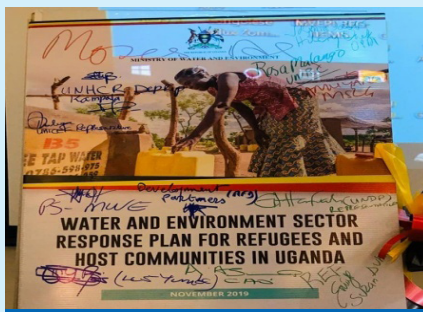


# THE WATER AND ENVIRONMENT MAGAZINE



VOLUME 2, ISSUE 1, September 2020

## Water and Environment for Inclusive-growth, Employment and Wealth Creation



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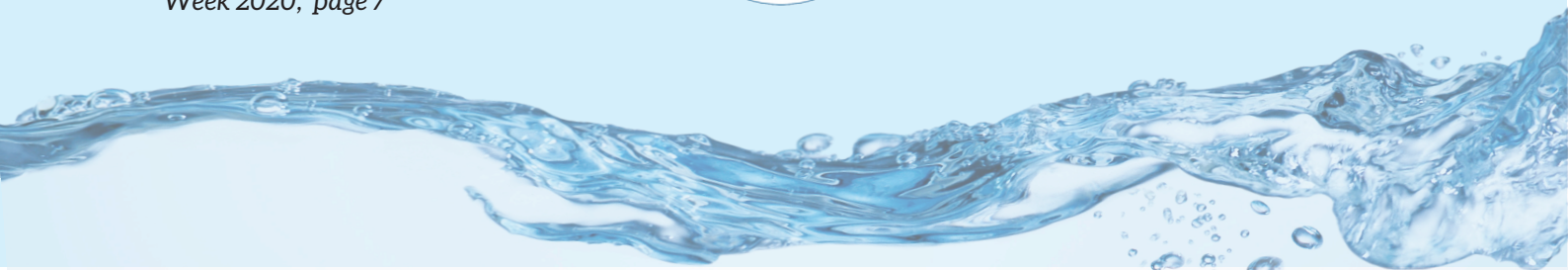
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## THE WATER AND ENVIRONMENT MAGAZINE

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**Main Cover Photo:** MWE Officials on an inspection visit to Orwamuge Town Water Supply and Sanitation System in Abim District, currently serving over 22 Villages

## THE WATER AND ENVIRONMENT MAGAZINE

The Water and Environment magazine is a publication prepared as part of the Uganda Water and Environment Week (UWEWK) 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 engagement through outreach. Preparation of this magazine is coordinated by the Water Resources Institute and the authorship is mainly from the Water and Environment sectors although its readership is intended for all.

### THE WATER RESOURCES INSTITUTE (WRI)

The Water Resources Institute (WRI) has been established within the MWE as a 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 Editors' desk

Dear esteemed reader, it is again with pleasure that we present to you another edition of the Water and Environment Magazine. Our first edition generated a lot of interest that we had to follow it up and still indulge you in a quick review of what the water and environment sector has been up to over the last one year.

This year's Water and Environment Magazine has once again been timed around the Uganda Water and Environment Week-2020 (UWEWK2020) when the Ministry of Water and Environment, its partners and other stakeholders showcase the many activities taking place within the sector but also remind us of the enormous tasks still left to be done. The magazine has therefore been produced to relate to the UWEWK2020 theme: "Water and Environment for Inclusive-growth, Employment and Wealth Creation"; but also to challenge the sector to respond to these unprecedented time of COVID19, raising water levels, flooding and loss of jobs.

This year's UWEWK conference which was scheduled for 23rd to 27th March 2020 at the Water Resources Institute-Entebbe shall now not be held face-to face but through various online platforms and via live television broadcasts from 13th to 18th September 2020 due to the current ban on all public gathering and conferences which was issued on 18th March 2020 by His Excellence, the President of Uganda due to the current COVID19 pandemic.

Since the Magazine goes out during the UWEWK and continues to contribute to the sharing of information and knowledge about the sector, and also as a form of service to our beloved country, this issue, which has been quickly put together to coincide with the upcoming online UWEWK20 shall mostly be made available on the Ministry and Water Resources Institute's websites and other digital fora for easy access and download while a limited number of hard copies shall be printed.

The Water Resources Institute is featured in the magazine and they would want you, the reader to see the continuous progress they are making; this year they launch their Strategic and Business Plans among other things and their story is told.

Yet again, there is still a group from the Ministry of Water and Environment in partnership with the Walkers Association of Uganda walking to raise awareness about issues pertinent and related to water, environment and climate change; last year they "walked from Kampala to Zoka forest in Adjumani and this year, having gained more followers, are walking more than 330kms from Mabira Central Reserve Forest to R. Rwizi, we captured this walk and let us tell you about it.

This year has already seen so many happenings within the sector and most notably is the appointment of "Mama Mabira"-Hon. Beatrice Anywar Atim as the State Minister for Environment. The magazine caught up with her and surely she did not disappoint during the interview and it is our pleasure to bring it to you, please read on. Also included in this edition are articles on: the Water Resources Institute, Key achievements and future prospects within the water and environment sector, Appropriate infrastructure planning as a pre-requisite for sustainable WASH services, etc. which we would like to invite you to read.

Knowing full well that the views and opinions expressed herein are not necessarily of the editorial team, WRI and the MWE; as always, allow me thank and recognize the various contributors who have lent their time and wise counsel to make this magazine possible. Also in a special way, allow us recognize the organisations that have provided resources to support the production of this magazine, either through sponsorship or advertisements; thank you once again.

**Enjoy!**

# Message from the Minister of Water and Environment



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

Thank you for picking up the second edition of the Water and Environment Magazine and allow me welcome you to the Uganda Water and Environment Week 2020 (UWEWK2020).

This edition is intended as a mouth piece for all players in the water and environment sector to highlight key achievements over the past year, inform about future prospects and draw attention to the challenges the sector is facing.

The UWEWK, now in its third year gives us an opportunity as stakeholders within the sector and the general public to deliberate on this year's theme: "Water and Environment for Inclusive-growth, Employment and Wealth Creation". Despite the current challenges posed by COVID19 and gathering restrictions, it is still upon the sector to demonstrate that water and environment remain vital and strategic resource for life, subsistence, socio-economic development and transformation to

an industrious and prosperous society; it's for this reason that the sector decided to host the event on-line.

At UWEWK, as we celebrate the achievements and growth within the sector, foster new thinking, dialogue and network, let us ponder upon on how to sustain and improve where we have registered successes but not forget the enormous challenges that still face us as a sector especially in relation to this year's theme and find solutions to tackle these challenges.

More specifically, the inadequate financing of the sector which continues to receive less than 3% of GDP, raising water levels and flooding, worrying cases of pollution and degradation of our water and environmental resources afflicted by natural but mostly human factors, which therefore calls for immediate action.

To this, the sector plans to ensure that all other sectors ministries, departments and agencies integrate and prioritize water, environment and climate change in their planning and execution of their activities; I therefore pledge my ministry's continued support.

On this note, allow me to thank the organizers and wish all participants a good reading of the magazine and a successful UWEWK.

Thank you once again.

For God and My Country.

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

# Walking 330kms for Water, Environment and Climate Change; from Mabira Forest to Rwizi catchment

In a continuation of last year's "Walk for Zoka", the Walkers Association Uganda (WAU) in partnership with the Ministry of Water and Environment rallied concerned stakeholders and the public to walk 330km from Mabira Central Forest Reserve (CFR) in Buikwe district to the Rwizi catchment in Mbarara district, from 10th to 20th March 2020. This was done to not only raise awareness about the Uganda Water and Environment Week 2020 (UWEWK20) but also draw attention to the importance of conserving water and environment resources in the country.

During the walk, mini celebrations were held at key points along the route and relevant stakeholders were engaged in several activities such as: general clean up exercises, environmental restoration activities like tree planting, distribution of tree seedlings to the communities along the way, sensitization of communities on importance of the riverbank protection and catchment management approach, school drama clubs played skits on natural resources for wealth creation and employment, etc.

Also lobbied along the way was the Uganda Manufacturers Association, the Parliament of Uganda, local government and communities, cultural and religious leaders, civil society organisations, etc. A simple count after the walk had at least: 15 schools along the Buikwe-Mbarara route engaged on sustainable use of water and environmental resources, over 100,000 tree seedlings planted or distributed to community members and 5 community sensitization meetings on water and environment conservation held. It only remains to be seen what impact was left by the walkers; otherwise, Mabira CFR which covers a total area of 29,974Ha has encountered

several challenges ranging from massive encroachment to proposed degazettement for sugarcane growing while the Rwizi catchment is facing challenges of increased population, increased need for agricultural production and industrialization, wetland degradation, deforestation and encroachment on river banks. This initiative from the WAU and others needs to be continued to draw attention and seek solutions to other water and environment challenges in the country. Well done WAU!



*The Archbishop of the Church of Uganda, The Most Rev. Stephen Kazimba Mugalu blessing the walkers before their journey.*



*The Walkers made a stop at the Parliament of Uganda,*

# The Uganda Water and Environment Week 2020

Under the theme: *“Water and Environment Resources in Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation”*, the Uganda Water and Environment Week (UWEWK) has been once again organized by Ministry of Water and Environment (MWE) through the Water Resources Institute (WRI).

UWEWK is a weeklong event organized annually by MWE to contribute towards the attainment of Sustainable Socio-economic Transformation in achieving Ugandan National Development Plan and Vision.



*UWEWK2020 pre-event activities in the Upper Nile Region had locals clean up Gulu Town*

Since its inception in 2018, the event provides an interface between sector actors and other stakeholders for knowledge exchange, dialoguing, learning for improvement of Uganda’s water and environment resources. UWEWK2020, which was scheduled to run from Monday 23rd to Friday 27th March was postponed due to the Corona virus (COVID19) and now will take place online from 13th to 18th September 2020. It will explore the role water and environment resources play in increasing household incomes, improved quality of life of the population; and overall, a core for sustainable and socio-economic development which are primed in



*Minister of Water and Environment, Hon. Sam Cheptoris accompanied by Minister for State for Water and Environment, Hon. Ronald Kibuule flagging off the Walkers from Mabira Forest to R. Rwizi; one of the pre-event activities for the UWEWK2020*



*UWEWK2020 pre-event activities in the Albertine Region had the launch of native tree nursery beds in Ibanda and Kagadi districts.*

the National Development Plan (NDP) and Uganda Vision 2040. Special attention will be placed around the challenges caused by the COVID19 pandemic, the raising water levels and flooding, loss of jobs, etc.

*Continued on page 8*



A wide range of stakeholders from within the country, as well as regional and international levels are expected to participate, these include: Cabinet Ministers, the Members of Parliament and the Diplomatic corps, policy makers, technical specialists, academics, public and private sector institutions, civil society organizations, non-governmental organizations and consumers.

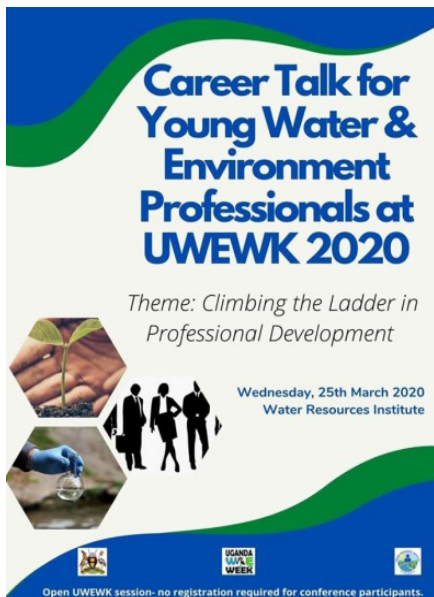
Despite the COVID19 ban on public gatherings and conferences, the UWEWK2020 will now take advantage of online platforms and television broadcasts to make available paper presentations, applied training, dialogues and exhibitions organized under the 3 sub themes.



Local and International exhibitions demonstrating the latest technologies and solutions for the water and environment sector



Local and International delegates at the opening ceremony of the UWEWK2019



One of the side events which was planned for March- UWEWK2020 will still take place but online.



Another pre-event of UWEWK2020: Running Out Of Tree (ROOT) campaign, is a private-public partnership that seeks to draw attention to the adverse impact of tree cutting and restore forest cover in the country.

Continued on page 9

**Targeted Participants:** Cabinet Ministers, the Members of Parliament and the Diplomatic corps, Policy Makers, Technical Specialists, Academics, Public and Private Sector Institutions, Civil Society Organizations, Non-Governmental Organizations, Users and Consumers, etc.

**Sub-theme 1:** Water and Environment Security for Inclusive-growth;

**Sub-theme 2:** Water and Environment for Employment and Wealth Creation;

**Sub-theme 3:** Climate change and achievement of NDP 3 goals.

*A scheme summarizing the activities for UWEWK2020*

- Planning and organizing the UWEWK 2020
- Publicity and awareness campaigns,
- The Water Security Conference
- Walking from Mabira Forest to Rwizi catchment
- Zonal clean up and tree planting activities
- Media campaign at national and regional levels

**Pre-Event**

- The Online Event**
- Exhibitions and side events
  - Keynote speeches, Paper and posters presentations
  - Panel discussions, Awards ceremony
  - Applied training, One-day field visits
  - Recognition of the International days: World Forest Day, World Water Day and World Meteorological Day;

- Evaluation reports,
- Publication of the proceedings
- Publication of WRI Journal
- Summary of the outcomes,
- Permanent Secretariat at WRI
- Sustain a post event media campaign

**Post-Event**

*Continued on page 10*

## Some highlights from UWEWK2019



MWE Director-Dr. Florence Adong congratulating youth stars-Keza Matsiko, Leila Kagere and Bonitor Murungi who inspired UWEWK19 participants on Water and Environment issues.



Participants at UWEWK19 take an exercise to demonstrate effective communication



MWE staff demonstrating how the Masulita solar powered water system works



School Children at Regional UWEWK19 awareness and tree planting activities

## MWE's work under COVID19 pandemic

On the 18<sup>th</sup> of March 2020, In the State of Nation address, His Excellency President Yoweri Museveni banned all public gathering in an effort to limit the spread of COVID19 pandemic. The Water and Environment sector has since followed this directive and set guidelines by the World Health Organization and the Ministry of Health-Uganda. Herein are examples of how the MWE and partners continue to deliver services despite COVID19 and its effects.

### How the MWE is continuing with its work despite the COVID19 pandemic:

- The MWE continues to encourage and emphasize that everyone should regularly and thoroughly wash their hands with water and an alcohol-based sanitizer or wash them with soap and water because this kills the viruses;
- Extensions of existing water distributions networks to ensure availability of water for use during COVID19 lockdown;
- The Ministry of Water and Environment through the Six Regional Umbrellas of Water and Sanitation has suspended disconnections for nonpayment of water bills.
- With support from private borehole drilling contractors, 30 boreholes were drilled in different locations for washing hands



*Sanitation measures and installed facilities at the Ministry Headquarters in Luzira to prevent the spread of COVID19 pandemic.*

**PUBLIC NOTICE**

The **MINISTRY OF WATER & ENVIRONMENT** through **UMBRELLA OF WATER AND SANITATION-MID WEST** is supporting government efforts in the fight against **COVID-19** by ensuring constant supply of safe water. We would like to inform our esteemed customers that disconnections have been suspended till further notice.

We encourage our customers to pay water bills to avoid accumulation of bills in future.

Kindly report any water related issues to Mid Western Umbrella Management.

**DIAL \*272# to pay using MTN Mobile Money or Airtel Money**

**TOLL FREE LINE: 0800256200, Tel: 0772 361 544 / 0701 361 544**

**#STAYHOME,STAYSAFE**

*Public notice by MWE on suspensions of disconnections and providing alternative ways to pay water bills*

**Challenges caused by COVID19 to the sector:**

- POSTPONEMENT OF THE FACE-TO-FACE UGANDA WATER AND ENVIRONMENT WEEK; although now talking place as an online conference, it was originally planned for March 2020 at the Water Resources Institute. Herein are examples of similar activities that had to be postponed due to COVID19.

- POSTPONEMENT OF THE NATIONAL TREE PLANTING DAY “40 MILLION TREES IN 8 HOURS”.

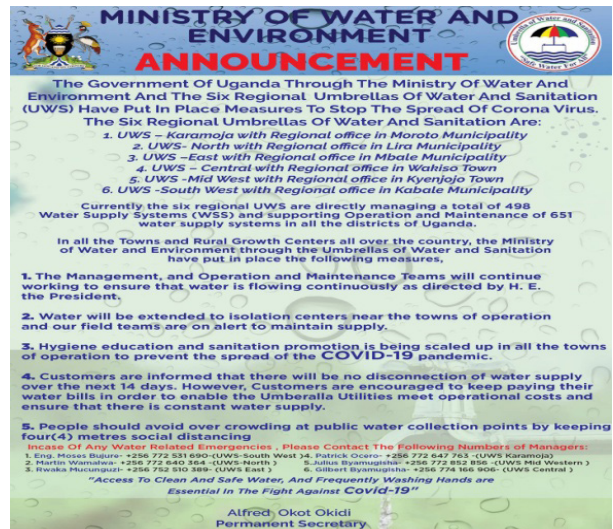
The Ministry of Water and Environment through the Forestry Sector Support Department (FSSD) has been organizing the National Tree Planting Day under the theme “40 Million Trees in 8 hours” and was to take place on 25th April 2020 where every Ugandan was expected to plant one tree as a symbol of environmental conservation.

- Postponement of THE AFRICA CLIMATE WEEK.

With support from the United Nations Framework Convention on Climate Change (UNFCCC), Uganda was to host the Africa Climate Week from 20th to 24th April 2020 in Kampala at Speke Resort Munyonyo Hotel but this was suspended.



MWE Officials, project Staff together with the Contractor held a site inspection to assess the progress of the on-going construction works while maintaining COVID19-SOPs.



Public Notice by MWE ensuring that all guidelines and principles set in the fight against #COVID19 are being adhered to.



During the handover of WASH facilities (10 public stand posts and 60 yard connections ) in Refugee Settlements and Host Communities, the MWE encouraging adherence to SOPs



*The Ministry of Water and Environment officials and Water Experts from the DR. Congo at the Water Resources Institute to learn more about the functionality of water quality systems and services under NELSAP- LEAFII.*

## The Water Resources Institute

Since its launch in March 2018 by the Prime Minister Rt. Hon. Dr. Ruhakana Rugunda, the Water Resources Institute has continued to profile the centrality of water resources in national development. It maintains a vision of ensuring that Uganda's water resources are optimally and equitably utilized.

The WRI focuses on 4 thematic areas:

- **Applied training**- continuous professional development for career growth; offer courses for officers joining the water sector in the country and lifelong learning opportunities;
- **Applied research**- Delivering a practical problem-solving process that applies innovation to existing water resources and environment challenges faced by the country;

**Outreach**-to increase sharing and linkages of the sector's wide experience, new ideas, innovations and practices in water and environment related issues with other organizations, media and general public;

**Our Values:** Professionalism, Innovation, Collaboration, Client focused, Stewardship and Diversity.

**Mission of the WRI:** Is to be a centre of excellence that provides cutting edge applied research and training; a neutral place for dialogue and out research; for professional skills development across all levels in water resources management and development to influence practice and policy for sustainable social economic development in the country



*Applied Training is one of the corner stones for the WRI.*

*Continued on page 14*



*Participants after receiving their WRI training certificates*

- **Dialogues**-Offer structured and well facilitated dialogue at national level that is necessary for improving the water resources management and development in the sector at all levels.

#### **WRI Facilities:**

The Institute has 5 training rooms (Nyagak, Edward, Mpologoma, Albert, and Kyoga) with a combined carrying capacity of 280 people.

These are well equipped with projectors, tables, chairs, computers, and Wi-Fi internet connection. The WRI also has two modelling rooms each with a capacity of 15 participants and a food canteen.

Key partners of the WRI include: Drilling Contractors Association, UNHCR, UNICEF, UNESCO, AMCOW, GIZ, Lake Victoria Basin Commission, IIASA Austria, UNINE University Switzerland, and Water for People.

The WRI has since developed a 10-year Strategic Plan (2019-2028) that will be implemented in three phases:

- Immediate phase covering 2019/2020 FY,
- Short term phase covering 2020/2024 FY and
- Medium term phase covering 2025/2028 FY and a 5-year Business Plan (2019-2024), that will look into:
  - Costs of WRI's products and services
  - Target market segments, clients and competitors
  - Strategies to grow the market and strengthening competitiveness

Establishing Partnerships and resource mobilization

## Achievements So far:

### Conferences:

- UWEWK2018 *“Water and Environment a catalyst for Achieving Middle Income Status 2020”* with about 400 participants, nationals, regional and international partners.
- UWEWK2019 *“Water and Environment a strategic driver in attainment of Sustainable Development Goals 2030”* with about 1000 participants both national and international.
- GLACAM *“protecting water and land resources in Africa for climate change adaptation and improved livelihoods”* with about 200 participants national, regional and international.
- UWEWK2020 -ongoing *“water and environment resources in Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation”*

### Short Courses Trainings

In order to bridge the gap between theory and practice, the WRI Institute has continued to conduct applied trainings with participants awarded with certificates of attendance. Since its establishment the Institute has:

- Conducted 38 short trainings (1-5 days each) with a total of 1195 local and international participants.
- Some of the different organizations that have received training from the WRI include CapNet, WaterAid, Nile-IWRM Net, Global Water Partnership, World Bank, and Uganda Drilling.



Participants utilizing the facilities at WRI



More of such capacity building trainings to be organised by MWE for their technical staff



# Key Achievements of the Water and Environment Sector

Key sector achievements taken from the Ministerial Policy Statement for Financial Year 2020/2021

## Key Achievements during FY2019/2020 included among others:

- Sector input into the National Development Plan III (NDP-III) was prepared and submitted to National Planning Authority;
- Sector was accredited as an implementing entity for Adaptation Fund and Green Climate Fund;
- Eight (8) projects were approved for inclusion into the Public Investment Plan.
- The Water and Environment Response Plan for refugees and host communities in Uganda was prepared and launched.
- Conducted sensitization on HIV/AIDS Capacity building workshops for Ministry staff and contractors in mainstreaming HIV/AIDS;
- Conducted HIV counseling and testing for 300 staff;
- Developed the Gender resource book, mainstreaming implementation manuals and capacity building trainings;

Continued on page 17



Senior Government Officials launching the Water and Environment Response Plan for Refugees and Host Communities in Uganda (2019-2022).



MPs from the Natural Resources Parliamentary Committee applaud MWE staff for proper accountability and the good work done to ensure that the committee is always aware of ongoing works across the country



MWE joining a National campaign calling upon all Ugandans to protect themselves, their families and their communities from Ebola



MWE involved in awareness raising HIV-AIDS through activities within on-going projects and to surrounding communities.



MWE staff engaging and creating awareness among school going children about the importance of water and environmental sustainability.

## Key achievements under Water And Sanitation; Water for Production

### Key achievements during FY 2019/2020 included among others:

- Rural population using an improved water source is estimated at 69%, access to safe drinking water in urban water at 79.1%
- Water for Production storage capacity increased from 39.8 MCM (FY 2017/2018) to 41.1 MCM;
- Six gravity flow schemes and four water supply and sanitation schemes at different levels of completion across the country;
- 31 Water point sources (hand pumped boreholes, production wells & Large diameter wells) drilled across the country;
- Construction of 3 faecal sludge management systems and 13 public water borne toilets are on-going in towns including the rehabilitation of the Gaba Water Treatment Complex.
- The construction of Mabira Earth dam in Mbarara (capacity of 1m cubic meter) and other eight (08) valley tanks across the country creating a water storage capacity of 117,000,000 liters;
- Construction of Rwengaaju Irrigation Scheme in Kabarole District is at 66% progress expected to bring 116ha under formal irrigation;
- Works are also ongoing for construction of forty six (46) small scale irrigation schemes and eleven (11) valley tanks across the country. Designs for piped water systems in 56 towns to be completed;
- Construction of Nakivubo WWTP, Katosi Drinking Water Treatment Plant & Katosi – Kampala Drinking Water Transmission Main is on-going;



*H.E President Museveni commissioning the Aringo-Mone Small Scale Irrigation System in Pader District.*



*MWE staff leading a drive to clean-up Fort Portal Municipality; the cleanup was graced by Fort Portal Diocese and joined by UPDF, Police and other partners*

- Feasibility studies for sanitation infrastructures in 02 cities and 08 municipalities is almost completed;
- Construction of nine (9) small scale irrigation schemes in Eastern Uganda is almost completed;
- Designs of four (4) multipurpose earth dams & watering facilities in Karamoja to be completed;

- Ten (10) small scale solar powered irrigation schemes Western Region to be constructed;
- Twelve (12) valley tanks around the country to be constructed;
- Feasibility studies for mega irrigation schemes around Mt. Elgon area and Mt. Rwenzori area is on-going;
- Feasibility studies, design of bulk water system and irrigation scheme of Lopei (Napak) is on-going;
- Kagera corridor multi-purpose water for production infrastructure and facilities is being designed.



*MWE in collaboration with JICA for improved Water Supply and Sanitation in the selected Rural Growth Centers Eastern Uganda at Kibuuku District.*



*MWE staff, Lwamata Town Council Leadership and political figures at the commencement construction of Lwamata Water Supply System*



*The Rushayumbe Valley Tank and small scale irrigation scheme in Kyegegwa district; implemented by the MWE*



*Inspecting the Shuuku-Masyoro Gravity Flow scheme at Sheema district aimed at increasing access to safe water, improving sanitation and hygiene*

# Key achievements under Integrated Water Resources Management

## Key achievements during FY2019/2020 included among others:

- 160 Water Permits were issued for water abstraction, wastewater discharge and construction;
- 228 drinking water sources were assessed and 77% complied with National Drinking water standards;
- Water samples were collected and quality of water tested from 20 Water Quality monitoring sites;
- 300 hectares were planted on degraded land restored in Maziba & Awoja catchments through 18 women groups supported to produce 2400 improved cook stoves;
- Undertook manual aquatic weed removal (40,000 square meters ) at Dei Landing site;
- 500 hectares of degraded catchments protected and restored through construction of flood control and water harvesting structures, river bank demarcation, wetland restoration and tree planting ;
- Catchment Management Organisation procedures and manual developed
- Strategy for catchment based integrated water resources management for 2020 to 2030 developed
- Three (3) Catchment plans of Muzizi, Mitano, Nyamwamba developed;



*Dr. Callist Tindimugaya from MWE addressing stakeholders on final input and feedback on the operationalisation of Catchment Based Water Resources Management in Uganda.*



*MWE staff on a patrol boat over L. Victoria performing water quality monitoring tests to ensure that the lake meetings standards for consumption and other uses.*

- Development of the Integrated Water Resources Development and Management plan for Albertine Graben ongoing of oil and gas related activities on water and assessment of potential undertaken;

Five (5) short term trainings conducted at the Water Resources Institute with a total number of 167 participants trained in

*Continued on page 21*

various fields-(i.e. water allocation, water permitting, licensing, and hybrid water law);

- Lakes Edward and Albert Integrated Basin Management Plan developed;
- Ten (10) year strategy and Business Plan for Water Resources Institute developed;
- Training on International Water Law and Water Governance done;
- Construction and installation of 17 Hydro-metric monitoring stations countrywide, (5 Ground Water, 5 Surface water, 2 automatic weather stations and 3 automatic precipitation and 2 dry deposition monitoring stations on-going;



The MWE delivering a water quality monitoring vehicle to the Kyoga Water Management Zone regional office-Mbale



Nile Basin Citizens and friends of the Nile came together in Kartoum-The Sudan to mark the Nile Day-22nd Febraury which is part of the activities of the Nile Basin Initiative.



MWE staff ensuring that the catchment management plans are being effectively used to ensure the proper management of water resources across the country.



MWE through the LEAFII project steering committee discussing the project status and perform inspection of alternative livelihood activities in Kamwenge district

# Key achievements under Environment and Natural Resources

## Key achievements during the FY 2019/2020 included among others:

- Uganda's area covered by wetlands is estimated at 8.9% while forest coverage has increased from 10% (2015) to 12.4% (2019).
- 180.9Km of critical wetlands were demarcated across the country;
- 4,018ha of degraded wetlands were restored while management plans for over 2,025ha of wetland developed;
- Restoration planting and maintenance of 250ha of degraded sections of Mabira Central Forest Reserve (CFR) was undertaken using 100,000 indigenous tree species;
- 200ha of degraded sections on both sides of River Nile (Owen Falls to Isimba Hydropower dam) were restored with bamboo;
- Demarcating the River Nile banks with 300 pillars was started;
- NEMA recorded a slight decrease in the number of ESIA issued which was down from 667 between Jan - June 2019 compared to 629 from July - December 2019;
- 917.1ha of degraded natural forest area were restored through planting indigenous tree species in various CFRs under the National Forestry Authority;
- 42.5km of tourist trail roads maintained while 1,030ha spot weeded by local;



*H. E President Museveni taking the lead on restoration of the environment through tree planting*



*NEMA Executive Director Dr. Tom Okurut handing over the ESIA certificate for the Kingfisher Development Area to CNOOC Uganda*

- 7,361ha of CFRs were recovered from encroachers in various the CFRs;
- 89.2 km of external forest boundaries were re-opened in the CFRs;

Continued on page 23

- 4,338 patrols were conducted from which 12.6m<sup>3</sup> timber was impounded, 388 people arrested and charged in courts of Law, 800 bags of charcoal confiscated and 3 vehicles were impounded, 376 charcoal Kilns destroyed, 4950 people were lawfully evicted using minimal force;
- 1,973,827 assorted seedlings were sold and supplied for NFA planting from NTSC;
- 320ha of tree plantations were established in plantation;
- 16,150ha were established by licensed tree farmers on CFRs;
- 9,167ha were demarcated and mapped for licensed tree farmers in Budongo Systems Range.



The State Minister of Water-Hon. Ronald Kibuule launching the National REDD Strategy and Action Plan



Inspiring the next generation of tree enthusiasts in country through tree planting in schools



MWE in partnership with Uganda Breweries Limited at the launch of Running Out Of Trees Campaign (ROOT) to create awareness and activities about increasing tree cover.



Along Lugogo Bypass, the WAU walking 330km to draw attention to environmental issues in Uganda



MWE handing over 10,000 tree seedlings to KCCA in support of the KCCA Green Strategy



A team of NEMA inspectors at a stone quarry to ensure standards are being met



## Key achievements under Climate Change, Climate and Meteorology

### Key achievements during FY 2019/2020 included among others:

- UNMA had supported the Aviation sector through issuance of 552 Terminal Aerodrome Forecasts and Aviation forecasts and 4906 flight folders to enable air navigation in and outside the country;
- 6 DAVIS and 20 ADCON Automatic Weather Stations functionality improved;
- Seasonal climate forecasts translated into 35 local languages;
- One seasonal climate outlook issued for September, October, November and December season;
- Trained Users in interpreting and applying weather information in through the setup village weather clinics;
- State of the climate report for Uganda for 2018 completed;
- Climate Change bill has been developed and is with Parliament for approval.



*The Ministry of Water and Environment officials and Water Experts from the DR. Congo at the Water Resources Institute to learn more about the functionality of meteorological systems.*



*A press-conference organized by MWE, various partners and stakeholders to brief the public about the 2nd national climate change symposium and expo*



By Florence Anobe Komakech ([anobe@ircwash.org](mailto:anobe@ircwash.org)); Monitoring, Evaluation, Research and Learning Advisor; IRC International Water and Sanitation Centre.

## Appropriate infrastructure planning is a pre-requisite for sustainable WASH services

### Introduction:

The Water and Environment sector is charged with ensuring the sustainable use and appropriate management of Uganda's water and environment resources for improved livelihoods. In the FY 2018/19 however, Uganda's proportion of the population with access to an improved drinking water source was lower (69%) than the previous financial year (70%); while villages with at least one drinking water source stagnated at 66% (38,183). Rural water functionality stagnated at 85% due to low national budget allocation and prioritization of operations and maintenance for rural water and sanitation supply functionality and drinking water quality.

### The Challenge

In 2019, IRC-International Water and Sanitation Centre in collaboration with Kabarole District water office conducted an asset analysis of 1100 water points in Kabarole district. This established that the functionality of water systems at the time of spot check was at 62% much lower than the national target of 86%.

### Related studies and methodology

Observation of system parts, both quantitative and qualitative methods were employed to analyze assets in collaboration with the Kabarole District technical team.

These assets included: protected springs, shallow wells, deep boreholes, kiosks/public stands and yard taps although the majority of the communal water systems were boreholes (precisely shallow wells). A census

of improved water points was undertaken with data collection and analysis done using the Akvo software. The data analysis focused on asset age, availability and value while the qualitative data was on physical condition, and water point parts. As well as, key informant interviews with technical staff at the district water office.

### Results and discussion:

Out of the 1100 water sources, 484 were constructed before the year 2004. Applying the ...useful life of a well standard to be 20 years (according MWE guidance), it means that 44% of the water sources have outlived their useful age and thus at high risk (0-5 years). An additional 263 (24%) were constructed within 6-10 years of age which now require planning for new infrastructure construction while 350 (32%) of the water points were constructed after 2011 and are considered low risk.

Further analysis shows that 121 (25%) of water points in the high-risk category were non-functional at time of spot check. Risk due to age estimation was calculated based on MWE guidance - wells have useful lifespan of 20 years and therefore an analysis of remaining useful life was used to determine the risk score. For water sources with useful life less than 5 years were considered high risk.

Table 1: Analysis of age of water system component and risk

Year of construction	No. of water sources	Age of the water sources	Remaining life	Risk Level
1945-2004	484	15 equal to greater than 19	0-5	High Risk
2005-2010	263	9-14	6-10	Medium Risk
2011-2019	350	0-8	12-20	Low Risk
Unknown	3	No data	No data	No data

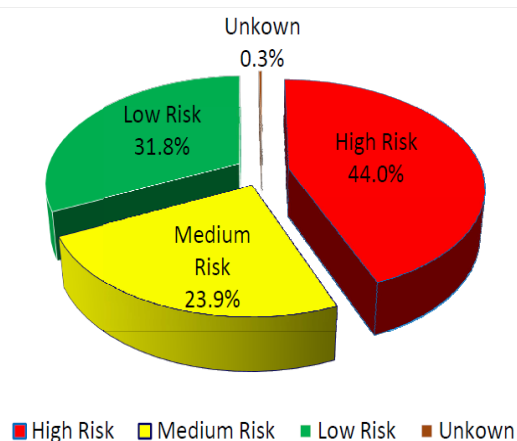


Figure 1: Chart one: WASH asset by risk due to age of water sources

While water sources with useful life between 6 and 10 years were considered as medium risk. Low risk was considered for water sources with remaining useful life between 12 and 20 years.

The water points that are at high risk of breakdown due to age and require priority planning for new construction when age analysis is done by the type of use technology indicates that: 57% (277) are shallow wells, 33% (160) are protected springs, 6% (29) are deep wells and 4% (17) are tap stands. The most affected water points are in the subcounties- Hakibale (84), Karambi (44), Rutete (44), Bukuku (39) and Kasenda (36 water points).

When similar analysis was done on water points systems with medium risk and should require planning for new construction within 6-10 years, it was found out that: 48% (125) are shallow wells, 27% (72) are tap stands, 21% (56) are protected springs and 2% (6) are deep wells.

The highlighted sub counties with water points for replacement planning including: Kicwamba (45), Busoro (27), Karagura (25), and Bukuku (24 water points).

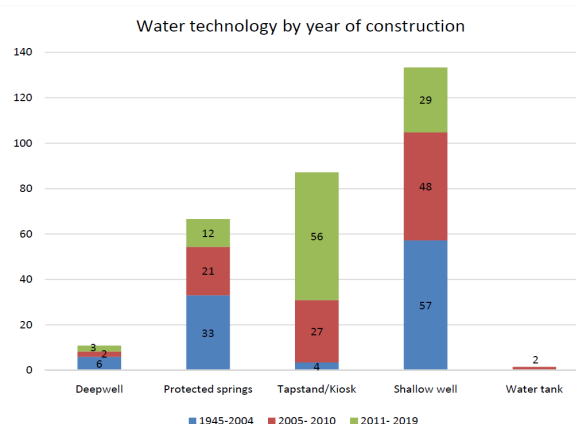


Figure 2: Age analysis by technology.

### Noted Difficulties in Operation and Maintenance

1. Inadequate allocation for the non- wage recurrent budget. The water and sanitation grant require DLG to spend 9% as opposed to 14%. Hence the District water office is challenged in meeting the operations and maintenance costs, as well as construction of new systems.

Limited resources to enable routine water points monitoring and use of information to inform district planning processes and decisions.

2. Only 33% of the water user committees are active which implies that most water points are marred with weak management barely collecting O&M fees, keeping records or holding regular communal meetings.

### Recommendations:

1. Continued engagement with the Ministry of Finance, planning and Economic Development (MoFPED) to increase the non-wage recurrent budget to enable sustainable access to clean and safe water in the rural communities;
2. Lobby for an increase in staffing and capacity to undertake WASH asset

analysis to influence planning and budget allocation towards maintenance and construction/ extension of new systems to the underserved communities/ villages.

Increased sensitization and mobilization of local leaders and communities.

### Conclusions:

The results should contribute to the body of knowledge and inform Kabarole district decisions on planning for new construction and major repairs of water points. These decisions are now based on evidence of asset age analysis and shall promote sustainable provision of safe drinking water systems and reach the un-served populations towards attainment of the Sustainable Development Goal Six (SDG6). More specifically:

- A holistic approach to WASH service provision comprising multi-stakeholder planning and coordination, monitoring and supervision, financial commitments coupled with appropriate infrastructure planning.
- Effective planning and budget allocations for operations and maintenance at national and district level are a pre-requisite for sustained access to drinking water sources.
- Public Private Partnerships are an approach for alternative funding sources towards operations and maintenance of water sources.
- Technical and capacity assistance towards implementation of WASH asset management system at district and national level.

### Acknowledgement:

Special appreciation to the Kabarole District water and health Office for the technical inputs at design and data collection, the communities visited and hand pump mechanics for participation and the IRC Uganda country team for technical and logistical support.

### References:

1. Ministry of Water and Environment Sector Performance Reports-2018 and 2019
2. Draft Kabarole District Service level and asset analysis Report, 2019.
3. The Kabarole District WASH master plan 2018- 2030.

## Obituaries:

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



At the time of his death, Mr. Chebet Maikut was Commissioner Climate Change Department, Ministry of Water and Environment. He shall be remembered for setting up the Climate Change Unit from scratch and mobilizing funds for Climate Change adaptation for the country. His service extended to various national committees, boards, task forces, and international organizations over the years, these included: Chairperson of the Board of Uganda National Adaptation Fund, National Focal Point Person for the United Nations Framework Convention on Climate Change, Vice President of the East African Farmers Federation and President of the Uganda National Farmers Federation, among others.

He also served as a Member of Parliament and the Constituent Assembly that established Uganda's post-Independence Constitution.

May his soul rest in eternal peace.

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The Ministry of Water and Environment mourns the death of Mr. Jackson Kitamirike, the Team Leader for Albert Water Management Zone based in Fort Portal. Jackson championed catchment based water resources since being deployed to AWMZ in 2011. He mobilized key stakeholders in the zone and was a darling to many partners.

This is a big loss to the Ministry, Nation and Family. We will always remember you for your good deeds, great work and effective service delivery. May God strengthen us all in this sad, painful and trying time

May his soul rest in eternal peace.

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The Ministry of Water and Environment is deeply saddened about the death of the former Commissioner for Water Utility Regulation Department (WURD) Eng. Ephraim Kisembo.

He shall be remembered for spearheading the creation of Small Towns Projects, managed the Reform Program, and created the Regulation Department and supervision of the construction of the new Ministry Headquarters in Luzira.

He also served and did development work in Karamoja region and was lecturer for 2 years.

May his soul rest in eternal peace.

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