, he said, noting that currently, one can stand and see miles away, including visible roads.

Residents acknowledge that the area was once food secure, famous for growing coffee, maise, beans, sugar cane and plantains.

"We are in a crisis," another resident who preferred not to mention her name said. She and other residents described slowed rains and increasing temperature, which they saw as a direct result of human activities. The changing climate is threatening the natural forest and wetland, which is known as Sango Bay in neighbouring Uganda.

Laying at the boundary between Uganda and Tanzania, this transboundary wetland is located in Kakuuto and Kyotera counties, Kyotera District on the Ugandan side. In Tanzania, the bulk area lies within Misenyi

"This place is invigorating, you only breathe fresh air."



Tanzania's Vice President, Dr. Philip Mpango, during an official trip to the Minziro Nature Forest Reserve in March 2022.

Photo: The Niles / Sylivester Domasa District and smaller portions in Bukoba rural and urban districts.

Experts suggest that the landscape is an important bird area, providing habitat and breeding ground for diverse species. The wetland is home to rare and endemic species, including plants like wild coffee, the pseudagrostistachys ugandensis and the African yellow-wood. It is also the habitat of African golden cats, African elephants, leaf-nosed bats, leopards, tree pangolins, hippopotami, the rare sitatunga and the northern swap musk shrew.

Other species include the black and white colobus monkeys and the restricted-range blue monkeys. In 2006, Uganda resolved to establish what came to be known as the Sango Bay-Musambwa Island-Kagera Wetland System (SAMUKA).

Nature Uganda Executive Director Achilles Byaruhanga acknowledged that SAMUKA is one of the nine Ramsar sites that the Uganda National Ramsar Committee has endorsed.

"These forests are a major source of the region's water resources." The official says the decision to designate the SAMUKA wetland site under the 1971 Ramsar Convention was meant mainly to improve the monitoring of the wetland against destruction.

In contrast, residents around the Minziro area say the destruction of the natural forest and the wetland has reduced the thickness of the forests and the streams. There were no records from the Ministry of Natural Resources and Tourism or the ministry responsible for the environment to verify the claims. Local observations, however, showed some parts to be dry.

Haji Chakuraa, a local leader in Mtukula, a village bordering Tanzania and Uganda and lying west of Minziro ward, said villagers are encroaching on marshy areas and cutting down all natural trees without planting new ones. "All the water source areas once had local trees like mango trees. But, they are no more," he said.

Although the government and local authorities had enacted laws meant to preserve forests and wetland areas from such activities, some individuals have been able to bypass them, sparking an alarming rate of cutting down trees and forest burning.

In March, Tanzania's Vice President, Dr. Philip Mpango, made two stops in the region to push for more commitments from the local leaders and residents to take tree planting seriously. "The forests and trees have proven great potential for environment conservation," he said at Rubare Forest, which lies between Bukoba and Misenyi Districts. "These forests are a major source of the region's water resources, and they must be protected against any form of environmental destruction."

How residents are endangering the Minziro paradise

inziro is a public natural resource, meaning officials are obligated to protect and preserve it. But locals are increasingly outsmarting authorities and exploiting the environment.

For decades, the Minziro forest and wetland areas spread up to homeowners' backyards. However, residents witnessed how, year by year, the marshy areas and forests inched away from their houses. By 2010 it was clear for all to see: the transboundary landscape was threatened by extinction.

Misenyi District Council Chairman Projestus Tegamaisho said authorities had repeatedly allowed homeowners and business people to clear the forests for logging. The media also reported the arrest of the then Misenyi District Commissioner, Ret. Col. Issa Njiku, over allegations of issuing "illegal" permits to businessmen to cut trees in the reserved forest for logging.

Before the government in Tanzania had named Minziro a nature forest reserve, forest officers were stationed at strategic routes to supervise the forest and direct residents to specific trees that could be harvested. These forest officers were well known in the villages.

Residents in Mutukula, Kasambya, Bwanjai, Minziro and Kaishebo acknowledged the officers are no longer at their posts. "The reason is we have an office in charge of supervising the entire operation to protect the landscape," said Alfred Mlenge, a conservation officer for the Minziro Nature Forest Reserve, the unit under the Tanzania Forest Service Agency in the Ministry of Tourism and Natural Resources.

"Before it became a natural forest reserve, it was a forest reserve, and there were serious reports of destruction that not only disturbed the nature but disrupted wildlife." The conservationist and residents here say they now see elephants and monkeys back in the area.

Mtukula Ward Councilor Haji Chakuraa said that wildfire and deforestation are still rampant amid the state's efforts to announce Minzoro a nature forest reserve.

He said locals have been hiding in the thick forest with bags of compost. "The organic fertiliser is not for feeding plants in the forest, but for terminating nature to get charcoal."

Locals tend to sneak into the forest, light the compost at late hours and leave the location. Technically the flame from the compost is not instant. It takes hours to be visible, thus enabling the culprits to get away.

For some time now, authorities have blamed hunters and pastoralists for such actions, which increasingly put the mighty paradise under pressure.

And it is hard for officials to patrol such a broad area: "Conservation officers cannot be everywhere: the forests are huge and thick," explains Regina Rwegasira, a resident of Buyango village. At least three villages lie within the natural forest reserve, and eight others surround the transboundary landscape.

A familiar tale

his story is reminiscent of the Kyotera District in Uganda, where excessive tree cutting had put the Sango Bay on the brink of extinction, prompting action from Tanzania and Uganda.

As measures, local authorities have adopted bylaws aiming to preserve the environment, notably the Minziro Nature Forest Reserve and wetland. These bylaws include prohibiting locals from owning large numbers of cattle and farming permanent crops such as coffee.

Some residents and leaders in Minziro were offered training in energy-saving technology. Residents have also been allowed to collect

firewood on Wednesdays and Saturdays in the forest.

The Conservation Investment Plan (CIP) of the Nile Basin Initiative (NBI) on the Sango Bay-Minziro Wetland landscape highlights that the wetland supports subsistence and commercial agriculture, fisheries, grazing land and pasture, timber and non-timber products, as well as traditional medicine.

The landscape's wetland also serves as a watering area for livestock herds from drier districts like Lyantonde and Lwengo in Uganda. Mlenge, the Minziro conservation officer, says the wetland helps stabilise the flow of the Kagera River that empties its water into Lake Victoria. The local communxities also use palm leaves, sedges and grasses from the wetland for handicrafts.

An expert in the Ministry of Water said the area has also been proven to have a particular sedimentary layer whose plants are essential in diffusing carbon gas. "This layer can easily be disturbed if paddy farmers are allowed to exploit the area unattended," said Tumaini Mwamyalla from the Ministry of Water.

Many conservationists and environmentalists fear people have limited knowledge about the benefits of wetlands. Nonetheless, authorities have failed to offer economic alternatives to communities that depend on this natural resource.

A report on biodiversity conservation and the sustainable use of ecosystem services in wetlands of transboundary significance in the Nile Basin – Monograph for the Sango

"These wetlands are undergoing habitat degradation and loss." Bay Minziro (Tanzania - Uganda) Wetland Landscape, published by the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) in 2020 identified rapid urbanisation, poor land-use planning, inadequate understanding of the value of wetlands, unsustainable resource use practices, overexploitation of natural resources and weak institutional and enforcement capacity as the leading threats to the wetland.

The residents also point out the limited involvement of senior government and regional leaders with the villagers.

Phocas Rwegasira, a local leader and resident of Bwajui village in Misenyi District, says some committees were formed back in the past, with representatives providing monthly reports to village meetings.

These committees "were very active" and were jointly organised in Uganda and Tanzania, said a 62-year old Kyaichumu of Minziro. However, such incentives were frozen. There was no response from the government as to why the meetings and financial support ceased.

A spot visit to the villages around the wetland has shown several new settlements emerging. Residents complained about tensions with the Tanzania Forest Service Agency (TFS).

Paulina Rutta, a small-scale farmer in Runziga village, said some people evicted in 2017 when the natural forest reserve was established had not been compensated. She said while it is understood that people should be 60 metres away from the water source or the forest, the new guidelines "demanded that people must be 500 metres away from the reserve".

Amudy Migeyo from Bugandika argued that people were forcibly removed to make space for the reserve.

Why are the wetlands so important?

ccording to the Ministry of Water, wetlands are an essential resource in the Nile Basin. They provide vital livelihoods, providing food such as fish, clean water, raw materials, medicines and habitat for wildlife.

The Executive Director of the Nile Basin Initiative (NBI) Secretariat, Eng. Sylvester Matemu said the diverse wetlands are crucial for providing multiple ecosystem services and goods, citing food, water purification and supply, climate regulation, flood control and tourism as some of the benefits of wetlands.

"However, these wetlands are undergoing habitat degradation and loss due to several contributing factors such as reclamation and conversion for agricultural production, settlements and urbanisation, local community over-exploitation and climate change," Matemu said.

What next?

he government in Tanzania has said it is finalising some critical steps to recommend the Minziro Nature Forest Reserve and wetlands be recognised as a Ramsar Site. Ramsar Sites in Tanzania are declared under the Ramsar Convention, established by UNESCO in 1971.

A site is declared a Ramsar Wetland Site in Tanzania if it meets any one of the nine criteria set under the Convention of Wetlands. Sources from the government said the recommendation documents have all been released by the Office of the Vice President responsible for Environment to the Ministry of Tourism and Natural Resources for a final decision, including making a recommendation to UNESCO to recognise Minziro as a site of international importance.

Uganda received the same status in 2006. Conservationists believe that if the site is named Ramsar, it will stir regional and international motivation to preserve the paradise.

The richness of flora and fauna in the Minziro reserve makes it a potential site for tourism in the Kagera Region. The nature reserve is unusual biologically as it contains a mixture of Guinea-Congo biome animals and plant species. Afrocarpus dawei, a coniferous timber tree species, is endemic in the reserve, while Coffea canephora or wild coffee is considered globally rare and found in several locations in the Minziro Nature Forest Reserve.

Two mammals which are Thomas' galago (Galagoides thomasi) and Grey-cheeked mangabey (Lophocebus albigena), are not found elsewhere in the country. Minziro is the only locality in Tanzania where these primates have been recorded. Another rare fauna is the Viper snake (Rhinoceros Viper). The reserve also contains a significant number of Guinea-Congo biome restricted bird species. Of 278 species of birds found in the Guinea-Congo biome, 58, or 21 percent, are in Tanzania.

Of 245 bird species recorded in the reserve, 56 are only found in the Minziro reserve. The forest, thus, has been classified as an Important Bird Area due to the presence of globally threatened species.

TFS says there are more than 600 butterfly species that are native to Minziro, surpassing any other forests in Africa.

And the area includes a wealth of tourist attractions, including a cave used during World War II, Mutagata hot springs, ancient rock painting at Mugana and traditional architecture and crafts. All of these could provide an alternative income for residents, experts say.

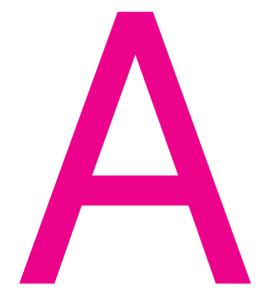
Meanwhile, there are loud calls – including from Vice President Dr. Philip Mpango – for environmental preservation training to feature in public schools to ensure children are equipped with the necessary knowledge to protect their land in the future.

Uganda and DRC are making big strides to resolve conflicts over fish in shared waters

A spike in killings and arrests among fishing communities from Uganda and the Democratic Republic of Congo (DRC) has been eased by a new bid to bring the countries together.

Henry Lutaaya / Kampala, Uganda

Lakes in the Western Rift of the Great Rift Valley: Lake Victoria, visible in the top centre, Kyoga, the lake above Victoria, Tanganyika, the oblong-shaped lake visible in the bottom left, Lake Albert, visible in the top left, Lake Edward, beneath Albert and Lake Kivu, beneath Edward. Photo: European Space Agency / Envisat



bout three years ago, there was a steady flow of fishermen arrested and some even killed on Lake Albert and Lake Edward – lakes with rich fish stocks shared by Uganda and the Democratic Republic of Congo (DRC).

Fishers, sometimes with the backing of security forces of their respective countries, engaged in bloody and quite often deadly fights over the sharing of fish from the transboundary lakes.

In 2018, for example, some 12 Ugandans, including soldiers and civilians, were shot dead by Congolese militia operating on Lake Albert. Reports indicate that the deadly attacks were in retaliation for the crackdown and arrests made by Ugandan security officers against illegal fishing on the lake by Congolese fishermen.

An investigation conducted in 2018 found that over 200 Congolese fishermen had been detained in Ugandan prisons for illegal fishing or illegally crossing into Uganda's territory.

Today, however, members of the two fishing communities tell a different story. It is one of peace, cooperation, and improved trade and collaboration at the highest levels of government and among the fishing communities.

High ranking officials from either side of the Rift Valley's Western Branch have invested their energy, time and money into ending the causes of earlier clashes. They have also sought to ensure that the temporary peace holds.

A lot of the credit is being given to a project that has helped build bridges between the two countries using several initiatives, including providing platforms for dialogue between leaders from both countries.

Dubbed the Multinational Lakes Edward Albert Integrated Fisheries and Water Resources Management Project (LEAF II) project, the USD 24 million investment was the brainchild of the Nile Equatorial Lakes Subsidiary Action Programme (NELSAP), a subsidiary of the regional body the Nile Basin Initiative (NBI) which brings together ten countries that host the Nile River and its catchment.

The pilot version of the project started in 2016, and it ran between 2018 and 2021.

The move was inspired by the need to end the rampant exploitation of fish resources in both lakes by competing communities from both countries. Fisheries experts from Uganda's government and NELSAP insist that the over-exploitation of the fish from both lakes was the main driver of the insecurity.

"Because of the rampant use of illegal and indiscriminate fishing methods, fish stocks became depleted in both Edward and Albert. Fewer and fewer fish, coupled with so many people depending on the lakes for food and livelihood, meant competition over fish was always bound to trigger more conflict," said Stephen Ogwete, the former Uganda Country Coordinator of LEAF II.

He notes that the project was designed to halt illegal fishing practices by, first of all, harmonising the policies and laws governing the sector in both countries.

"We realised that what we considered illegal in Uganda was not necessarily illegal in DRC and vice versa. So in order to stamp out illegalities, we needed to have uniform standards in the policies and laws," recalls Ogwete.

With an estimated 10 million people living around both lakes, with 70 percent of that population depending on fish for survival, the project sought to ease pressure on the

lakes by giving people alternative sources of livelihood.

"Most of the landing sites had inadequate fish handling facilities. And many didn't have access roads. This meant that they were getting a fraction of the estimated value of the fish they were catching from the lakes," says Ogwete.

The project sought to boost the industry by improving fish handling at nine sites in both countries to raise the value of the fish and hence the incomes of the people who depended on them

A 2019 Catch Assessment Survey jointly conducted by Ugandan and DRC officials revealed that fishers from both countries had caught as much as 440,000 tonnes of fish in one year. This was equivalent to more than USD 400 million.

"This shows that, even with the decline in fish stocks, the industry was very lucrative and hence a source of conflict," says Ogwete.

With a combination of loan and grant funding from the African Development Bank and the Global Environment Facility, LEAF II tackled the differences in the laws and policies by gathering officials from both countries around the discussion table.

The talks involved the fisheries protection enforcement agencies from both countries, as well as technocrats from the ministries responsible.

After several discussions and lobbying by NELSAP and the LEAF II implementing experts, relevant government officials from DRC and Uganda finally met in Munyonyo, Kampala, on October 20, 2018, and signed a bilateral agreement for the sustainable management of fisheries and water resources of Lakes Edward and Albert.

The agreement recognised the right of each country to equitable access and utilisation of the water and aquaculture resources sustainably. This agreement formed the first step towards harmonising policies and laws that experts wanted to use to stamp out illegal fishing practices that had sparked conflict.

Some of the pillars of the bilateral agreement included joint fisheries monitoring,

control and surveillance activities supported through the deployment of patrol boats (two for each country), as well as the construction of surveillance stations on both lakes.

The bilateral agreement further provided for the harmonisation of fisheries and aquaculture policies and laws. It included creating a joint fisheries data collection and information management system to ensure decisions on conservation and development are taken based on accurate information.

Most importantly, perhaps, the agreement provided for establishing a Transboundary Lakes Edward and Albert Basin Organisation.

A new regional body is born

ccording to Joyce Ikwaput Nyeko, the Acting Director of Fisheries in Uganda's Ministry of Agriculture, creating a permanent institution was a milestone in safeguarding progress and a tool to help resolve outstanding or new challenges.

Expressing joy at the outcomes of LEAF II, Nyeko says: "We agreed that even after this project (LEAF) has ended, we shall continue working together because we saw that by working together, you can address these issues of illegalities that were the main causes of insecurity."

Nyeko told The Niles about outstanding discrepancies in the laws and policies that need to be harmonised to bring uniformity in the implementation of laws. She says, in January 2022, both Uganda and DRC leaders invoked the relevant articles of the bilateral agreement to enable the organisation to start work.

Nyeko further says that the organisation is set to start work in the first half of 2022, a time when Ugandan authorities are expected to have provided office space in Entebbe – where it will be based. DRC will name the first Executive Director of the organisation.

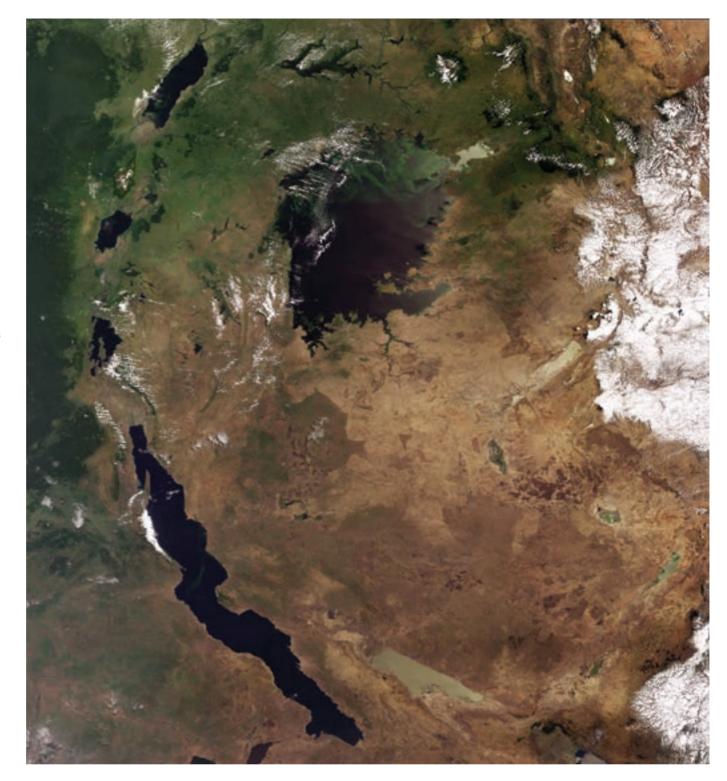
Besides establishing an institutional framework for greater cooperation and addressing pxolicies and legal frameworks, LEAF II recorded several achievements on the ground that have improved the lives of ordinary people.

Ogwete says that before the project commenced, the fishing industry in both countries was on the verge of collapse due to excessive competition. "We discovered that before the advent of the project, three factories had closed in the space of three years due to dwindling fish in Lake Albert resulting largely from the use of inappropriate gear."

Besides the waning size of the catch and the insecurity, conditions surrounding fish handling as well as the livelihoods of the fishers were also deplorable.

"Before the project started, only 11 percent of the 120 fish landing sites had a modern handling facility. Only 21 percent had a public toilet. Twenty-four percent had portable water, and only 70 percent were accessible by road. The rest didn't have market access," Ogwete quotes a 2018 survey carried out across both lakes.

At the end of the project, nine landing sites from both countries (five in Uganda and four



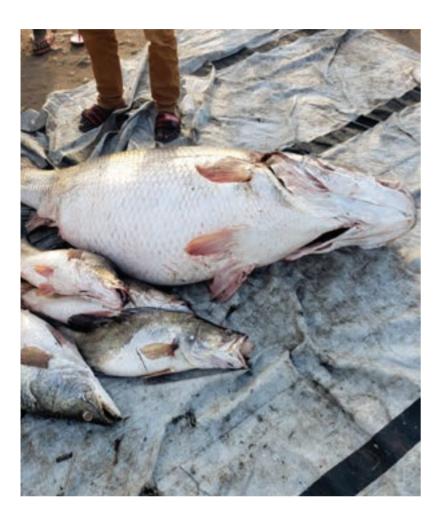
in DRC) had been modernised. The landing sites were equipped with portable water for washing fish and use by the community. Women, who previously dried their fish on the bare ground, were provided with fish drying racks. The project further built fish smoking kilns and built 21 kilometres of feeder roads to improve market access.

Kyansi Henry, the village chairman of the Rwenshama fish landing site in Rukungiri District of South Western Uganda, commended the project for improving the lives and access to the market for their fish.

"This was a good project. We were using water directly from the lake. And we didn't have places to wash or dry our fish. This negatively affected the marketing of the fish. Now we're able to get a good price because traders find the fish is clean," says Kyansi.

Ogwete adds that an evaluation study found that the project had led to a 21 percent increase in processed fish on Lake Edward and a four percent increase in processed fish on Lake Albert.

"We didn't have places to wash or dry our fish."



A fisher presents his catch of the day. Photo: The Niles / Henry Lutaaya

"Nowadays we have a lot of customers."

Alternative livelihoods created

by providing water and access to roads for greater access to the market, the project created alternative sources of livelihood, mainly targeting women and youth.

From aquaculture to goat rearing, beekeeping, soap making, chalk making and several other income-generating ventures, the alternative livelihoods programme touched over 100,000 lives, helping to provide 45,000 jobs.

The introduction of aquaculture or fishrearing in the lakes and empowerment of communities through training and provision of start-up capital was particularly central to saving the lake from the pressure facing the lake in search of fish.

As Ogwete remarks: "Cage farming on both lakes has the potential to produce up to 41,000 tonnes of fish. Because it is a capital intensive undertaking, it means that if commercial investors went into this business, the ordinary man can be assured of getting a fish with a hook."

The project didn't stop at demarcating potential areas for aquaculture; it supported communities from both countries to pilot aquaculture by providing cages, start-up capital and know-how of aquaculture.

Experts from the Jinja-based National Fisheries Resources Research Institute (NaFIRRI), which evaluated the aquaculture venture, found out that those initiated to the business were successful and wanted to take it forward.

Praise from youth and women

he youth and women introduced to alternative livelihoods like chalk-making and goat rearing reported being happy with their new opportunities.

Akiiki Apollo, a 23-year-old university student who sells smoked fish at Bwera market on the Uganda-DRC border, says the construction of fish smoking kilns and fish drying racks has contributed to better fish prices.

Akiiki further points to the provision of financial literacy training amongst youth and women groups as having improved their businesses.

"The project gave us saving boxes, counter books and trained us in financial management affairs. The children and wives of fishermen no longer eat all the money as they used to," says Akiiki.

Chamim Sarah, one of the women who dry and sell Muziiri (a small but very nutritious type of fish) at the Mbegu fish landing site in Hoima District of Western Uganda, says: "Nowadays we have a lot of customers and the prices of Muziiri are better because it is dried on racks and remain whitish and clean while those dried on the bare ground are brown and full of sand."

The way forward

t is anticipated that the spirit of cooperation and goodwill exhibited by leaders of both countries will create a conducive environment for the smooth operation of the Transboundary Lakes Edward and Albert Basin Organisation.

This comes when the two countries are enjoying unprecedentedly cordial relations, as shown by an ongoing military hunt for the Allied Defence Forces (ADF) jointly conducted by the Uganda People's Defence Forces (UPDF) and the Congolese military.

The government of Uganda is also funding the construction of three roads with a combined length of 223 kilometres inside DRC territory.

President Yoweri Museveni's government has rebuffed criticism from his opponents that he ignores national priorities by investing in another country. Museveni has argued poor roads undermined the considerable market potential in Eastern DRC that Uganda seeks to explore.

Other initiatives, such as the ongoing construction of high-voltage power lines by NELSAP that will dispatch electricity from Uganda to Eastern DRC towns such as Bunia and Butembo, are further signs of improved relations between the two neighbouring countries.

The acquisition of a modern research vessel by Uganda and the promise to set up research stations in both countries promise to improve decision making based on scientific data to ensure sustainability.

It is the view of Nyeko that things can only get better. "When the permanent Lakes Edward and Albert Basin Organisation kicks off, we shall start by harmonising our policies and legal framework on fisheries. It is also my hope that when this is done, we shall discuss other things such as how to develop our navigation."

In the transboundary Nile Basin, riparian countries are often divided by misunderstanding, suspicions and conflict over water use. Can media help ease these tensions?

Nile narratives without borders

Mugume Davis Rwakaringi / Kampala, Uganda & Mohamed Wadie / Cairo, Egypt

n a world filled with uncertainties and conflicts, media coverage has always been under fire amid discussion about whether it fuels or alleviates disagreement. This also holds for the coverage of Nile Basin affairs in its II riparian countries.

The words of the renowned Austrian-American journalist Henry Anatole Grunwald highlight the urgent role of honest reporting. "Journalism can never be silent: that is its greatest virtue and its greatest fault. It must speak, and speak immediately, while the echoes of wonder, the claims of triumph and the signs of horror are still in the air."

According to Dr. Allan Bomuhangi, a Climate Change and Natural Resources management expert, the media play an essential role in shaping governance – if it is well balanced. "Suffice to mention is that it's a powerful agent of democratic accountability. The government are held accountable to its citizens," he says.

Through the media, Dr. Bomuhangi says, voices of the marginalised are heard and consequently inform the government's policy agenda. It is also critical in ensuring stability and conflict reduction in conflicted areas. He added that areas like the Nile Basin benefit from "the promotion of improved debate, dialogue and tolerance in fragile or conflict-affected societies".

Kagire Edmund, a Rwandan journalist, underscores the need for neutrality in reporting issues about the Nile. "As a neutral party, the media has the power to discern between a lot of misinformation on Nile issues," he says, referring in particular to the Grand Ethiopian Renaissance Dam (GERD), located on the Blue Nile in Ethiopia in the Benishangul-Gumuz region – about 30 kilometres upstream (east) of the Sudanese border.

"Journalists have to avoid propaganda and taking sides regarding the Ethiopian or Egyptian narrative," Kagire says. "The media can play a vital role in helping the masses understand the background and the whole issue."

Juma Kirya, a reporter with Uganda's Nation Media, says reporters can help educate citizens of the Nile Basin, letting them know that the Nile can be used without damaging it: "We can educate the masses to use the Nile while conserving it so that others can equally benefit from it."

With its tributary basin spanning Tanzania, Kenya, Burundi, Rwanda and the Democratic Republic of Congo, the White Nile flows downwards through Uganda, South Sudan and Sudan, where it joins the Blue Nile, with its source in Ethiopia, before making its way to Egypt.

The Nile works as an energy source for most countries in the basin. And its water is vital for domestic purposes, factories and irrigation. The basin's water resources are home to many fish species, providing food for millions of people. The river also forms the habitat for various other animals – crocodiles, hippos, and other reptiles. Its shores are home to hundreds of bird species.

"The Nile shouldn't be owned by anyone. It's for us all. It's about humanity," says Adams Mayambala, who works for See TV in Uganda. He argued that conflicts should be resolved by amicable discussion when they arise.

Concerning Nile controversies, Egyptian Journalist Amira Sayed, a senior reporter at The Egyptian Gazette newspaper, says that the politicisation of water issues has put extra pressure on journalists. She said it is a hard beat due to a lack of neutral information.

Dr. Agaba Abbas, the Secretary-General of the African and Arab Youth Council, says journalists in the Nile Basin have to avoid "irresponsible" reporting. "Media should care about people's reaction but not blow things out of proportion," he says. "We need equitable utilisation of the River Nile resources that each of the peoples of the Nile Basin can benefit

from it, for it has been given to us. We just live around it."

For his part, Edmund Kagire cites the Kinyarwanda saying: "Issues of a household are resolved within the household." He says he believes the issues of the Nile Basin can always be resolved among member states so that all members can equitably benefit from the Nile.

Provision of resources is also crucial in nipping future conflicts in the bud, according to Marwa Tawfik, a prominent journalist at the Egyptian state-run newspaper Al-Ahram: "If we provide resources for everyone, there will be no conflicts."

Changing the narrative

he Nile Basin Initiative (NBI) is an intergovernmental partnership of ten Nile Basin countries, namely Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda. Eritrea participates as an observer. The allinclusive basin-wide institution was established on February 22, 1999, to provide a forum for consultation and coordination among the riparian countries for the sustainable management and development of the shared Nile

"The media cannot do anything if there is no genuine political will."

Basin water and related resources for winwin benefits.

In 2010, five NBI members adopted the Cooperative Framework Agreement (CFA) treaty. The document outlines principles, rights and obligations for the cooperative management and development of the Nile Basin water resources. Rather than quantifying 'equitable rights' or water use allocations, the CFA intends to establish a framework to "promote integrated management, sustainable development, and harmonious the utilisation of the water resources of the Basin, as well as their conservation and protection for the benefit of present and future generations".

Egypt and Sudan declined to sign the agreement. As a consequence of this disagreement, Egypt suspended its full participation in the NBI. As Nile controversies gathered pace, so did training programmes for journalists in the Nile Basin. Through its programmes and courses, the NBI has taken centre stage in this regard, supporting constructive and professional narratives on transboundary water issues.

Marwa Tawfik, who specialises in African affairs and water and environmental issues, believes that the workshop she attended with NBI in 2014 was a milestone in her career journey. "It was a real moment of opportunity," she said, describing the workshop with Mohamed Wadie, a senior journalist at the Sada El-Balad website, Nile TV Presenter Mona Sweilem and others.

Tawfik recalled that the workshop was followed by several other courses in Jordan, tackling water and its management, especially in the North African region, which is grappling with freshwater scarcity. Attendance was from across the Nile Basin countries, encouraging a diversity of perspectives.

"This helped me get acquainted with different viewpoints and share knowledge in fields related to water and the environment. Spontaneous face-to-face meetings helped lay the foundation for constructive dialogue," Tawfik remarked, adding that it offered new networking opportunities.

Journalists, according to Tawfik, are in charge of highlighting the problems facing their countries, such as pressing topics like water and food security and climate change.

The NBI workshops have also helped create strong relationships at work and beyond, despite the different ideologies of participants. It allowed the trainees to share knowledge and co-report stories.

Tawfik recalls a situation with a colleague called Florence Abolot from Uganda, who she knew through the NBI and who came to Cairo to report about water quality. "Myself and my colleague, Mohamed Wadie were pleased to help her gather information and meet the sources, whether within the Egyptian Ministry of Foreign Affairs or in the Ministry of Irrigation," she recounts.

"I am also sure that if any Egyptian journalist travelled to any Nile Basin country, our colleagues we met in the courses would do the same," she says.

The NBI also provides field visits for its trainees, which is essential for comprehensive coverage of issues. "For example, if you want to write about the sources of the Nile in Uganda, you have to visit it first," Tawfik said.

Helping reporters visit different NBI member countries opens up new perspectives to understand the Nile controversies. In turn, this helps provide nuance to the many stereotypical portrayals of the region.

Sayed is glad that she has attended some media training and workshops that have helped her better deal with controversies surrounding the Nile, including one organised by the Stockholm International Water Institute (SIWI) in Ethiopia in 2019.

She called the workshop timely as it helped her write better stories about controversial issues surrounding the GERD. "For Egypt, this dam poses a serious threat to its water security. For Ethiopia, the dam is a vital source of electricity which is in dire need," she said.

By interacting with Ethiopian colleagues, she understood "the other side of the story. We met many international experts who dealt with the Nile file from scientific perspectives throughout the workshop. They presented their recent papers and research, helping us know more about the technical points related to the dam," Tawfik adds.

She says it is journalists' responsibility to give readers accurate and unbiased information. "The programme provided me with new tools for reporting despite a lack of information. I started to deal with this file from a new lens," she says.

Many reporters benefit from uniting experts from all NBI member countries to discuss intrinsic issues surrounding the Nile. But, says Tawfik, there must be political will from all NBI partners for a peaceful solution to equitable use of the Nile.

"The media cannot do anything if there is no genuine political will to solve problems and reach a compromise and solutions that do not harm the people," she concludes.

"If we provide resources for everyone, there will be no conflicts."

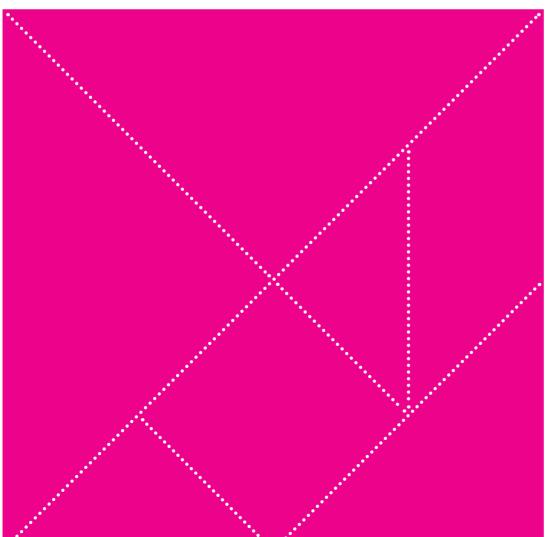
A group photo of journalists from across the Nile Basin, taken during a conference in Addis Abeba, Ethiopia, on February 23, 2018.
Photo: The Niles / Dominik Lehnert



The Nile Basin Tangram

Explore the Nile Basin Tangram and test your knowledge and imagination by recreating each riparian country's national animal.





Seven simple geometric shapes, which together form a square, are needed to make a tangram. By dividing and rearranging the tans, you can contour up imaginative figures.

Each shape can be turned around and placed next to other shapes. Each player places the shapes in the form of a pattern or a familiar figure, like an animal or person.

It is the same with countries or communities seeking to cooperate. As long as we keep the final pattern in mind, that of an interconnected and interdependent world, it will not be too difficult to find how we fit with one another.

Just as the borders of the different tangram shapes fade into the background when the final pattern emerges, so will the boundaries separating us become barely visible lines when genuine cooperation is achieved.

Each shape is an entity in its own right, but, together with others, they achieve something none of them could reach alone: a new, more meaningful form.

Think of each Nile riparian country's national animal and make the II shapes using all seven pieces.

You'll find the 11 solutions on the back cover.

