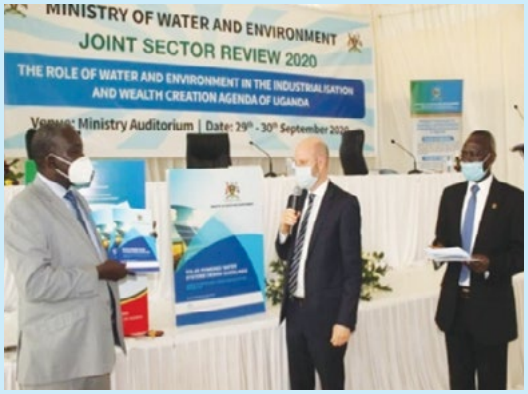
THE WATER AND ENVIRONMENT MAGAZINE

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

VOLUME 3, ISSUE 1, March 2021

# Water and Environment Security for Socio-Economic Transformation of Uganda


Inside this edition

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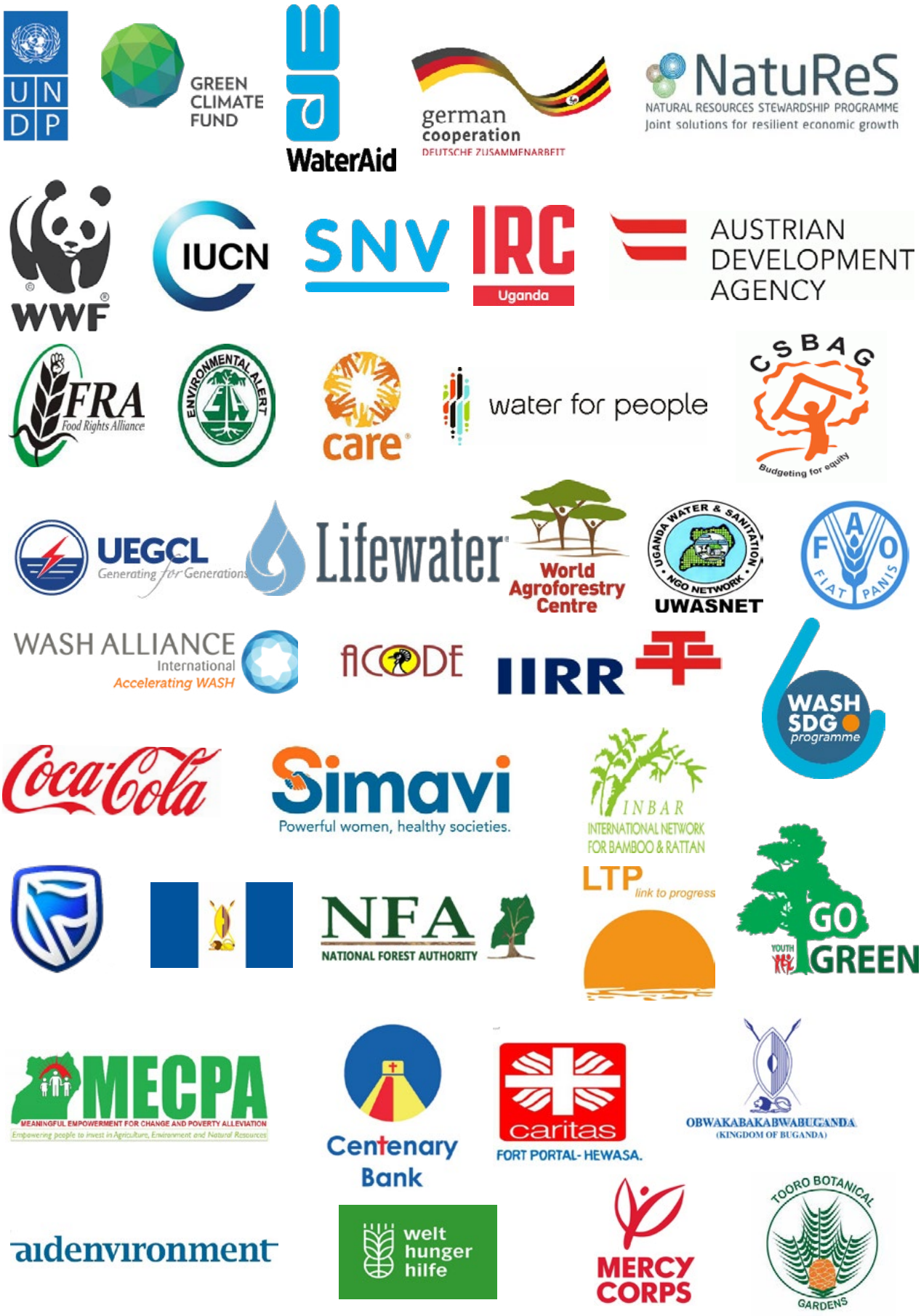

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# THE WATER AND ENVIRONMENT MAGAZINE


## EDITORIAL TEAM

**ENG. DANIEL OPWONYA**
Independent Consultant,
daniel.opwonya@gmail.com

**DR. CALLIST TINDIMUGAYA,**
Commissioner-DWRM,
Ministry of Water and Environment
callist_tindimugaya@yahoo.co.uk

**Gwendolyn Kyoburungi**
Coordinator, Water Resources Institute,
wri.uga@gmail.com

**Francis Kizito Xavier**
Partnerships and Dialogues Officer, Water Resources Institute

**Solomon Kyeyune**
Consultant, Water Resources Institute





**Administration:**
Contacts: uwewk@mwe.go.ug

## Locations:

WATER RESOURCES INSTITUTE,
Plot 17 John Babiiha Road, Entebbe
Website: http://wri.mwe.go.ug/

**MINISTRY OF WATER AND ENVIRONMENT**
Plots 3-7 Kabalega Crescent, Luzira
P.O Box 20026 Kampala-Uganda
Website: www.mwe.go.ug


*Main Cover Photo: The newly commissioned Rwebisengo-Kanara Gravity Flow Scheme in Ntoroko District to serve 54, 000 people*

## THE WATER AND ENVIRONMENT MAGAZINE

The Water and Environment magazine is a publication intended to share insights of accomplishments, on-going activities, challenges and opportunities, etc. within the water and environment sector. It is targeted towards professionals, practitioners and the general public as an avenue for providing feedback, encouraging dialogue and engaging through outreach. The authorship is from mainly the Water and Environment sectors although its readership is intended for all.

## THE WATER RESOURCES INSTITUTE (WRI)

The Water Resources Institute (WRI) was established to be centre of excellence that provides cutting edge applied research and training; delivers continuous professional skills development across all levels of water resources management and development while serving as a neutral place for dialogue and outreach for the sector.

## DISCLAIMER:

The information shared in this magazine and therefore the opinions therein are not necessarily those of the Ministry of Water and Environment, Water Resources Institute, its agencies, staff or the editors, and should therefore be acted upon at ones discretion.

The MWE, WRI and the editors will not accept responsibility for any damage or loss suffered by any person or party acting or refraining from acting upon any material contained in this publication.

# From the Editor's Desk

Dear Esteemed Reader,

It pleasures us once again to present to you another edition of the Water and Environment Magazine. This comes as part of Uganda Water and Environment Week-2021; where the Ministry of Water and Environment, its partners and other stakeholders celebrate the achievement thus far but also remind everybody about our shortcomings and strive to do better as the years roll by.

*It is also dawned upon us that forest cover continues to shrink at an alarming rate, with an example of burning of the Shea tree for charcoal, then poses the question, is it really worth it?*

This year, Water and Environment enthusiasts are walking for Water, Environment, Climate Change and Public Health. The walk is a much bigger challenge than last year's since its 371km long and it's to be covered in 11days; but all for a worthy cause of raising awareness of degradation and abuse of the water and environment resources and also demonstrating to the communities how to do better. This walk is between Kampala to River Nyamwamba in Kasese with various stopovers along the way. Equally the walkers are to remind us that COVID19 is still with us and we need to be cautious and follow the SOPs. On a similar note, we have another group that has taken the awareness around Lake Victoria through a water expedition on a dhow built fully from recycled plastic to demonstrate that a green circular economy is possible and this is by having. This journey is from Kisumu-Kenya through Uganda (Jinja, Kampala and Entebbe) to Mwanza-Tanzania on lake Victoria.

The Uganda Water and Environment Week-2021 (UWEWK2021) is here with us from 21st March to 26th March 2021 with its theme being Water and Environment Security for Socio-Economic Transformation of Uganda. During UWEWK2021 the nation is being called upon to protect and sustainability utilize its water and environment resources; not only for today but also for future generations. Considering water resources are shared and follow a basin, the magazine would like to introduce to you the State of the River Nile Basin Report 2020 and welcome you to join the 6th Nile Basin Development Forum.

The Ministry of Water and Environment through the Water Resources Institute is organizing this UWEWK2021 to highlight the success, prospects and challenges facing water and environment resources. This magazine therefore presents key achievements in Water Development, Water Resources Management, Environmental and Natural Resources, and Sector Financing and Cross-Cutting Issues. It is also dawned upon us that forest cover continues to shrink at an alarming rate, with an example of burning of the Shea tree for charcoal, then poses the question, is it really worth it? Still within the magazine is a case being made for improving resilience of communities to climate change through management of water catchments and the wetlands therein among others as a means to guarantee water and environment security.

We are also using this magazine to remember our dear colleagues who are no longer with us.

When it is all said and done, shall we look back a year from now and say that water and environment resources have changed for the better?

***Please indulge yourself, enjoy and nice reading!***

# Message from the Minister of Water and Environment

*Photo: Courtesy of Parliament of Uganda website (https://www.parliament.go.ug/mp)*

I wish to thank you for joining us to celebrate the fourth Uganda Water and Environment Week under the theme: Water and Environment Security for Socio-economic transformation of Uganda.

To accompany this celebration, the Ministry of Water and Environment through the Water Resources Institute has produced this third edition of the Water and Environment Magazine as one of the ways to inform the Ugandan public about key achievements, future prospects and draw attention to the challenges facing the water and environment resources and institutions.

Despite the challenges still posed by COVID19, the celebrations of UWEWK2021 had started with the "Walk for Water, Environment, Climate change and Public health"; from the Ministry of Water and Environment headquarters in Luzira-Kampala through various stopovers along the way to River Nyamwamba catchment in Kasese district. During the walk, the public will be made aware of the importance of water and environment resources but also the dangers posed by its destruction and the opportunities that lie therein with its safeguard.

The Ministry has also partnered in an expedition along Lake Victoria to showcase the dangers of plastic pollution and climate change to such a valuable water resource but also the possibilities of local innovation and solutions to turn plastic wastes into re-usable materials.

Last but not least, the Ministry and various stakeholders will share experiences and dialogue both online and physically at its headquarters from 21st March to the 26th March 2021 to raise awareness and call for a holistic and integrated approach to addressing common challenges but also celebrate where we have registered achievements and growth, foster new thinking and network to sustain and improve our various successes.

As we move away from a sector to a programme based approach, I would like to express my Ministry's commitment to join hands with all other stakeholders within and outside government for coordinated planning, development and management of water and environment resources to limit among others the effects of:

- High forest and land degradation due to increasing demand for cooking energy, agricultural expansion, infrastructure development etc.;
- High rates of encroachment on the river banks, water catchments and wetlands;
- Disposal of untreated industrial effluent in water bodies, flooding, drought and landslides.

Allow me one again to thank and wish the organizers, partners and all a successful UWEWK2021 and good reading of the Magazine.

For God and My Country,

*Hon. Sam Cheptoris*
**Minister of Water And Environment**

# Walking 371km in 11days for Water, Environment, Climate Change and Public Health"

*Hon. Cheptoris, Minister for Water and Environment flagging of the members of WAU on their 371km walk*

It's another time of the year when the Walkers Association of Uganda (WAU) in partnership with the Ministry of Water and Environment rally stakeholders and the whole nation to ***"Walk for Water, Environment, Climate change and Public health".*** This event is a pre-event to the fourth Uganda Water and Environment Week scheduled from 21stto 26thMarch 2021 under the theme: ***"Water and Environment Security for Socio-economic transformation of Uganda".***

The 371 Km Walk will start from the Ministry of Water and Environment headquarters in Luzira-Kampala to River Nyamwamba catchment in Kasese district for a total of 11 days. The walk will provide various opportunities to highlight realities on the ground regarding impacts of climate change, degradation of water and environment resources and raise awareness about public health especially during this period of COVID 19.

As the walkers visit and stopover at different locations including central forest reserves, wetlands, lakes, rivers, municipalities, towns and district local government headquarters, there shall be opportunities to identify solutions to these challenges but also showcase that water and environment resources if well utilized, can lead to more jobs and wealth creation among our people. Along the route there will be clean-up exercises, distribution of tree seedlings and tree planting by the communities, sensitization on riverbank and wetland protection for today's use while protecting it from the ever present danger of flooding, drought and landslides; cognizant that future generations will need these resources too.

Special thanks goes out to all those who have participated in the 371km walk. Special thanks go to organisations that have supported the walk namely: the National Forestry Authority, CARE International-Uganda, Vi-Agroforestry Project, INBAR, Coca Cola and many others. . Thank you WAU!

*WAU engaging citizens on street cleaning at one of their stopovers in a demonstration of the dangers of poor waste management*

# Water and Environment Security for Socio-Economic Transformation of Uganda

The Ministry of Water and Environment (MWE) through the Water Resources Institute (WRI) is organizing and hosting the fourth Uganda Water and Environment Week (UWEWK2021) under the theme is ***"Water and Environment Security for Socio-Economic Transformation of Uganda".***

UWEWK2021 will be both physical and online and provide space to stakeholders to exchange knowledge, dialogue, and learn how to improve Uganda's water and environment resources among others objectives. The UWEWK2021 will explore the role of water and environment resources in:

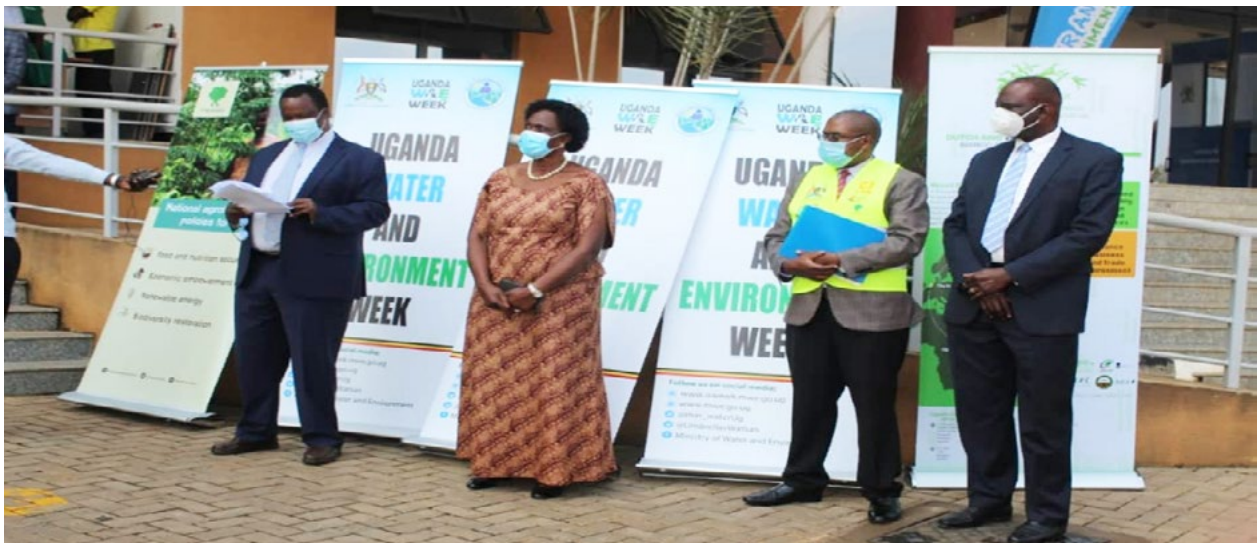
i. Increasing investment in value addition to environment and natural resources products and services,

ii. Promoting natural resource accounting, to improve the national income measurement,

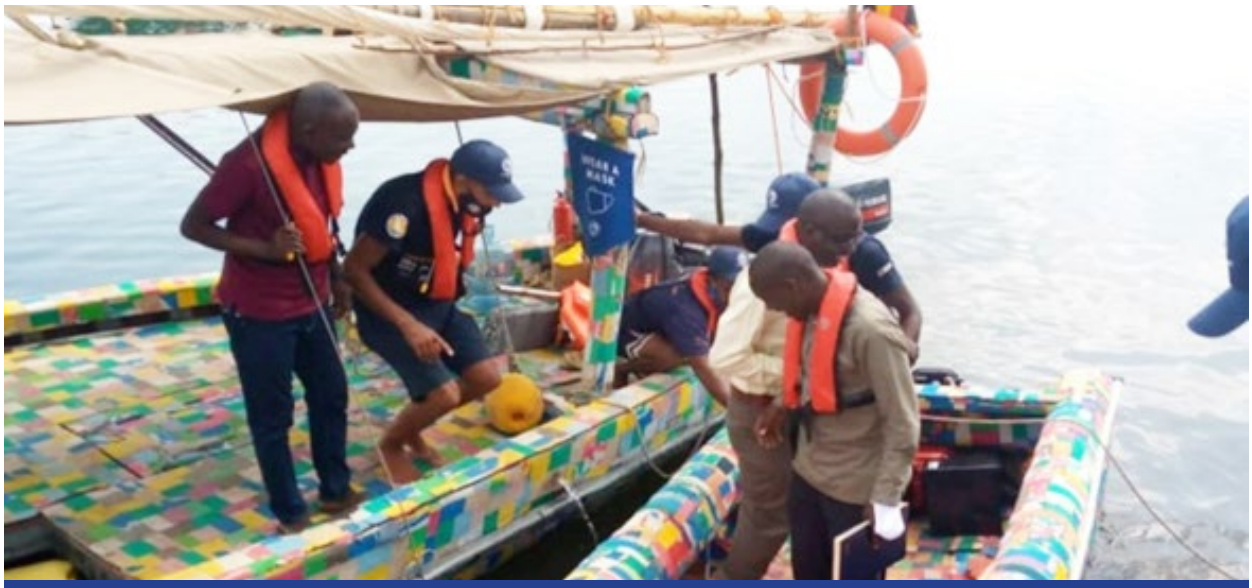
iii. Promoting research, innovation and adoption of green appropriate technology to foster sustainable use and management of water and environment resources and

iv. Reducing human and economic loss from natural hazards and disasters.

As always, during the conference period of UWEWK2021, the stakeholders will continue commemorate the three International Sector Days namely: the International Day of Forests (March 21st) with a theme "Forest restoration: a path to recovery and well-being.", World Water Day (March 22nd) with a theme 'valuing water' specifically recognizing the crucial role of healthy ecosystems in maintaining water supplies around the world and World Meteorological Day (March 23rd) with a theme "The Ocean, our climate and weather". Since COVID19 is still a major threat to human life, invitation to attend the conference physically at MWE headquarters will be limited but everybody is invited to join both on live television and online channels.




*Minister Hon. Cheptoris with senior Government of Uganda officials briefing the press about UWEWK2021 and its activities*



*The Flipflopi exhibition, one of the pre-event activities of UWEWK2021 is showing the potential of circular economy arrives in Jinja from Kisumu-Kenya in an all recycled plastic dhow*

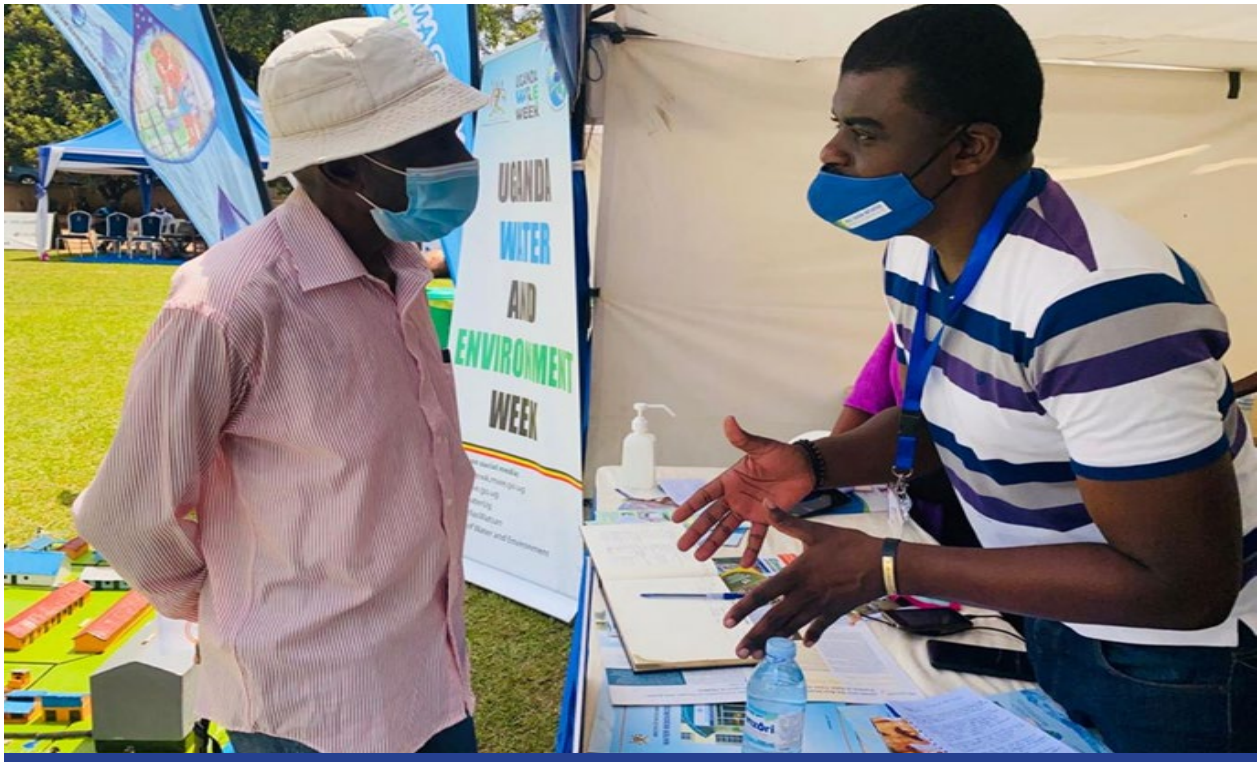
UWEWK2021 is deeply anchored in NPDIII which focuses the country on enhancing value addition in key growth opportunities while reducing environmental degradation and the adverse effects of climate change as well as improve utilization of natural resources for sustainable economic growth and livelihood security. This year's sub-themes specifically hinged on:

a) Valuing Water and Environment resources for socio-economic transformation of Uganda;

b) Water and Environment in a creative economy; c) Managing Water and Environment shocks, and

d) Water and Environment security for smart urban growth.

UWEWK2021 therefore targets you the: policy makers, technical specialists, academia, public and private sector institutions, civil society organizations, non-governmental organizations, consumers and citizens as a whole.




*Mr. Mathew Kariisa, a communication officer, MWE briefing a participant during pre-event at Bulange, the Buganda Kingdom Headquarters about UWEWK21*

## Some highlights from UWEWK2020

**Pre-Event**

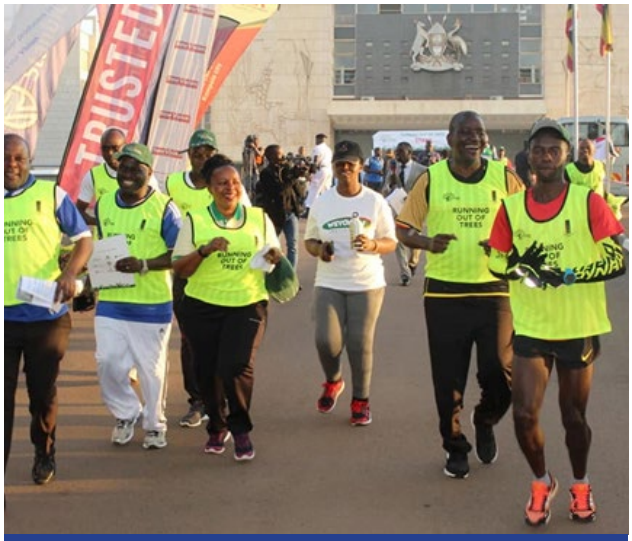
- Planning and organising the UWEWK 2021;
- Publicity campaigns in print, electronic and social media platform, radio or TV talk shows;
- Decentralised UWEWK 2021 MWE structural activities around Water and Environment issues;
- Walking for water, environment, climate change and public health- from *Kampala to Kasese District*
- Video clips of field visits and exhibition:

**The Online Event**

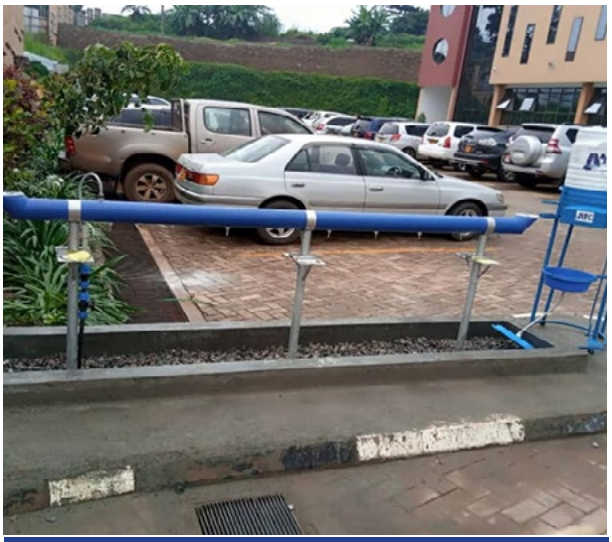
- Commemoration of International days:
- The official opening of the UWEWK2021
- Keynote addresses, dialogue, paper and posters presentation on theme and sub-theme
- Applied training sessions
- Daily water front, Water and Environment publications circulated
- A 5 – 10 minutes' documentary production for the Ugandan public on water and environment resources

**Post-Event**

- Evaluation reports,
- Publication of the proceedings
- Publication of WRI Journal
- UWEWK2021 Report,
- Publication of the proceedings of UWEWK 2021 and Book of Abstracts,
- Summary of the outcomes of UWEWK 2021.

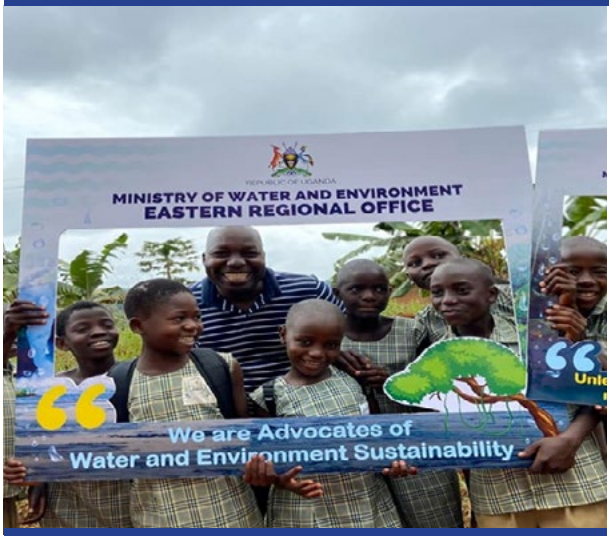


*Running Out Of Tree (ROOT) campaign*



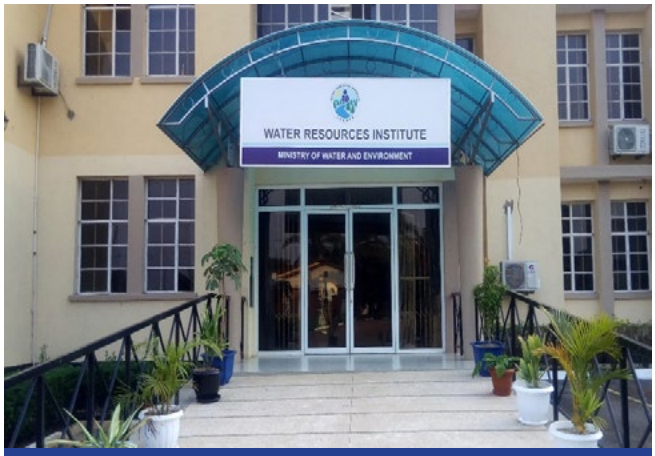
*UWEWK2020 was held online and physical presence under strict COVID19 SOPs*

*Capacity Building of MWE staff*




*Sustained media campaigns on water and environment sustainability*

# Water Resources Institute Ministry of Water and Environment




*Water Resources Institute-Entebbe*

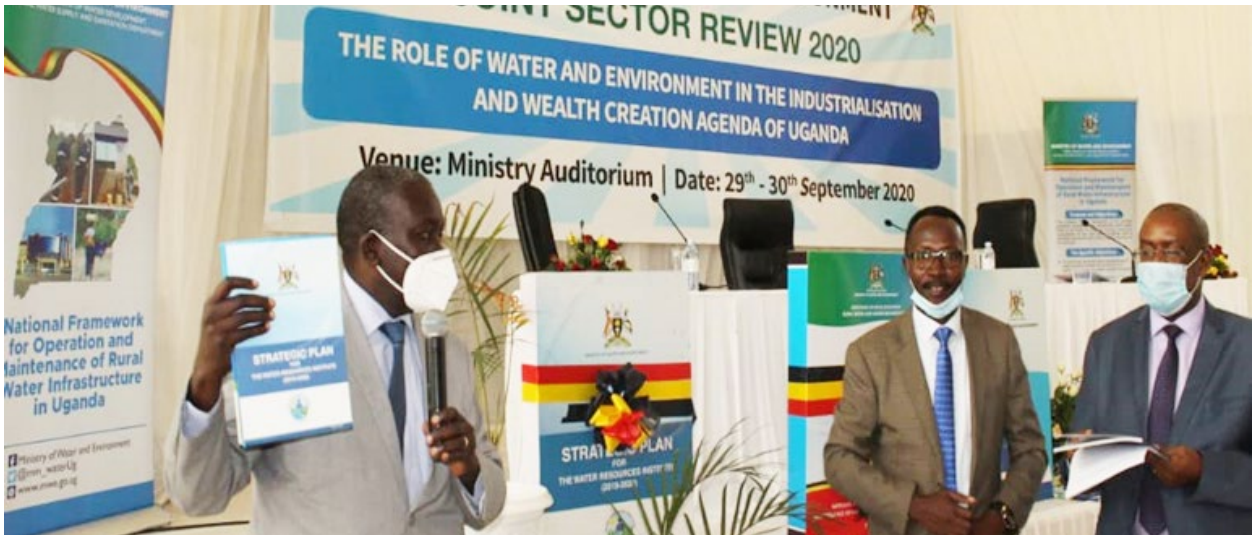
The WRI was established as part of the reform study for water resources management undertaken from 2003 to 2005 that recommended the establishment of the Water Resources Institute as a center of excellence for applied research, applied training, dialogue and outreach.

Launched in March 2018, the WRI has since embarked on its mandate with specific focus on conducting short training courses; so far the Institute has conducted over 50 short training courses with over 1840 professionals trained in various areas; WRI has also improve on outreach through spearheading organization of the Uganda Water and Environment Week since 2018 (UWEWK 2018, UWEWK 2019, UWEWK 2020 and the upcoming UWEWK 2021) to provide a platform for increasing sharing of experience, new concepts, innovations and practices in water and environment resources and related issues. Furthermore WRI through the framework of Uganda Water and Environment Week has continued to conduct dialogues, a platform for discussions that inform policy.

The WRI has developed a strategic plan and a business plan with support from WaterAid Uganda. This Strategic Plan was launched on the 29thOctober 2020 during Joint Sector Review of Ministry of Water and Environment.

The strategic plan developed gives has a 10 year direction to the Water Resources Institute (WRI) and demonstrate that the institute can be a one stop center where water resources development and management can translate into sustainable economic development for Uganda and the region.

This Strategic Plan intends to leverage on the existing strengths and opportunities of the WRI. For example, the WRI is national with a potentially diverse market and is open for collaboration and partnerships with many other institutions.




*Participants from IGAD member states countries attending a course in Hydro diplomacy at the WRI*

The 10 -year Strategic Plan will be implemented in three phases:

1. immediate phase covering 2019/2020 FY,

2. short term phase covering 2020/2024 FY and

3. medium term phase covering 2025/2028 FY

The 5-year business plan was also developed to guide the implementation of the first five years of the strategic plan for WRI (2019-2024). In the 5 years of Business Plan, the WRI will do the following:-Costing and pricing of the products and services, Target market segments, clients, competitors and their characteristics, develop strategies to grow the market and competitiveness- Strengthening WRI competitiveness, Establishing Partnerships and Resource mobilization.

The WRI has continued to provide short trainings in water and environment through its thematic area of applied training building capacity nationally, regionally and also international to address current and emerging water resources related issues in. These trainings have been conducted on cost sharing arrangements between MWE and different organizations such as CapNet, WaterAid, Nile IWRM Net, GWP, World Bank, Uganda Driller Association, UNHCR, GIZ, LVBC, IIASA Austria, UNINE University Switzerland, Makerere University and Water for People.

WRI has currently embarked on positioning its self to become a significant contributor in strengthening capacity for water and environment resources management and development through provision of practical skills, increasing access to information, knowledge and technologies and innovations.

Within the framework of the 10 year strategic plan, the institute has developed a WRI-MENTORSHIP program which is a career-development fellowship that seeks to mentor the young and mid-career professionals in water and environmental related fields of practice by catalysing and strengthening their scientific and leadership skills.

First priority is being given to women but the program will be broadened soon to cover men too.

This program is a trigger to awaken young and mid-carrier professionals 'capacity for management and development of water and environmental resources. This program will be launched on the 25th March 2021 during the Uganda Water and Environment Week 2021.

Since 2018, WRI has recorded a number of achievements; 300 practices, policy and scientific papers have been presented in the past 3 UWEWKs, 12 dialogues that are multi-sectoral in nature have been held. Young professionals-have been engaged in career development, and civil society organisation, government agencies and private sector organizations have been between MWE and trained on W&E technologies and approaches, all these have been done within the framework of the Uganda Water and Environment Week.

# Shea Tree Burning for Charcoal, is it really worth it?

Celebration of the International Day Forests 2021 themed "Forest restoration: a path to recovery and well-being" particularly focusing on forest restoration, calls for the Water and Environment Magazine onto bring you pressing issues related to forest cover in the country, raise awareness about it and call for action.

According to the Sector Performance Report (2020), forest cover has declined from 24% in 1990 to 12.4% in 2019. Bugoma Forest (or part of it) is making a lot of news lately because it's being cut down for sugarcane growing. We therefore need a balance between industrial growth, job creation and demands for domestic energy while maintaining and increasing forest cover.

One such victim for mainly domestic energy needs is the Shea tree (Vitellaria paradoxa) or Chwa in most of the local languages in the northern part of the country. This is a highly valuable resource used by the natives for mainly medicinal purposes, making cooking oil, beauty and cosmetic productswhile the fruit is eaten as snack but news coming in from Northern Uganda is that it has become the primary source for charcoal with hundreds of lorries seen everyday carrying charcoal made from trees cut down these trees and yet there is the opportunity to turn Shea tree products into a highly commercial industry beyond charcoal trade.

***Massive destruction of the Shea tree through cutting for charcoal***

***Massive destruction of the Shea tree through cutting for charcoal***

Despite numerous attempts to engage the authorities for the practice to end or done sustainability, the residents feel that little is being done and are now taking matters into their own hands and some bags of charcoal are seen being burnt down to demonstrate the frustration with the practice

***Residents taking issues into their own hands by burning charcoal bags made from Shea tree***

The writing is now on the wall that something must be done and done urgently otherwise a once precious natural resource is on its last footing.

By Michael p'Lapit,
Concerned citizen in Agago

# Key Achievements in Water Development

*Key sector achievements as taken from the Water and Environment Sector Performance Report 2019/2020*

## Rural Water Supply Status:

- The main technology options for water supply in rural areas include: deep boreholes (44.7%), shallow wells (23.1%), and protected springs (20.8%). While others (tap stands/kiosks of piped schemes and rainwater harvesting tanks at (11.3%).
- As of June 2020, the national safe water coverage in rural areas was estimated at 68% from 66% in FY 2018/19 although functionality of systems stagnated at 85%.
- 608 new boreholes, 57 piped water systems with 587 taps and 90 protected springs were constructed. With another 1,096 rehabilitated while 116 rainwater harvesting systems (ferro cement tanks, Plastic tanks and Communal) of 10m3 were installed.
- The percentage of water points with functional water and sanitation committees increased from 89% in June 2019 to 90% in June 2020.

*Namutya Small Scale Irrigation Scheme in Kayunga District*

*Improved Hand Washing Facility*

## Urban Water Supply status:

- 16 small town's water supply systems with 383 Public stand posts (PSP) construction were completed while 23 institutional and 4,032 yard tap connections done.
- Umbrella Authorities made 5,197 new connections while 61,246 was done by NWSC.
- The population using an improved drinking water source in urban areas reduced from 79%in June 2019 to 70.5% in June 2020. Access to safely managed water (available on premises) remained at 57.11% in urban areas.
- NWSC geographical coverage increased from 253 towns as at 30th June 2019 to 258 towns as at 30th June 2020, a growth of 2%.
- Functionality of small towns and rural growth centres piped water supply systems reduced from 94.3% in June 2019 to 81.23%.
- In large towns, the average hours of service were 18 hours per day.

- Non-Revenue Water (NRW) increased from 30.73% to 33.5% in large towns and from 33% to 37.78% in small towns and RGCs.
- The average per capita investment cost for the new water facilities was USD57.95 compared to USD 58 in FY 2018/19.

## Water for Production (WfP)

- The cumulative WfP storage increased from 41.124 million m3 in FY 2018/19 to 42.0 million m3.
- Four medium scale Irrigation schemes were completed in Lira District, Lamwo District, Kasese District and Butaleja District.
- MWE Constructed Sixteen (16) valley tanks in the Districts of Soroti, Butebo, Kapelebyong, Kumi, Bukedea, Kaabong, Kotido, Lyantonde, Mbarara, Butambala, Rukungiri, Ntungamo, Kyankwanzi, Sembabule, Bushenyi, and expanded a valley tank in Bugiri District thereby creating a water storage capacity of 256,000,000 litres
- Functionality of WfP facilities remained at 87.2% and functional management systems improved to 88% from 86% in FY 2018/19.

## Sanitation and Hygiene

- In rural areas, access to sanitation services in general increased from 77.2% to 78% while basic sanitation increased from 16.6% to 18%.
- In urban areas, access to sanitation services in general increased from 87.9% to 89.1% while basic sanitation from 42.8% to 44.8%.
- Access to hand washing facilities in schools increased from 42% in FY 2018/19 to 58%.
- Use of safely managed sanitation in rural areas remained at 7.1% and in urban areas increased from 37.4% to 38.9%.
- Three Faecal Sludge Management Facilities were constructed to completion and under test running at Dzaipi, Kamuli, and Nakasongola.

## Civil Society Organizations (CSOs) Contribution to Water and Sanitation

- CSOs investment in FY 2019/20 was UGX 52.12 bn compared to UGX 69.13 bn in FY 2018/19. UGX 29.88 bn was invested in water supply and UGX 9.72 bn in sanitation and hygiene, UGX 8.08 bn in water for production, UGX 0.77 bn in capacity building and UGX 0.60 bn in research and development.
- CSOs constructed 251 boreholes, 110 rainwater harvesting tanks and 15 shallow wells. Rehabilitated 303 boreholes, 5 protected springs and 49 shallow wells. Constructed 10 piped water supply systems and rehabilitated/ expanded 11.

*Cesspool truck for the dzaipi cluster.*

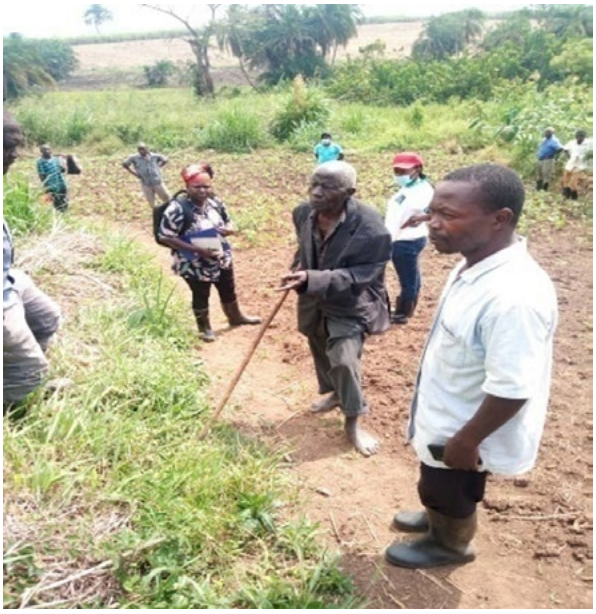
## Challenges included among others:

- There is low reporting of new water sources effects and effects of Covid-19 pandemic by by districts due to manual system of data capture and entry.
- Functionality of small towns and rural growth centres piped water supply systems reduced from 94.3% to 81.23%; most of this was attributed to result of taking over many schemes none functional.
- Reports show that 22 % of the rural population was practicing open defecation.

# Key Achievements in Water Resources Management

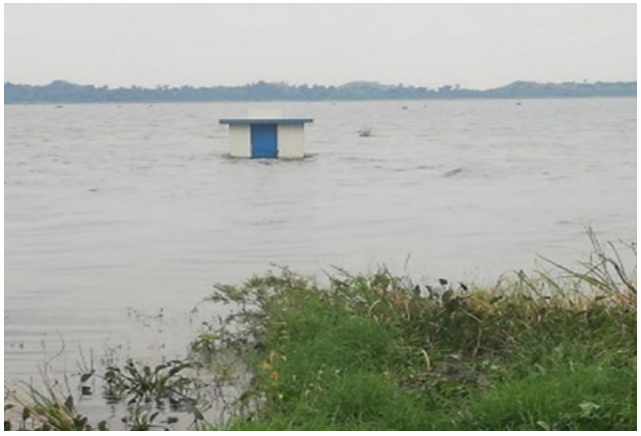
*Key sector achievements as taken from the Water and Environment Sector Performance Report 2019/2020*

- Total of 301 water permits for water abstraction and waste discharge were issued.
- 82 Environmental impact assessment related activities were undertaken,
- Revision of the National Water Policy continued to be undertaken with finalisation of the Regulatory Impact Assessment, Implementation of Catchment Management interventions on going in the catchemnts of Rwizi, Mpanga, Semliki, Aswa, Awoja, Maziba, Katonga, Lokok, Lokere, Mpologoma and Albert Nile.
- The first ever 10 year Strategic Plan and 5 year Business Plan for the WRI were developed.
- Uganda Water and Environment Week 2020 was held,
- 17 Short training courses involving 524 participants were conducted at the WRI,
- The average compliance to the permits (surface water, groundwater and waste water discharge) conditions increased from 73% in FY 2018/19 to 77.6% FY 2019/20; while the proportion of water safely treated increased from 28% to 30%.
- From the samples collected to assess the water quality for rural water sources, compliance increased from 64% to 67% of the previous year.
- Implementation continued of trans-boundary projects such as the multi-national Lakes Edward and Albert Integrated Fisheries and Water Resources Management (LEAF II) Project being implemented nationally between Uganda and Democratic Republic of Congo.
- Water safety by technology type was; 81% of boreholes, 55% shallow wells and 37% protected springs had safe water for drinking based on compliance to bacteriological safety or E. coli. Samples taken from peri-urban water sources (protected springs).



*Communities participating in wetland restoration activities as part of catchment management activities*

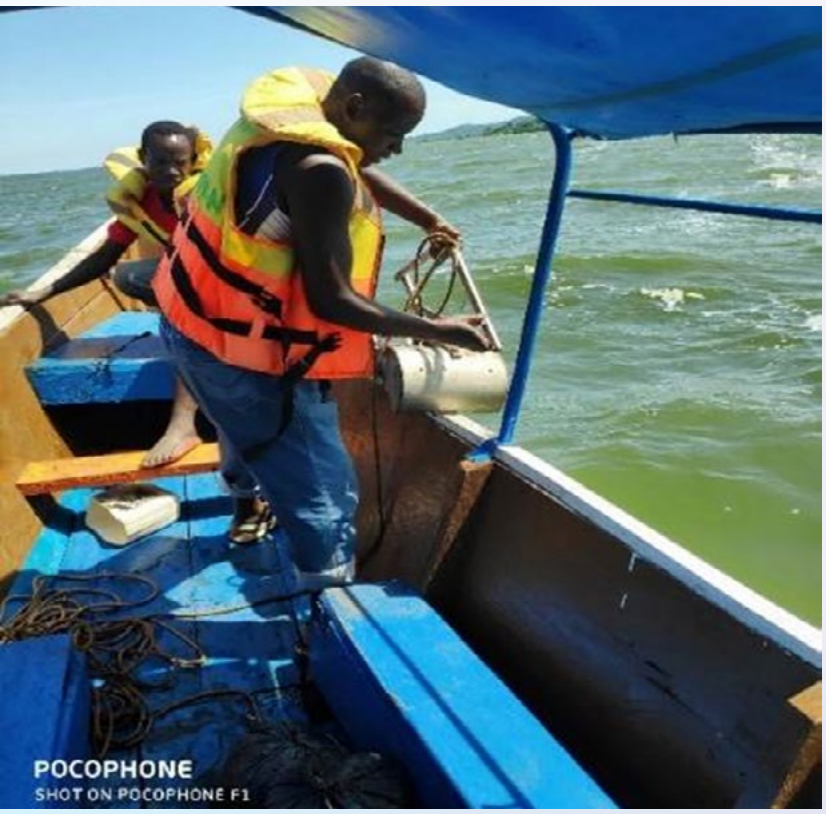
- A total of 151 wastewater discharge facilities were monitored countrywide which also included monitoring of Industrial facilities (tanneries, diaries, beverages, fish processing, sugar processing, other food processing factories and pharmaceuticals) with an average compliance increasing from 28% to 30% FY 2019/20.
- There was continued cooperation, financial support and technical guidance to the Trans-boundary organizations including the Nile Basin Initiative (NBI), Lake Victoria Basin Commission (LVBC) and Global Water Partnership (GWP).



*Surface water monitoring stations at Entebbe Pier submerged during the May2020 Lake Victoria Water Level Rise to record high of 13.48m*

- Status of the lakes and rivers was updated and daily updates provided to the Office of the Prime Minister. For example, Lake Victoria levels continued to oscillate above the long-term average of 1134.37m above mean sea level (11.48m above the local datum) since the end of 2013 with the new highest recorded daily level of 13.49m on the afternoon of 19th May 2020.

- Five fish landing sites are under construction in various districts including 19 modern smoking kilns, 21.4 kilometres of feeder roads to the facilities, 50 modern sun drying facilities (platforms/racks), 8 sanitation facilities and 4 solar powered mini water supply systems to the fishing communities.




*Algal bloom in Inner Murchison Bay in November 2019*

- Implementation of catchment restoration interventions is ongoing in rivers' catchments of Sebwe in Kasese District, Tokwe and Humya in Bundibugyo District, and Semiliki in Ntoroko District.

*Assorted seedlings distributed to 13 project beneficiaries in Kuju Sub-county, Amuria District witnessed by LC1, Parish Chief and District technical officers*

## CSOs Contribution to WRM

- Civil Society Organizations (CSOs) investment UGX 3.08 bn in IWRM

## Key Challenge in Water Resources Management

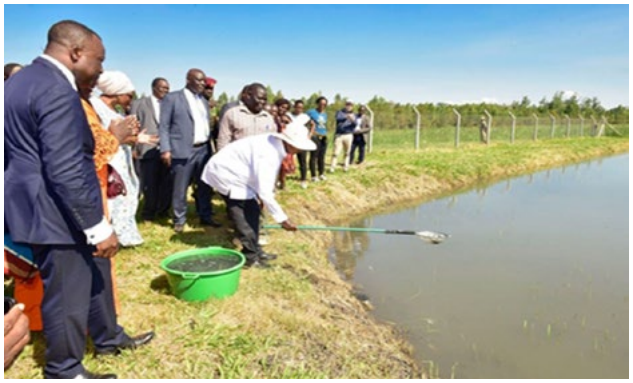
- The compliance levels with respect to E. coli for small towns fell from 96% FY 2018/19 to 94% in FY 2019/20. For example 50% and 90% of protected springs in Entebbe and Kampala were contaminated with E.coli.

- Degradation of catchment and the resultant impact on the quality of water resources,

- Flood and rising water levels of major lakes and rivers and their impacts on the people, property and infrastructure.

# Key Achievements in Environmental and Natural Resources Management

*Key sector achievements as taken from the Water and Environment Sector Performance Report 2019/2020*



*Demonstrating fish farming in a wetland in Pallisa*

## Forestry Management

- De-forestation remains the major challenge which has led to decline of forest cover from 24% in 1990 to 10% in 2017 now with a slight increment to 12.4% in 2019.
- 2,233ha of degraded natural forests were restored through planting indigenous tree species and bamboo while 2,696.5ha of local forest reserves were planted from the 6,123,553 raised tree seedlings.
- Of the annual planned 31,400,000 assorted seedlings, from the 12 NFA regional tree nurseries and 22 community nurseries produced and supplied 26,398,947 seedlings to increase tree cover across the country, representing 84% performance.
- 307Km of forest boundary was resurveyed and marked with concrete pillars.
- 19,800.4ha of industrial tree plantations with above 70% survival were established (1,400.4ha by NFA and 18,400ha by licensed tree farmers).
- A total of 114,528,770 assorted seedlings were supplied to increase forest cover during NDP II (2015-2020), representing 65% performance.

## Environmental Support Services

- Six (6) districts were supported to develop by-laws in Mbale Bulambuli and Manafwa, Mitoma, Ntungamo, and Buhweju.
- A total of 1,381 Project Briefs and Environmental Impact Statements were submitted to NEMA resulting in 991 ESIA certificates being issued to the developers.
- Eighty (80) environmental inspectors were trained in Environment integrity and sustainability of the green and brown environment following the gazette of 774 environmental inspectors in FY 2018/19.

## Wetlands Management

- FY 2019/20, a total of 6,642.939 ha of critical wetlands was restored across the country.
- The cumulative boundary of wetland demarcated since 2012 is 2208.9km (1.56%) out of the 141,366km earmarked for demarcation countrywide with 480.39Km of wetland boundary demarcated across the country in FY2018/2019.


*Demarcation of wetlands with community participation*

## Climate Change Adaptation

- The training of 80 companies (energy, forestry, agriculture, waste management & financing institutions) has been conducted to enhance their skills in green investments and access to climate
- Capacity development on integration of gender in the implementation of climate actions was done for 10 districts in the central region

Uganda has began developing her Long Term Climate Strategy to provide national direction with regard to reaching national peaking of greenhouse gas emissions and undertaking rapid reductions

## Meteorology, Weather and Climate Services

- UNMA support to the Aviation sector provided through issuance of 2196 Terminal Aerodrome Forecasts and 13700 flight folders to enable air navigation in and outside the country.
- Four seasonal climate outlooks of July 2019-May 2020 issued for regions of Uganda and disseminated the seasonal forecasts of the September to December 2019 and the January to April 2020 season.
- State of the climate report for Uganda for 2019 was completed
- 36 Manual Weather Stations, 31 ADCON Automatic Weather Stations and 12 DAVIS Community Automatic Weather Stations' functionality improved across the country.
- The first weather Radar was successfully installed in Kigungu-Entebbe and is operationa while the one for Lira University-Lira is already shipped and civil works for its installation is ongoing at Lira University. The procurement of the second Radar (Mwizi – Mbarara) is in advanced stages.
- The performance of manual weather station was at 72%, automated weather stations 72% and rainfall stations 40%.

## CSOs in Environment and Natural Resources (ENR)

CSOs active in ENR reported a contribution of USD 529,425 for forestry and USD 467,909 for environment and USD 346,802 to climate change activities among others.

*First weather radar fully installed and operational in Kigungu*

## A major challenge in Environment and Natural Resources (ENR)

- Decline of forest cover from 24% in 1990 to 10% in 2017. Currently the forest cover stands at 12.4%.

*Massive cutting of the treasured Shea tree for making charcoal, March 2021 in Agago District*

# Key Achievements in Sector Financing and Cross-Cutting Issues

*Key sector achievements as taken from the Water and Environment Sector Performance Report 2019/2020*

## Sector Finances

- Total on-budget and off-budget was approximately UGX 1,820.97bn. UGX 1,667.86bn was on-budget appropriated by Parliament for the Ministry of Water and Environment, National Environment Management Agency, National Forestry Authority, Uganda National Metrological Authority and National Water and Sewerage Corporation.

- In terms of releases, the total amount released to the Sector was UGX 1,207.58 bn (representing 66.3%) while the Government (treasury) released UGX 451.358bn (representing 79.7%) Donors UGX 287.964bn (55.0%), AIA UGX 391.00bn (67.6%) and off-budget UGX 77.25bn (50.5%).

## Cross cutting issues, Gender & HIV/AIDS

- The percentage of Water Source Committees (WSC) with women holding key positions increased to 86% from 85%.

- MWE Headquarters organized World AIDS 2019 where 250 staff (149 female and 101 male) were sensitized about the latest information on HIV and AIDS including safe testing. Another 20 staff (12 female and 8 male) staff attended the Philly Lutaya Memorial Public Lecture.

- Various CSOs reported contributions towards Covid-19 response in 108 districts with at least UGX 5.54bn spent on Covid-19 related activities.

*Mothers during training sessions on the importance of hand washing nutrition and antenatal care services*

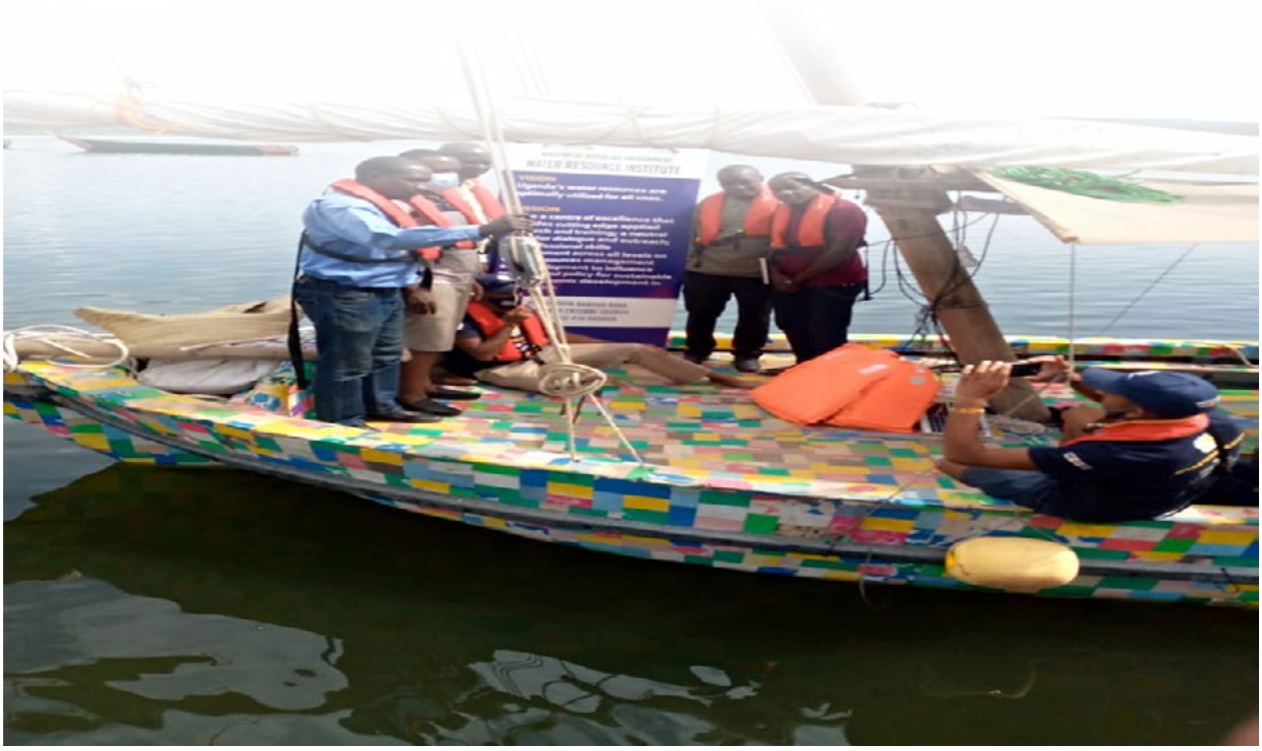
## Critical Issues for the Sector

- Inadequate financing to the sector remains a major challenge and affects the fulfilment of core functions. Capacity gaps in the sector remains critical and particularly in newly created local governments, Umbrella Authorities and the ENR subsector.

- Inequity in water service coverage is affecting the sector. 17 least served districts with less than 55% coverage require special attention. The majority of these districts fall in the dry cattle corridor with low surface and ground water potential and require expensive technologies like bulk piped water supply.

- The revised sector performance measurement framework of 2016 remains not disseminated. With limited support from UNICEF, the ministry produced a guide for computation of the WASH indicators but this also needs widespread dissemination across the Water and Sanitation sub-sector. This is partially responsible for the persistent lack of data (including baselines) on a number of sector performance indicators since FY 2016/17 of the first year of implementation of the revised framework.

# Charting a Course towards a Green Recovery in East Africa: The Flipflopi Expedition on Lake Victoria



*The Flipflopi dhow made wholly of recycled plastic docking in Jinja*

The world's first recycled plastic sailing dhow made in Kenya has embarked on a second expedition by sailing around Africa's largest freshwater ecosystem-Lake Victoria; following up on its historic first expedition on the Indian Ocean that brought global attention to the plastic revolution.

## So why L. Victoria

Over 40 million East Africans depend on L. Victoria's ecosystem for their livelihood and yet social and environmental issues including climate change and plastic pollution are putting these livelihoods are at risk. So this is where Flipflopi comes in as positive symbol of hope showing the world that it is possible to make valuable materials out of plastic wastes, some form of circular economy campaign that should inspire local innovation and solutions that are critical to a green and sustainable economic recovery for African nations. We must now take the next step in driving legislation that supports circular economies and brings an end to unnecessary single use plastic products.

Over the last three-weeks, Flipflopi did circumnavigate the lake from Kisumu-Kenya, to Uganda and should finish in Mwanza-Tanzania; highlighting the climate and pollution issues affecting the lake while encouraging cross-border collaborations and showcasing the adoption of circular solutions at local and regional level. It has been engaging policy makers, community leaders, civil society, media, business leaders and youth. As an example of the impact of Flipflopi, UNEP estimated that its last expedition to Zanzibar had an estimated reach (TV, radio, newspapers and social media combined) of 444 million of people all over the world.

## What was planned for Uganda?

There were three major events which included among others:

## Jinja Sailing Club Event: Sunday 14thMarch

This had the cleanup of Jinja town by Jinja scouts with Busoga Kingdom participating at the event. There was also a recycling workshop for youth and a call to private sector (e.g. Nile Breweries, Eskom, kayak and rafting companies) to take actions against single-use plastics.

## Ggaba Beach-Kampala Public event: Saturday 20thMarch

An exhibition on Green Circular Economy was organized at Ggaba Beach to raise public awareness about plastic pollution as well as promote and showcase Ugandan innovative initiatives turning plastic waste into wealth (construction materials, fashion and art) and alternatives to single-use plastics (natural straws, ceramic water filters, food packaging).

## Speke Munyonyo-Kampala VIP event: Saturday 20thMarch

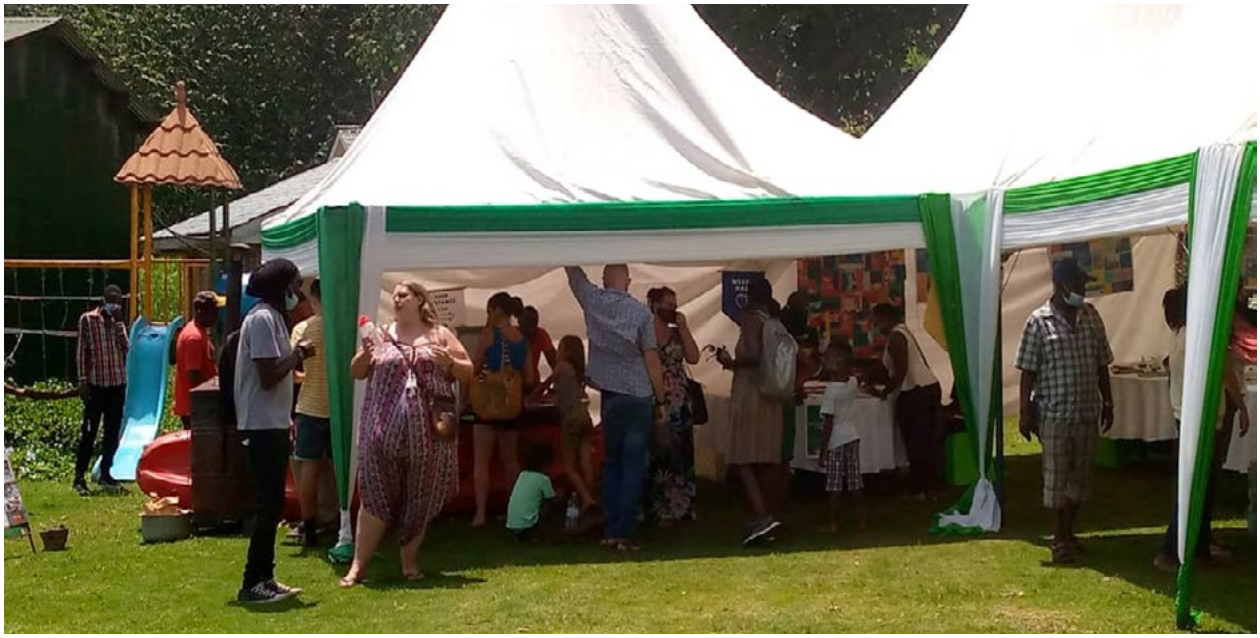
Here was a high level panel discussion organized to bring together VIPs, dignitaries and businesses to share views on the question of the need for a regional consensus on the use of single-use plastics. The Minister of Water and Environment was the Guest of Honor to officially receive the Flipflopi and inaugurate the occasion.

## Victoria Nyanza Sailing Club-Kampala School event: Sunday 21stMarch

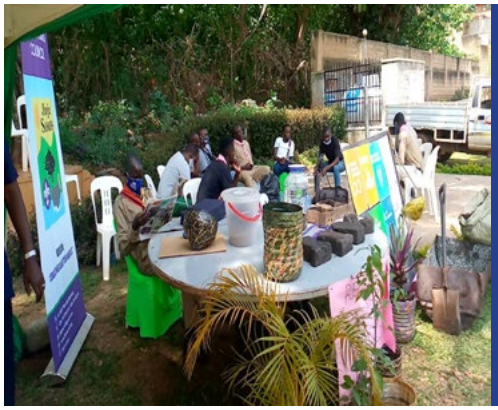
Here five local and international schools participated in a plastic bottle boat building competition and race.

## Entebbe Sailing Club Event: Sunday 21stMarch

Here a recycling workshop for youth on local environmental and circular economy initiatives was promoted with participation of Wakiso Environment Office, the Water Research Institute, Lake Victoria Environment Management Project and the Nile Basin Initiative.



*A recycling workshop for youth and a call to private sector to take actions against single-use plastics*



*Exhibitors showing some of the products made from recycled plastic in support of green circular economy*

# Introducing the State of the River Nile Basin Report 2020

The challenges facing the Nile Basin are complex and continue evolving. They include population pressure, land use changes and rapid urbanisation, uneven distribution of resources, which are dwindling, pollution of water resources and disappearing ecosystem habitats as well as emerging pressures like climate change.

Plans by Nile Basin Initiative (NBI) Member States for developing the common Nile Basin water resources are constrained by these challenges. This is not withstanding limited data and knowledge on the abundance and variability of the resource itself. Member States therefore need well synthesised and factual information to enable them make evidence based decisions for better use and protection of the scarce water resources.

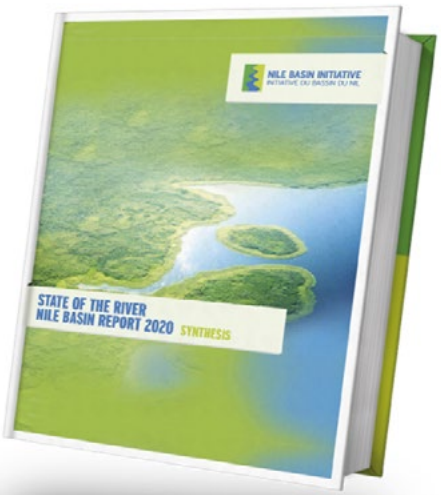
The second State of the River Nile Basin Report 2020jointly prepared by NBI and Member States was launched during Nile Day on February 22, 2021 by the Chairperson of the Nile Council of Ministers who is also Rwanda's Minister of Environment Hon. Dr Jean d'Arc Mujawamariya. The NBI first published the State of River Nile Basin Report in 2012.

The regular State of the River Nile Basin Report is part of the suite of Basin monitoring tools (including, for example, the Nile Basin Water Resources Atlas) prepared by NBI. It is aimed at critically assessing facts, trends, patterns, synthesis and indicators for both the Basin health and multiple biophysical conditions and also establishes the foundation and structure for Basin reporting. The report provides policy makers, senior government officials and the international development community, a basis for well-informed decision-making.

The report is meant to be used as a reference document and source of data and information for formulating or reviewing policies and also when making decisions on planning, design and implementation of water resources management and development projects.

By targeting diverse audiences, including politicians, government officials, development workers, media experts, academicians, researchers and all citizenry of the Member States, the report is also aimed at further cooperation among stakeholders as a key driver of sustainable and equitable utilisation of the Basin's resources.

The contents and structure of the report are guided by the six priority areas of NBI's 10-year Strategy (2017–2027), which advocates key strategic directions that were agreed by Member States and sets the ambition for delivery of impact on the ground. The priorities include (i) water security, (ii) energy security, (iii) food security, (iv) environmental sustainability, (v) climate change as well as (vi) Transboundary governance. For each of these themes, the current state, main trends, drivers of change and management responses have been identified.




This 2020 report was prepared with financial support from the European Union and the German Federal Government through GIZ. Numerous professionals within and from outside the Nile Basin contributed to its preparation and their role is acknowledged.

Find out more: https://bit.ly/3bWmfDn

*Dr Michael Kizza*
Senior Water Resources Management Specialist
NBI Secretariat, Entebbe

# The 6th Nile Basin Development Forum

*Underway Process to Join Webinars Simplified*

The Nile Basin Initiative and the Federal Democratic Republic of Ethiopia in collaboration with partners is organsing the 6th Nile Basin Development Forum (NBDF), now under way in form of webinars. The latter began on March 9 and will continue until April 29, 2021

The over-arching theme for the Forum is 'Rethinking regional investments in the Nile Basin: Water | Energy | Food | Environment| Climate Change.' The theme is timely taking into account that Nile Basin citizens, building on the work of NBI over the past two decades, are moving towards a new approach to regional/Basin planning and investment agenda. The goal is to enhance transformative processes and projects that will contribute to NBI's Shared Vision Objective: to achieve sustainable socio-economic development through the equitable utilisation of and benefit from the common Nile Basin water resources.

The 6th NBDF is structured along five key topics namely Water Resources Management; Water-Food-Energy Security Nexus; Environment; Water and Climate; as well as Transboundary Water Governance. The topics are also in line with the six pillars of the NBI 10 Year (2017 – 2027) Strategy.

The Forum is organised both as a physical and virtual conference. The launch and most of the technical sessions are organised as webinars while the concluding plenary sessions shall be organized with limited physical presence of participants, with the majority joining over virtual platform.

Join a webinar of your interest https://zoom.us/j/98882909742?pwd=bzFablVnMWY5RGdWSFB6d2ZOU0NBUT09. This link works for all the webinars.

## Registration to join webinars

While, failure to register will not prevent you from joining the webinars (Join a webinar of your interest), we encourage you to do so for our record keeping purposes. To register, please visit https://www.eventleaf.com/nbdf. You only need to register once, not every time a webinar is running

View the programme of webinars https://www.eventleaf.com/nbdf.

The 6th NBDF is organised with support of GIZ on behalf of the European Union and German Federal Government as well as the World Bank and Cooperation in International Waters in Africa (CIWA).

The NBDF is a high level regional science–policy–dialogue jointly organized by the Nile Basin Initiative (NBI) and its Member States. The objective of the Forum is to build a common understanding among stakeholders – policy-makers, scientists, practitioners, and the public at large – on the status of the common water and natural resources base, the shared complex challenges and ultimately, to exchange perspectives on the solutions for addressing the water security challenges facing the Nile Basin countries.

*Jane K. Baitwa*
Communication and Stakeholder Engagement Specialist
Nile-SEC, Entebbe

## INTERNATIONAL UNION FOR CONSERVATION OF NATURE (IUCN)

## UGANDA COUNTRY OFFICE

***A Partner of the Ministry of Water and Environment in the Uganda Water and Environment Week, 2021***

IUCN is a Membership Union composed of both government and civil society organizations. It harnesses the experience, resources and reach of its more than 1,400 Member organizations and the input of more than 17,000 experts. This diversity and vast expertise makes IUCN the global authority on the status of the natural world and the measures needed to safeguard it.

### IUCN Uganda Vision:

Healthy and Resilient ecosystems for inclusive social-economic transformation.

### IUCN IN UGANDA

IUCN commenced operations in Uganda in 1991 and has over the years been recognized as a key partner in shaping the country's' conservation agenda. IUCN supports the development and implementation of national environment and natural resources strategies and programmes. Through its members and experts, IUCN generates trusted knowledge and experience that has shaped policy and practice in environment and natural resources management and governance and socio-economic transformation at national and local government levels, as well as grassroots demonstration of nature based solutions to address societal challenges.

### IUCN Country Programme

***Integrated Water Resources Management Programme:*** Supports government to manage and develop water resources in an integrated and sustainable manner for all social and economic needs of the present and future generations and with the full participation of all stakeholders.

***Nature based Solutions for Climate Resilience Programme:*** Builds on Government's recognition of the role of biodiversity and ecosystem services for climate change adaptation and mitigation, and catalyse actions towards realizing Uganda's commitment for 22% greenhouse gas (GHG) emissions reduction by 2030 as defined by the Nationally Determined Contributions (NDCs).

***Sustainable Landscape Management for resilient Ecosystems and livelihoods Programme:*** Supports the realization of landscape restoration for enhanced livelihoods and ecosystems through scaling up and catalyzing restoration actions to attain the Land Degradation Neutrality (LDN) and Bonn Challenge pledge to restore 2.5 million hectares of degraded and deforested land by 2030.

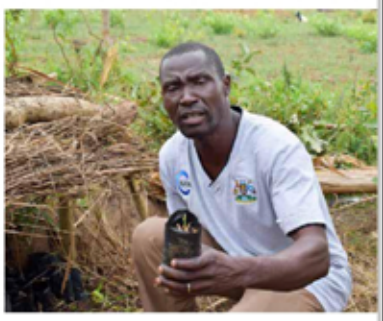
***Protected Area Governance Programme:*** Focus on establishing collaborative partnerships to develop and implement core actions in the National Biodiversity Strategy and plan of action, which focuses on enhancing biodiversity conservation, management and sustainable utilisation and fair sharing of the benefits for socio economic development.

## IUCN CONTRIBUTION TOWARDS UGANDA WATER AND ENVIRONMENT WEEK (UWEWK)

Since its inception in 2018, IUCN has been a key partner in the commemorating of the annual Uganda Water and Environment Week (UWEWK) convened by the Ministry of Water and Environment (MWE), through sponsorship of events, sharing lessons and innovations and providing expert knowledge and lessons on emerging trends and innovations in water and environment management.

### The Resilience for People and Landscapes Programme (REPLAP)

REPLAP is a three-year innovative project aimed at building the resilience of communities and ecosystems within selected river sub-catchments to the impacts of increasingly severe and frequent drought, through strengthened ecosystem management and adaptive capacity. The project is being implemented within the Aswa catchment in Northern Uganda, with a target of directly benefitting 386,000 vulnerable nomadic pastoral and agro-pastoral community members through nature based solutions.



### REPLAP Innovations and Lessons

#### Shea value chain

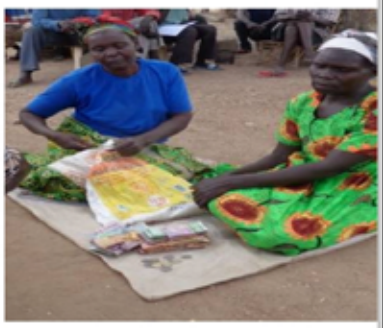
REPLAP is supporting communities protect indigenous trees and diversify livelihood incomes through processing of shea nut products (Vaseline, cooking oil and cooking fat). Over 1,200 beneficiaries (85% women) have been supported to triple their incomes through sale of processed shea products. The communities have also been able to register as a cooperative association for the production of Shea, which has enabled them to communally market their product and negotiate a better price for the Shea oil. The added value to the traditional tree has also reduced cutting of the shea tree for charcoal, thus improving the health of the catchment (shea is about 40% of the tree cover in the project area).

#### Community led catchment restoration

By supporting communities to develop and implement restoration action plans, IUCN has supported the communities to demarcate over 198Kms of river banks and streams, restoration of over 600ha of wetlands, restoration of 200ha of degraded agricultural landscapes in the districts of Lira (Orit parish), Otuke (Arwotngo, Ating, Angetta, Anepkide parishes), Alebtong (Alololollo parish), Kapelebyong (Akileng parish) and Agago (Mutu parish). In addition, over 225 water sources (boreholes, shallow well, traditional wells) were brought under better management by constituting self-governing management committees.

### The Community Environment Conservation Fund (CECF)

CECF is a sustainable innovative mechanism for catalyzing communities to engage in catchment restoration and management while providing for their socio-economic needs in the short, medium to long term. The CECF provides a financial incentive to address the livelihood needs of communities, while catalyzing them implement restoration actions within their landscapes. Under the REPLAP/BDR, IUCN has provided over $80,000 to communities to enhance their livelihoods, while restoring over 600 ha of degraded wetlands and landscapes and demarcating over 198km of riverbanks. The CECF is a scalable mechanism that IUCN recommends for supporting catchment restoration in Uganda



# Restoring Wetlands for Water and Environment Security

In order to curb increasing degradation of wetlands and associated effects, government has come up with several initiatives including building resilience of communities and wetland to mitigate climate change impact. Human activities are increasingly delinking water from wetlands, a phenomenon that is drastically affecting livelihoods of many communities. It is estimated that up to 50% of inland wetlands have been lost globally, with the biodiversity of the inland wetlands being the most affected. In Uganda, over the past 15 years, 30% of the country's wetlands have been lost due to human activities.

Ministry of Water and Environment ( MWE) in partnership with Ministry of Agriculture Animal Industry and Fisheries (MAAIF) and the National Metrological Authority(UNMA), is implementing the eight-year (2017-2025) the Building Resilient Communities, Wetland Ecosystem and Associated Catchment Areas in Uganda project worthy USD 44.262m in 24 South Western (Mitooma, Buhweju, Sheema, Kabale, Ntungamo, Bushenyi, Rubirizi, Kisoro,Kanungu, Rukungiri, Rukiga, Rubanda,) and Eastern (Bukedea, Palisa, Ngora, Kibuku, Namutamba, Tororo, Kaliro, Butaleja,Butebo,Kumi,and Budaka) districts. Of USD 44.262m; USD 24.140m is a grant from Green Climate Fund (GCF), USD 18.48m is a co-financing from the Government of Uganda (GoU) and USD 2m is a contribution from the United Nations Development Program (UNDP).

***To date, up to 11,792 ha of wetland restored, (4,694 ha - South Western, 7,098ha - Eastern) and 5,050 ha of catchment restored have been restored, 2,125 (63% female) households have adopted a wider variety of livelihood strategies/ coping mechanisms...***

Four years into project implementation, benefits arising from economically viable alternative livelihoods so far provided (such as; horticulture, heifers, turkeys, piggery and fish farming) indicates that it is actually possible for communities to benefit from wetlands without necessarily affecting the ability of the wetland ecosystem to continue providing vital ecosystem services.

To date, up to 11,792 ha of wetland restored, (4,694 ha - South Western, 7,098ha - Eastern) and 5,050 ha of catchment restored have been restored, 2,125 (63% female) households have adopted a wider variety of livelihood strategies/coping mechanisms. 38 ha of agricultural land made more resilient to climate change through agricultural practices(e.g. planting times, new and resilient native varieties, efficient irrigation systems adopted), 7,322 households vulnerable households, communities, businesses and public-sector services of Fund-supported tools, instruments, strategies and activities to respond to climate change and variability, 3540 males and females reached by climate-related early warning systems and other risk reduction measures established/ strengthened.

The project that takes a multi-sectoral approach in its implementation establishes wise use wetland demonstration sites to illustrate to communities how to sustainably use wetlands. The first demonstration site is at Limoto wetland in Pallisa district. The site consists of a water retention facility, mini-irrigation scheme, fish pounds, and watering troughs for cattle. Several others have/

are being constructed in Ngora, Bushenyi, and Sheema among other benefiting districts. This model explains the project logic that, if wetlands are restored, water storage and supply will increase, hence ensuring water availability and enhanced community resilience to climate change related impacts. If this water is provided closer to people (through micro and mini irrigation schemes using solar and other appropriate technologies); and necessary nutrients added to the soils, production enterprises developed that add monetary value, and early warning systems are in place to guide proper planning of these alternative livelihood activities, then the need, and pressure to encroach on wetlands will reduce and wetland adaptation related benefits will increase.

Indeed the model is beginning to pay off and government is enthusiastic that tangible success in building community and wetland resilience is being attained as community members voluntarily leaving the wetlands are registering better livelihoods whilst wetlands are left to regenerate.

Positive attitudes and behaviours of former wetland users who have received alternative livelihoods is a clear indication of the possibility to reclaim the country's lost wetlands. As such, government may need to continue focusing the minds of wetland users to improved farming practices in the catchment if the issues of wetlands degradations are to be addressed.

The Wetland Restoration Project demonstrates that provision of alternative livelihoods to communities can be very effective in relieving wetlands of human pressures. As a result several wetlands being restored under the project including; Limoto Wetland, Nyaruzinga, Nyamuhizi Kagogo, and Mpologoma among other wetlands are progressively regenerating.

Ms. Elsie G. Attafuah, UNDP Resident Representative observes that the unwise use of wetlands had drained them of water, aquatic life and vegetation, eroding the provision of critical ecosystem services. "For example, in Pallisa District, the degraded Limoto wetland lay bare, dry and only covered with patches of grass and thickets. Residents had descended on the wetland to grow rice, graze cattle and extract raw materials. When the residents vacated voluntarily, and the project provided them with alternative livelihoods such as poultry, zero grazing cattle, fish ponds, an irrigation scheme and water troughs, the wetland regenerated: It has now regained its natural vegetation, with abundant water and bubbling with aquatic life. On a serene morning, you can hear the sound of the birds and croaking of the frogs. The residents can once again benefit from the wetlands in a sustainable manner," Ms. Attafuah, noted.

According to Mr. Alfred Okot Okidi the Permanent Secretary Ministry of Water and Environment, the wetland restoration project is thus spot on as it has demonstrated that communities can co-exist with wetlands while enjoying their ecosystem services.

"Participation of communities in conservation is key to the success of the wetland restoration interventions and provision of alternative livelihoods will be instrumental to the success of such initiatives" he notes.

The current project achievements therefore, fit well with the Uganda Water and Environment Week2021 theme:"Water and Environment security for Socio-Economic transformation of Uganda. However, this can only be realised, if stakeholders start valuing and managing wetlands and water – and treat both as a collective responsibility, stop constructing dams, divert or drain, stop destroying, but rather restore, reduce industrial use of water by 50%, make agriculture wetland/water stewards, increase investment in wetlands as nature based solutions for water resource management, currently less than 1%.

There is also need to integrate water resource management across all sectoral policy and planning locally, national, internationally, increase sustainable demand for water through protection, restoration and wise use of wetlands and coordinate water, land and resources to deliver maximum social and economic welfare fairly without compromising sustainability of ecosystems.

By:

*Jimmy Brian Toko,*
UNDP
jimmy.toko@undp.org

# Enhancing the Resilience of Communities to Climate Change through Catchment Based Integrated Management of Water & Related Resources

*Active tree nursery established in Kween District – Awoja catchment*

Uganda continues to suffer from the impacts of climate change in the form of floods, droughts and landslides among others. These impacts affect the communities through displacements, destruction of their infrastructure and sources of livelihood all of which result in increased poverty levels.

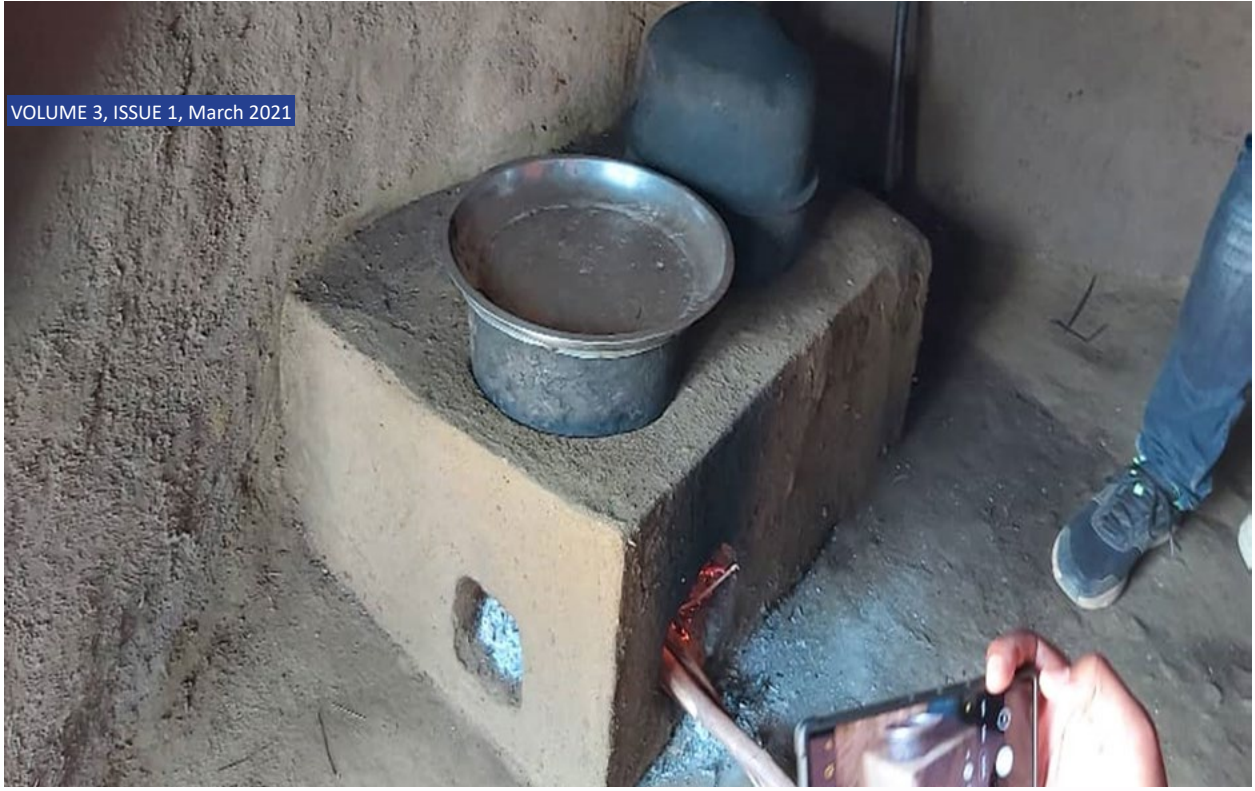
There is therefore a need to enhance resilience of these communities to impact of climate change. One of the important ways is through a catchment based integrated management of water and related resources.

In this article an example of how the resilience of communities to climate change is being enhanced through a project called Enhancing the resilience of communities to climate change through catchment based integrated management of Water and related resources in Uganda (EURECCCA) project started in May 2017. The project, whose overall goal is to increase the resilience of communities to the risk of floods and landslides through promoting catchment based integrated, equitable and sustainable management of water and related resources, is being implemented in the 3 catchments of Awoja, Maziba and Aswa located in Kyoga Water Management Zone, Victoria Water management Zone and Upper Nile Water Management Zone respectively.

The project has been the first of its kind in the Water and Environment sector and Uganda at large. Its philosophy and implementation arrangements have been well appreciated as a good case example for an integrated national project and locally, as one that involves the communities as well as brings tangible results and benefits to the project communities such as the establishment of tree nurseries, restoration of degraded areas through afforestation and promotion of energy saving cook stoves with the overall goal that a community's resilience to climate change has been enhanced.

One of the specific objectives of the project is to increase the resilience of ecosystems by supporting sustainable management of forests. As a means of community support and outreach, nine (9) tree nurseries (3 in each catchment) were identified during the baseline study that was conducted at the beginning of the project, during which it was realised that the tree nurseries were operating at minimum capacity. The project then supported the nurseries with locally tailored trainings on establishment of tree nurseries, marketing, planting of seedlings accounting, management and business planning.

*Mukirwa women group in Maziba catchment that has produced 1463 cook stoves so far*



*A energy saving cook stove being used in Agago district - Aswa catchment*

Tools and inputs like water tanks, a variety of seeds, mini irrigation systems, hoes, watering cans etc. were also supplied to them which gave them a big boost that has enabled them to;

- Produce the required species of tree seedlings of good quality,
- Supply over of 800,000 tree seedlings to community members in the different catchments in order to restore degraded areas and establish woodlots around their homestead, at a subsidized rate,
- Follow up and support the farmers to grow the trees in order to realise a high survival rate,
- Manage their enterprises as a business,

This has made a tremendous impact on the tree nursery operators through the money got from selling the tree seedlings and also impacted the community members who are growing the trees and hope to harvest them in future.

The community members that have received seedlings for planting have also been supported with energy saving stoves which are produced by 18 women groups that were identified during the baseline study.

The women groups which consist of between 30-45 members were trained by the project on how to produce 2 types of cook stoves (rocket lorena and fire shielded).

They were also given training in , business management, management of community dynamics and book keeping. The groups have also been supported with tools and inputs required to make cook stoves (the raw materials are provided by the benefiting household). The support has enabled them to;

- Produce and supply over 7300 cook stoves in various households at subsidized rate,
- Conduct sensitisation among the community members in order to create demand and awareness about the energy saving cook stoves
- Manage their enterprise as a business
- Train other women groups beyond the project area in order to increase on the outreach

This has made a tremendous change in the lives of the women.

The cook stoves use about 20% of the energy compared to the conventional 3 stone cooking method that the community members in Aswa, Awoja and Maziba were using. The community members have also boasted of having their food cook faster than usual, have less smoke and hence reducing on the chest problems.

The woodlot supported by the project will therefore play a major role in supporting the use of these cook stoves while reducing on degradation of the environment. In future, once the woodlot is harvested, the established tree nurseries will be available to provide seedlings for planting again.

The activities of tree nursery establishment in the project area, woodlot establishments in different homesteads coupled with the use of energy saving cook stoves have greatly increased the resilience of communities to climate change through improved tree cover hence reduced degradation, economic empowerment of the different categories of the people, and awareness that has been created among the communities.

By **EURECCA Project Team**

# Obituaries

*"I have fought the good fight, I have finished the race, I have kept the faith". 2 Timothy 4:7*


The Ministry of Water and Environment family lost two of its former directors. Mr. Paul Mafabi, Director of Environmental Affairs and Eng. Sottie Bomukama, Director, Directorate of Water Development over the last 6 months.

**Mr. Paul Mafabi** was very well known locally and internationally as the father of wetlands in Uganda. He single handedly made a case for wetlands management and demonstrated the contribution of wetlands to socio-economic development of Uganda. At the time of his he was in charge of a big wetlands management project supported by the Green Climate Fund. He will be remembered for his passion and hard work for environmental management.

**Eng. Sottie Bomukama** was well known for his great and tremendous contribution to the growth of the water sector over his career.

He not only mentored many young engineers and scientists and ensured that capacity training programs were designed for them to enhance their capacity.

He promoted the cause for water and ensured that Ugandans in both rural and urban areas have access to safe drinking water.

Additionally, the Ministry lost a vibrant young Groundwater specialist **Gaston Osiimwe** in the wee days of 2021 at prime age of his career.

He contributed greatly to the advance of groundwater resources management and was key in the production of groundwater maps used to guide groundwater development in the country.

They will always be remembered for their good deeds, great work and effective service.

*May their Souls Rest in Eternal Peace?*

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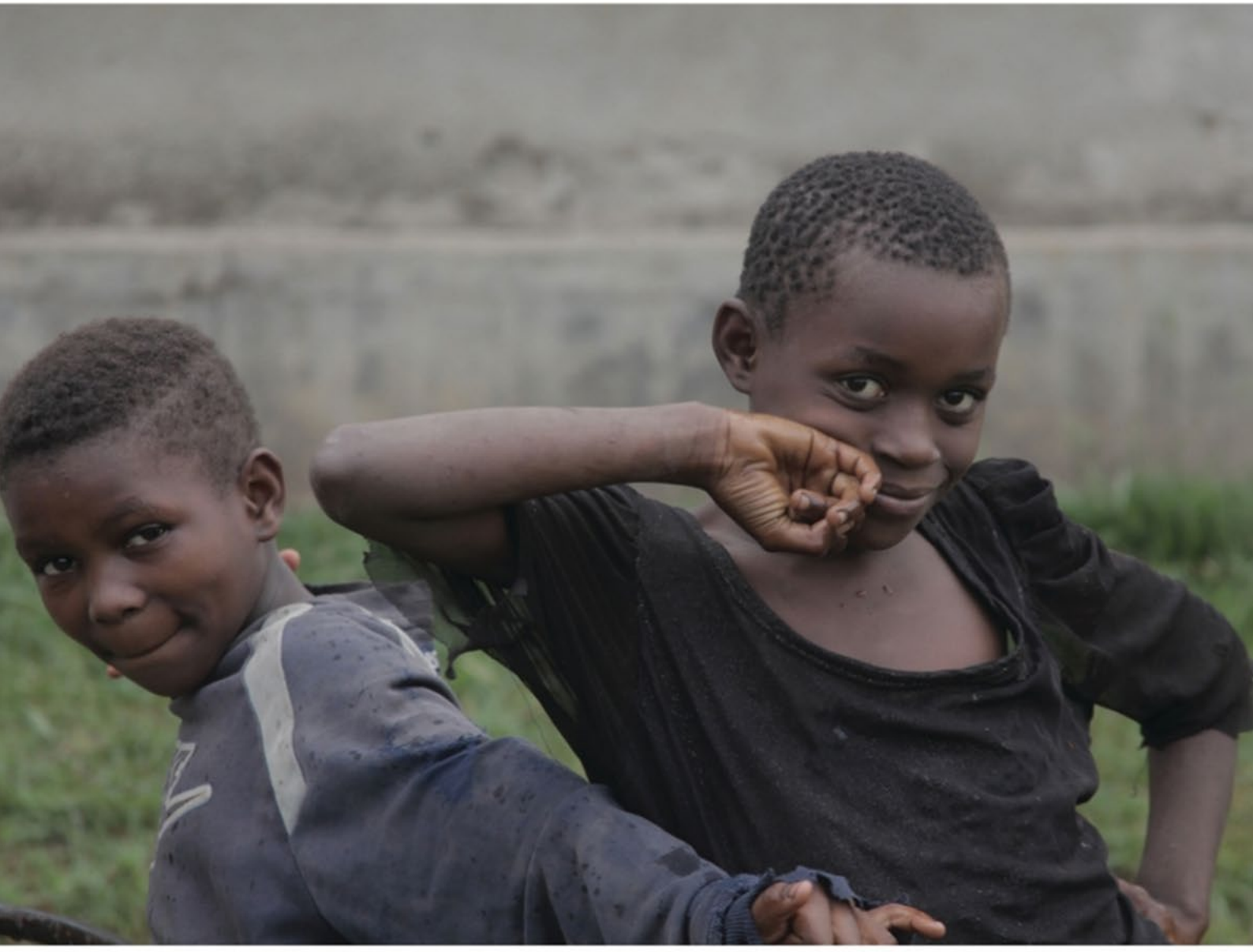

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