THE REPUBLIC OF UGANDA

NATURAL RESOURCES, ENVIRONMENT, CLIMATE CHANGE, LAND AND WATER MANAGEMENT

PROGRAMME PERFORMANCE REPORT 2022

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Ministry of Water and Environment

Natural Resources, Environment, Climate Change, Land and Water Management

Annual Programme Performance Report 2022

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FOREWORD

Natural Resources, Environment, Climate Change, Land and Water are critical to the achievement of NDP III goal of increased household incomes and improved quality of life of Ugandan. They are a catalyst for growth opportunities in agriculture, industry, tourism, minerals, oil and gas exploitation and ultimately contributing to increase in incomes and improved quality of life.

The poor management of natural resources including wetlands, forests, land, water, and environment have contributed to climate change with serious implications on agriculture production and productivity, biodiversity, and extreme weather conditions characterised by severe floods and prolonged drought which affect macroeconomic variables such as economic growth and inflation.

The Programme on Natural Resources, Environment, Climate Change, Water and Land Management was intended to contribute to the realization of the sustainable industrialization agenda of the NDPIII 2020/21- 2024/25. It contributes directly to the NDPIII objective of Enhancing Value Addition through managing water resources for generation of electricity, provision of land for industries, regulation of pollution and provision of raw materials.

This is the second Natural Resources, Environment, Climate Change, Lands and Water Management (NRECCLWM) Annual Programme Performance Report (APPR) 2022. It presents the performance of the Programme during the Financial Year (FY) 2021/22 with respect to investments, achievement of outcomes and interventions, and challenges. It is based on Programme objectives, outcomes and interventions as outlined in NDPIII and Programme Implementation Action Plan (PIAP). The report also presents the Ministry of Water and Environment (MWE) contribution to the Human Capital Development (HCD) and Agroindustrialisation Programmes, and the contribution of NGOs/CSOs.

Substantial progress was made in restoration of the forest cover which has increase to 13.4% from 9.5% in 2015. This is attributed to concerted effort to restore the degraded forests by planting trees and allowing the natural forests to regenerate after evicting encroachers. A total of 26,394,856 assorted tree seedlings were planted in FY 2021/22. However, the degradation of wetlands remains a major concern. Only 8.9% of the wetlands remains intact. The highest level of degraded wetlands is in the eastern region with 40% of the wetlands degraded followed by Central with 26%, Northern 18% and Western 17%. To reverse this trend, 293km2 of wetlands needs to be restored every year. 17,800 Hectares of degraded wetlands were restored and 1,170 km of wetland boundaries were demarcated. Eviction of encroachers on wetlands continued and process cancellation of land titles in the wetland commenced.

Climate Change remains a major concern particularly emission of greenhouse gases. The estimated annual change in Greenhouse gases in Uganda was 1.15 Million Tonnes of Carbon dioxide equivalent which very low compared to other countries. The programme will continue to monitor this to ensure we attain carbon neutral status as soon as possible.

Compliance with permit conditions for developers is a challenge but improving. Compliance with ground water abstraction permit conditions was 78.7%, surface water abstraction compliance was 80.2% and wastewater discharge 66.2%. This is partly due to inadequate funding for the routine inspections.

Land management is priority of government because of increasing land conflicts/disputes. The total land titled/registered increased to 22.4%. However, substantial progress was made in securing tenure for lawful and bonafide occupants and customary land owners. 6,314 lawful and bona fide occupants were issued with certificates of title. Acquired/compensated 3,130 Hectares of Land for Lawful and bonafide occupants. 7,807 certificates of titles were transferred to lawful and bonafide occupants. 4032 Certificate of Customary Ownership (CCOs) were processed and issued in Northern Uganda. 14

Communal Land Associations (CLAs) in Karamoja region were formed and certificates issued. 38,976 land titles were issued.

The increasing natural disasters is a concern due to climate change and fire outbreaks. 1200 persons died due to natural disasters including floods and landslides. 498,180 disaster affected households were supported with relief food and nonfood items like tarpaulins, blankets, soap, jerry cans, iron sheets, mosquito nets etc. Resettled households living in disaster prone districts of Bududa, Namisindwa, Manafwa, Sironko nd Bulambuli to Bunambutye in Bulambuli district.

Underfunding remains a major challenge; the budget allocation in the MTEF is far below the projected funding to achieve the outcomes and implement the interventions as outlined in NDP3 and PIAP.

Finally, on behalf of the Government of Uganda, let me express our gratitude to the various programme actors, Programme Development Partners, the Civil Society Organisations and the Private sector for the continued support and partnership.

Sam Cheptoris (MP)
MINISTER OF WATER AND ENVIRONMENT
POLITICAL HEAD, NRECCLWM PROGRAMME

EXECUTIVE SUMMARY

Introduction

This is the second Natural Resources, Environment, Climate Change, Lands and Water Management (NRECCLWM) Annual Programme Performance Report (APPR). It presents the performance of the Programme during the Financial Year (FY) 2021/22 with respect to investments, achievement of outcomes and interventions, and challenges. It is based on Programme objectives, outcome Indicators and interventions as outlined in NDPIII and Programme Implementation Action Plan (PIAP). It covers natural resources, environment, climate change, land and water management, disaster preparedness and risk management. The report also covers Ministry of Water and Environment (MWE) contribution to other programmes – Human Capital Development (HCD) and Agro-industrialisation, the contribution of NGOs/CSOs and cross cutting issues.

Data used for this report is derived from databases in the Ministry of Water and Environment, District Local Governments, semi-autonomous Agencies, Ministry of Lands Housing and Urban Development (MLHUD), Office of the Prime Minister, Ministry of Education and Sports, Ministry of Health, and the Uganda Bureau of Statistics (UBOS).

Programme Financing

During the FY 2021/22, the programme received a total of UGX **581.97 bn** of which **UGX 281.689 bn** was from Government of Uganda, UGX **268.21 bn** was external financing (loans and grants) and UGX 32 bn was off budget. The programme required budget as per NDPIII was UGX 983.24 bn. This shows a budget shortfall of over UGX 400 bn. The allocation to Disaster Management was **UGX 84.33bn**, Land Management **UGX 42.32 bn** and Natural Resources, Environment, Climate Change and Water Management **(UGX 455.326bn).**

Out of the UGX 581.076 bn allocations to the programme, **UGX 466.75bn** was released, representing 82% of the budget released from the Treasury. UG **426.77 bn** was spent representing 94% absorption rate.

Environment and Natural Resources Civil Society Organisations (ENR-CSOs) ENR-CSOs contributed USD 2,860,836 **(**UGX10.585 bn) and UWASNET contributed UGX 78.61 bn.

Water Resources Management

Compliance: A total of 351 permit holders of groundwater, surface water and wastewater discharge were monitored for compliance within the provisions of Water Act and permit conditions. Compliance with ground water abstraction permit conditions was 78.7% compared to 76.8% in FY 2020/21. For surface water abstraction compliance was 80.2% compared to 78.4% in FY 2020/21. Compliance to wastewater discharge 66.2% compared to 65% in FY 2020/21.

Overall, 374 permits (199 new and 175 renewal) were issued in FY2021/22 compared to 351 permits issued in FY 2020/21.

Effluent quality monitoring: The compliance levels to National Standards for wastewater (effluent) discharges with respect to Total Nitrogen (TN), Total Phosphorus (TP), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) were 36.7%, 24.5%, 27.4% and 45.1 % respectively. Average compliance levels to National Effluent Discharge Standards stood at 33.4 % against a target of 68%.

Drinking water monitoring: 2,208 water samples were collected from point water sources from 96 districts country wide. The National standard and SDG 6.1.1 recommend zero *E.coli* in drinking water. Based on this target, compliance of rural water supplies to *E.coli* by technology option was 71.6%, 54.8%, 43.8%, 34.1% and 19.34% for deep wells, protected springs, shallow wells, RWH, and open wells respectively.

A total of 3,319 water samples were collected and analysed from 75 piped urban water supply systems serving large towns, small towns and rural growth centres. The

compliance of urban water supplies to *E.coli* by technology option was 80.3% and 48.9%, for piped water (other than gravity flow systems) and gravity flow systems respectively. Overall, 77.2% of the water samples collected from urban water supplies met the National Standards for Potable (Drinking) water quality

Catchment management: 2 catchment Management Plans were developed for River Nyamugasani and River Kafu Catchments. Six micro catchment management plans for Ora, Anyau, Laropi, Ayugi, Nyimur, Awic and Mutunda micro catchments were developed.

These plans are intended to facilitate sustainable development and utilization of water and related resources within the sub-catchments.

Communities in Awoja, Aswa, Maziba, Nyamwamba, and Mpanga catchments were supported to restore 3,881 Ha of degraded and deforested wetlands through growing of over 1,785,400 tree seedlings.

Communities in Awoja, Aswa, Mpanga, Nyamwamba and Maziba catchments were supported to construct water-harvesting structures such as dams, gabions, diversion canals etc. which contributed to the restoration of over 3,881 Ha of degraded wetlands.

14,000 improved cooking stoves were distributed in Awoja, Aswa and Maziba catchments.

The governments of Uganda and Kenya through NELSAP identified the Angololo Water Resources Development project for preparation of fundable projects. The consultants produced the final Environmental and Social Impact Assessment (ESIA), Resettlement Action Plan (RAP) and Compensation framework (CF).

Adapting to Climate Change for Lake Victoria Basin Project (ACC-LVB) commenced demonstration of climate change adaptation technologies at selected project intervention sites: (i) Enhancing Ecosystem Resilience through Promotion of Energy Saving Stoves in Mpala, Serinya, Kitoma and Kanywa villages in Masaka and Kalungi village in Mubende. 128 household cooking stoves and 3 institutional cooking stoves were constructed; (ii)Enhancing Adaptive Capacity of Communities to Climate Change through Sustainable Pasture Management in Mubende where 20 acres of pasture demonstration plots were established in Rwobushumi village; and (iii) Strengthening Community Resilience to Drought through Construction of two Communal Valley Tanks in Kyankungu and Kalungi villages.

Surface Water & Ground Water monitoring network

Lake Victoria

Higher inflows were received during the March-April-May (MAM) season. More inflow received in 2021 than in 2022. There were no net inflows received during the June-July-August (JJA) season for both years except for August 2022. Low values of NBS were observed during the September-October-November-December (SOND) 2021.

Lake Kyoga and Lake Albert

A declining trend in water levels of Lake Kyoga and Lake Albert was observed due to regulation of Lake Victoria outflows. Water supply systems and run-of river hydropower systems continued to operate well. There was a significant reduction in lake shoreline flooding since most land previously submerged is now dry ground.

Capacity Building and Sensitization Strengthening

Water Resource Institute (WRI) conducted **14** short courses of national and international nature involving **941 (329** females **and 612** male**)** participants. 26 young professional were mentored. Water WRI in Partnership with UNHCR, Oxfam and Water Mission Uganda launched a graduate trainee internship/placement program offering a 12-month skilling in Water, Sanitation and Hygiene (WASH) to 20 enterprising students who graduated in period of 2020-2021. The Uganda Water and Environment Week (UWEWK) 2022 was held from 20th -25th March 2022.

Water Policy revision and Water Act amendment: The revised draft National Water Policy was submitted to Cabinet for consideration. In March 2022, Cabinet discussed the draft National Water Policy (2022) and guided the Minister on the revisions to be made.

Natural resources, environment, and climate change

Land area covered by Forest: According to the NFA Land Use and Land Cover Biomass Study (2019), Uganda registered an increase in forest cover from 12.3% in 2017 to 13.3% in 2019. This was attributed to restoration of the degraded forests through planting trees and allowing the natural forests to regenerate after evicting encroachers.

11,329 Ha out of the targeted 20,560 Ha of degraded CFRs were restored with threatened high value indigenous tree species and bamboo. The area and productivity of industrial forest plantations on Central Forest Reserves (CFRs) increased from 143,611 Ha to 149,460 Ha.

504.38km of forest reserve boundaries were re-surveyed and marked. District Local Governments using locally generated revenue and partner support opened and maintained 339 kms of forest boundary, provided technical backstopping to 12, 683 farmers, trained 22,628 farmers in forestry management and restored up to 1,578 Ha of Local Forest Reserves (LFRs).

A total of 26,394,856 assorted tree seedlings were planted. 21,550 trees were planted along the City roads, schools, and city public areas. The survival rate for tree seedlings supplied was 66%.

Land area covered by wetlands: As of 2015, the wetland coverage was at 13% of Uganda's surface area with 21,526km^2 as intact wetlands (8.9%) and 9,885km2 as degraded wetlands. The highest level of degraded wetlands was found in the eastern region with 40% followed by Central with 26%, Northern 18% and Western 17%. This means that the country loses 293km2 of wetlands every year and if this trend is not reversed, Uganda is likely to lose more 7,325km2 by 2040.

A total of 1,170.60 km of wetland boundaries were demarcated. Restored 12,875.50 Ha of degraded wetlands with 800 Ha in Mpanga gouge wetland in Nyabbani and Ntara Sub-Counties in Kitagwenda District and 1,950 Ha of Ogwenyere wetland (Tochi system) in Oyam, Wangtula-Lapurupuru wetland (Aswa system) in Otuke district and Okole wetland in Lira city. 3,000 Ha of degraded wetlands (1,000 Ha restored in the districts of Butebo, Tororo and Kumi in Eastern Uganda) and 2,000 Ha in Ihimbo-Mushakwe and Kidubule Ibamba wetlands located in the South-Western districts of Rukungiri and Rubirizi were restored. 230.3 Ha of degraded ecosystems were restored.

Permit holders complying with ESIA condition

12 entities were inspected, 8 were complying (66.6%) with ESIA conditions and 4 have since improved their compliance after being issued with environmental improvement notices.

Green House Gas (GHG) Emissions: The estimated annual change in Greenhouse gasses was 1.15 Million Tonnes of Carbon dioxide equivalent.

Climate Change Vulnerability Index: Developed a draft Climate Risk Vulnerability Assessment (CRVA) report. Technical reviews of the report was ongoing by the different technical focal points across the Ministries, Departments and Agencies (MDAs) and Non-state actors.

Developed capacity of 40 District technical staff from Nakasongola and Mbarara on how to use the Intergovernmental Panel on Climate change (IPCC 2006) tool and guidelines for the compilation of GHG emissions from cattle and trained them on the GHG inventory management system, including data entry, analysis, and reporting.

Developed Briefing Paper on the Elements of National Adaptation Communication (ADCOM).

Developed the national climate change action plan including updating the NDC up to 2030 and submitted to United Nations Framework Convention on Climate Change on 12th September 2022. NDC resource mobilization and implementation draft is available. Uganda will require to mobilize domestic financing of USD 4.1 billion for unconditional adaptation and mitigation actions.

Developed and submitted to UNFCCC Secretariat the third National Communication (2022) which provides information on national greenhouse gas emissions, measures to mitigate and facilitate adaptation to climate change.

Accuracy of metrological information: The Accuracy of forecast for FY2021/22 was 70-75%. This was lower than the Accuracy of forecasts reported in FY 2020/21 which was 75-80%. However, the NDP III target for FY 2021/22 of 72% was achieved with average accuracy of 72.5%.

Automation of weather and climate network: The percentage of automation of weather and climate network increased from 62% in FY 2020/21 and 64% in FY 2021/22. 94 out of the 146 districts had at least an automatic weather station installed compared to 92 districts in FY 2020/21.

Green jobs

An estimated 200,000 people were employed in the different forestry enterprises(20%) against the annual target of 1,000,000 green jobs provided by the entire forestry sector.

Land Management

The total land titled/registered increased from 22% in 2020/21 to 22.4% in FY 2021/22. The increase was less than the NDPIII target of 29% for the FY 2021/22.

A total of 5,808 land conflicts were reported out of which 3,146 were mediated/ resolved. This represents 54.16% of reported land conflicts mediated/resolved.

During the FY 2020/21 the interventions undertaken for land management included:

Roll-out and integration of the Land Management Information System

The Ministry launched the online public portal https://ugnlis.mlhud.go.ug. The public portal is used to directly access land services.

Harmonization and implementation of land laws and policies

Held 9 Committee meetings to review Land Acquisition, Resettlement and Rehabilitation Policy (LARRP). Conducted 11 Committee meetings and 4 review meetings on the proposals of revised Land Act. National Land Policy disseminated in 8 districts.

Inventory of Government land

795 lease transactions were processed comprising 370 for men, 219 women and 206 Companies/Firms on Government land. Processed 46 Land titles for Government institutions.

Land Fund

6,314 households of lawful and bona fide occupants were issued with certificates of title. Acquired/compensated 3,130 Hectares of Land from 61 men, 23 women, 5 couples and 16 companies for Lawful and bonafide occupants. 7,807 certificates of titles were transferred to lawful and bonafide occupants. 3,167 subdivisions surveys were conducted for Mubende (1,200) and Kakumiro district (2,167).

Land consolidation, titling, and banking

4032 Certificate of Customary Ownership (CCOs) were processed and issued in Northern Uganda. 14 Communal Land Associations (CLAs) in Karamoja region were formed and certificates issued. 38,976 land titles were issued across the country.

Tenure security

29,639 applications for freehold titles were approved.

Disaster preparedness

During the FY 2021/22, mortality (death) related to natural disasters was 1,200. This translates to about 3 persons per 100,000

population. This mortality rate was higher than that in the FY 2020/21 where 26 persons died. This translated into mortality rate of 0.06 persons per 100,000 population. The major causes of natural disasters were floods, landslides, and lightening.

Policy and legal framework

Reviewed and revised the Principles of the National Disaster Preparedness and Management Bill. Developed the National Disaster Risk Management Plan.

National Disaster Risk Atlas

The Atlas was disseminated in 17 districts of Iganga, Kaliro, Namutumba, Namayingo, Mayuge, Kole, Lira, Otuke, Apac, Kwania, Amolator, Bugiri, Bugweri, Jinja, Luuka, Kamuli and Buyende.

Disaster Risk Information Management

Enhanced the National Early Warning System against Disaster risks through practicing use of chatbot and digitized damage and loss assessment tool. Produced and disseminated 12 monthly Uganda National Integrated Early Warning systems (UNIEWS) bulletins on potential disaster occurrences. Conducted Post-Disaster (windstorms, hailstorms, floods, landslides) losses and damage assessments in 32 districts.

Access to relief

Supported 498,180 disaster affected households with relief food (34,438 bags of maize flour (100kgs each), 16,367 bags of beans (100kgs each) and 76,800 kgs of sugar. Non-relief food items included 9,200 tarpaulins, 300 wheelbarrows, 1,800 blankets, 600 pangas, 7,000 spades, 1,100 pairs of shoes, 1,950 basins, 300 bars of soap, 1,950 jerry cans, 400 sleeping mats, 4408 iron sheets and 3,200 mosquito nets.

Resettlement of persons at risk of disasters

Resettled 22 households (170 persons) living in disaster prone districts of Bududa, Namisindwa, Manafwa, Sironko nd Bulambuli to Bunambutye in Bulambuli district. Completed the preparations for resettlement of 66 households (330 persons) living in areas with high risk of landslides in Semiliki wildlife reserve. Verified 11 displaced households during the October 2021 mudslides in Bududa district for resettlement.

Meteorological information

Issued 3 seasonal rainfall forecasts that is June-August, September-December, and March-May for the period June 2021 to May 2022 . Translated the seasonal forecasts into 10 local languages. Conducted seasonal rainfall performance evaluations in the districts of Kapelebyong, Amuria, Katakwi, Bukedea, Serere, Luweero, Buikwe, Nakasongola, Isingiro, Mbarara, Ntungamo Lira, Pader, Gulu, Omolo, to generate feedback on the issued forecast. Profiled 7,057 farmers (3,417 females and 3,640 males) to increase access to climate information in 24 districts. Daily forecasts were disseminated to 3 media houses of UBC TV, Star TV and Bukedde 1 TV after the newscasts in Luganda, Swahili, and English.

Weather stations

UNMA cumulatively established 196 Automated Weather Stations (AWS) spread over 94 Districts, representing 64% coverage. At the current rate of progress, the NDP III target of 80% coverage of the districts is unlikely to be attained by 2025. Revived the functionality of 4 DAVIS Automatic Weather Stations in Agoro, Koci-Goma, Kakira Karenga and ADCONs in Entebbe, Bududa, Butaleja, Buginyanya, Budaka, Pallisa, Tororo and Jinja. 128 out 196 weather stations were maintained across the country.

Natural Resources, Environment, Climate Change, Land and Water Management Outcome Indicators

Outcome	Indicators	Baseline FY2017/18	Achievements	
			2020/21	2021/22
Increased compliance to all water permit conditions	Compliance to ground water abstraction (%)	76	76.8	78.7
	Compliance to surface water abstraction (%)	78	78.4	80.2
	Waste discharge (%)			
Enhance water quality management	Percentage of water quality samples complying with national standards for water bodies	ND	COD 47.9% TSS 71.5% TN 25.3%	COD 27.4% TSS 45.1% TN 36.7% Average 33.4%
	Percentage of water samples complying with national standards for water collection points (*E.coli*)	ND	Rural 62.2% Urban 90%	Rural 62.3% Urban 77.2%
Increased land areas covered by forests and wetlands	% of land area covered by forests as % of total land area	9.1%	12.3	13.3
	% of land area covered by wetlands as a % of total land area	8.9%	8.9	8.9
Increased titled land	Titled land as a percentage of total land area	21	22	22.4
High compliance with an environmental and social impact assessment (ESIA)/Condition by developers	Percentage of permit holders complying with ESIA conditions at the time of spot check	40	80	66.6
Improved Air quality in cities	Trends in Air Quality Index $PM_{2.5}$	147	154	ND
Climate Change responsive Development Pathway	Average Annual Change in a Green House Gas (GHG) emissions (MtCO2e)	1.39	ND	1.15
	Climate Change Vulnerability Index	2.5	ND	ND
Reliable and accurate Meteorological information	Percentage of accuracy of meteorological information	60	75 - 80	70 - 75
	Percentage of weather and climate network automated	30	62	64
Reduced human and economic loss from natural hazards and disaster.	Human mortality and missing persons directly attributed to water and environment related disasters per 100,0000	150	0.06	3
	Economic loss (USD incurred per disaster as a % of GDP)	7.5	0.4	ND
Increase income and employment from natural resources	Proportion of green jobs to total jobs	25%	ND	20%

Note ND means No Data

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ACCRA	Africa Climate Change Resilience Alliance
ADB	African Development Bank
BFP	Budget Framework Paper
BOD	Biological Oxygen Demand
BoP	Best operational Practices
CBO	Community Based Organisation
CBMS	Community Based Maintenance System
CCU	Climate Change Unit
CDD	Community-Driven Development sub-project
CDM	Clean Development Mechanism
CFA	Cooperative Framework Agreement
CFR	Central Forest Reserves
CLTS	Community Led Total Sanitation
CMO	Catchment Management Organisation
CSO	Civil Society Organisation
DESS	Department of Environment Services
DHI	District Health Inspector
DLG	District Local Government
DP	Development Partner
DWAP	District Wetland Action Plan
DWD	Directorate of Water Development
DWO	District Water Office(r)
DWRM	Directorate of Water Resources Management
DWSCC	District Water and Sanitation Coordination Committee
DWSDCG	District Water and Sanitation Development Conditional Grant
EAC	East African Community
EC	European Commission
EHD	Environment Health Division (of Ministry of Health)
EIS	Environmental Impact Statement
ENR	Environment and Natural Resources
EPPU	Environment Protection Police Unit
FAO	Food and Agricultural Organisation
FGD	Focus Group Discussion
FIEFOC	Farm Income and Enhancement and Forestry Conservation
FMP	Forest Management Plans
FO	Forest Officers
FSSD	Forestry Sector Support department
FY	Financial Year
GEF	Global Environmental Facility
GFS	Gravity Flow Scheme
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GGAP	Good Governance Action Plan
GGDS	Green Growth Development Strategy
GGWG	Good Governance sub-sector Working Group
GIS	Geographical Information System
GoU	Government of Uganda
ha	Hectares
HIC	Home Improvement Campaigns
HIP	Hygiene Improvement Programme
HIV/AIDS	Human immunodeficiency virus / acquired immunodeficiency syndrome
HPM	Hand Pump Mechanic

HPMA	Hand Pump Mechanic Association
HWF	Hand Washing Facility
ICT	Information Communication Technology
IDAMC	Internally Delegated Area Management Contract
IDP	Internally Displaced Persons
IGAD	Intergovernmental Authority on Development
ISDP	Infrastructure Service Delivery Plan
ISH	Integrated Sanitation and Hygiene
INDC	Intended Nationally Determined Contributions
JAF	Joint Assessment Framework
JBSF	Joint Budget Support Framework
JPF	Joint Partnership Fund
JSR	Joint Sector Review
JWESSP	Joint Water and Environment Sector Support Programme (2013 – 2018)
KCCA	Kampala City Council Authority
KfW	Kreditanstalt für Wiederaufbau
KP	Kyoto Protocol
KPI	Key Performance Indicators
LG	Local Government
LGDP	Local Government Development Programme
LVEMP	Lake Victoria Environmental Management Project
LVWATSAN	Lake Victoria Water and Sanitation Initiative
M&E	Monitoring and evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MIS	Management Information System
MoEMD	Ministry of Energy and Mineral Development
MOESTS	Ministry of Education, Science, Technology and Sports
MoFPED	Ministry of Finance, Planning and Economic Development
MoGLSD	Ministry of Gender Labour and Social Development
MoH	Ministry of Health
MoLG	Ministry of Local Government
MoLHUD	Ministry of Lands Housing and Urban Development
MoTTI	Ministry of Tourism, Trade and Industry
MoU	Memorandum of Understanding
MUCCRI	Makerere University Centre for Climate Change Research and Innovations
MTEF	Medium Term Expenditure Framework
MWE	Ministry of Water and Environment
MTEF	Medium Term Expenditure Framework
MRV	Measuring, Reporting and Verification
NAADS	National Agricultural Advisory Services
NAPA	National Adaptation Programme of Action
NAMA	Nationally Appropriate Mitigation Actions
NBI	Nile Basin Initiative
NDP	National Development Plan
NEA	National Environment Act
NEC	National Environment Council
NEMA	National Environment Management Authority
NEMP	National Environmental Management Policy
NFA	National Forestry Authority
NGOs	Non-Government Organisations
NPHC	National Population and Housing Census
NPV	Net Present Value

NRW	Non-Revenue Water
NSDS	National Service Delivery Survey
NSOER	National State of Environment Report
NSWG	National Sanitation Working Group
NWIS	National Wetland Information System
NWSC	National Water and Sewerage Cooperation
NWQRL	National Water Quality Reference Laboratory
O&M	Operation and Maintenance
OBA	Output Based Aid
ODF	Open Defecation Free
PAF	Poverty Action plan
PEAP	Poverty Eradication Action Plan
PES	Payment for Ecosystem Services
PHAST	Participatory Hygiene and Sanitation Transformation
PMF	Performance Measurement Framework
PPDA	Public Procurement and Disposal of Assets Authority
PPEA	Participating Poverty Environment Assessment
PPD	Policy and Planning Department
PPP	Public Private Partnership
PSP	Public Stand Post
PRT	Performance Review Team
PWD	Person(s) with disabilities
PWP	Public water points
REDD	Reducing Carbon Emissions from Forest destruction and Degradation
RGC	Rural Growth Centre
R-PP	Readiness Preparation Proposal
RWHT	Rain Water Harvesting Tank
RWSS	Rural Water Supply and Sanitation
RWT	Rain Water Tank
SIM	Sector Investment Model
SIP	Sector Investment Plan
SPGS	Saw log Production Scheme
SPR	Sector Performance Report
SSIP	Sector Strategic Investment Plan
STWSS	Small Towns Water and Sanitation
SWAp	Sector Wide Approach
SWC	Soil and Water Conservation
SWG	Sector Working Group
SWSSB	Sub-county Water Supply and Sanitation Boards
TA	Technical Assistance
ToR	Terms of Reference
TSS	Total Suspended Solids
TSU	Technical Support Unit
UBOS	Uganda Bureau of Statistics
UfW	Unaccounted for Water
UGX	Uganda Shillings
UIA	Uganda Investment Authority
ULGA	Uganda Local Governments Association
UN	United Nations
UNMA	Uganda National Meteorological Authority
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

UNICEF	United Nations Children's Fund
UPHC	Uganda Population and Housing Census
USAID	United States Agency for International Development
UWASNET	Uganda Water and Sanitation NGO Network
UWSS	Urban Water Supply and Sanitation
VCT	Voluntary Counselling and Testing
VfM	Value for Money
VHT	Village Health Team
VIP	Ventilated Improved Pit
VT	Valley Tank
WAG	Wetland Advisory Group
WAP	Wetland Action Planning
WASH	Water, Sanitation and Hygiene
WED	World Environment Day
WfP	Water for Production
WMD	Wetland Management Department
WMZ	Water Management Zones
WPC	Water Policy Committee
WQ	Water Quality
WRM	Water Resources Management
WSDF	Water and Sanitation Development Facility
WSP	Water and Sanitation Programme
WSC	Water Source Committee
WSS	Water Supply and Sanitation
WSSWG	Water and Sanitation Sector Working Group
WUC	Water User Committee
WURD	Water Utility Regulation Department

Exchange Rate[1] **USD 1 = UGX 3,700** **EUR 1 = UGX 4,400**

[1] Actual annual average exchange rates based on official statistical exchange rate information from Bank of Uganda and The European Central Bank.

CHAPTER 1
INTRODUCTION

1.1 Programme Description

The Natural Resources, Environment, Climate Change, Land and Water Management (NRECCLWM) Programme is one of the 18 Programmes of NDP3. It is responsible for sound management and sustainable utilization of natural resources, environment, land and water resources and mitigation of the impact of climate change for socio-economic development of Uganda. The Programme, therefore, is central to realization of the NDP III goal of increased household incomes and improved quality of life of the population, set under the theme "***Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation***".

The Third National Development Plan (NDPIII) whose goal is to increase household income and improve the quality of life of Ugandans has adopted a programme approach to planning, budgeting, implementation and reporting. This entails programme and performance-based budgeting to address the persistent implementation challenges resulting from uncoordinated planning, weak harmonization, limited sequencing of programmes and poor linkages between outcomes and outputs experienced in the past NDPs.

Programme Goal

The Goal of NRECCLWM Programme is to stop and reverse the degradation of Water Resources, Environment, Natural Resources as well as the effects of Climate Change on economic growth and livelihood security.

Programme Objectives

i) Assure availability of adequate and reliable quality freshwater resources for all uses.
ii) Increase forest, tree and wetland coverage, restore bare hills and protect mountainous areas and rangelands.
iii) Maintain and/or restore a clean, healthy, and productive environment.
iv) Reduce climate change vulnerability and carbon footprint.
v) Reduce human and economic loss from natural hazards and disasters.
vi) Increase incomes and employment through sustainable use and value addition to water, forests and other natural resources.

Programme Results

(i) Increase water permit holders complying with permit conditions at the time of spot check:
   a. abstraction – surface from 76% to 85%.
   b. abstraction – groundwater from 73% to 83%.
   c. wastewater discharge from 59% to 68%.
(ii) Increase water samples complying with national standards:
   a. water bodies at 65% by 2025.
   b. supplies/water collection point at 80% by 2025.
(iii) Increase land area covered by forests from 9.1% to 15%.
(iv) Increase land area covered by wetlands from 10.9% to 12%.
(v) Increase permit holders complying with EIA conditions at the time of spot check from 40% to 90%.
(vi) Increase the accuracy of meteorological information from 80% to 90%.
(vii) Increase the percentage of automation of weather and climate network from 30% to 80%.
(viii) Increase the percentage of titled land from 21 percent to 40 percent; and
(ix) Reduce land related conflicts by 30 percent.

1.2 Institutional Framework

The Ministry of Water and Environment is lead Ministry responsible for implementation of the Natural Resources, Environment, Climate Change, Land and Water Management Programme. The Minister of Water and Environment is the lead Minister for the programme and provides policy guidance jointly with the Minister for Lands to hold the technical leadership accountable for implementation of the programme.

The Permanent Secretary of the Ministry of Water and Environment is the designated technical leader and coordinator for the implementation of the programme bringing together all the several state and non-state actors in the programme and steers and chairs the Programme Working Group.

Programme Working Group (PWG) is the policy making organ, within the overall NDP programme approach, in which Government (*all MDAs under the Programme*) and other stakeholders come together to function, discuss and agree on:

i) Inter and intra agency planning.
ii) Priority interventions and Resource allocation.
iii) Delivery of services; and,
iv) Joint monitoring & evaluation of multi-agency activities.

Through the Program Working Group (PWG), all stakeholders are convened to set the priorities for implementation, identify the key policy and project requirements and key implementation bottlenecks to be resolved.

***Sub-Programmes* –** There are three sub-programmes (i) Natural Resources, Environment and Climate Changes, (ii) Water Management, and (iii) Land Management. These are related to interventions/ outputs contributing to Programme Outcomes.

Directorates/Departments - These are administrative units within the institutions that implement Interventions/activities of the programme.

Programme Working Group Secretariat - The Secretariat of the Programme is housed at the Policy and Planning Department of the Ministry of Water and Environment as the leading Ministry in the Programme. The Commissioner Policy and Planning Department is the Secretary to the PWG and responsible for the day to day running of the Programme Secretariat.

1.3 Programme Report

The Natural Resources, Environment, Climate Change, Land and Water Management Annual Programme Performance Report (APPR) is the most important document for assessing the performance of the Programme. It provides an annual assessment of investments, achievement of outcome targets and progress in implementation of interventions and actions as outlined in the NDPIII and Programme Implementation Action Plan (PIAP). It highlights the major challenges and strategic issues which effect performance.

This is the First NRECCLWM Programme Performance Report. It is based on programme approach to planning, implementation and reporting which commenced in the FY 2020/21. It has been prepared through a participatory process with inputs from the Ministry of Water and Environment (MWE), National Environment Management Authority (NEMA), National Forestry Authority (NFA), Uganda National Meteorological Authority (UNMA), National Water and Sewerage Corporation (NWSC), Ministry of Lands, Housing and Urban Development (MLHUD), Office of the Prime Minister, Local Governments, Uganda Water and Sanitation NGO Network (UWASNET) and Environment and Natural Resources CSO Network. A senior management team quality assured and synthesised these inputs. The primary data sources are Local and Central Government reports and databases at District Local Governments and MWE**.**

Chapter 2 presents Programme Planning, Finance and Capacity Development. It presents an analysis of on-budget and off-budget resources, Government (GoU) and Development Partner contributions, and contributions from large cross-sectoral projects and programmes.

Chapter 3 presents the performance of Water Resources Management sub-programme including water resources planning and regulation, water quality, monitoring and assessment, and international and transboundary water. Chapter 4 presents the performance of the Natural Resources, Environment and Climate Change.

Chapter 5 presents the performance of Land Management and Chapter 6 Disaster Preparedness and Risk Management. Chapter 7 Presents the contribution of MWE to other programmes – Human Capital Development and Agro-Industrialisation. It analyses the performance under rural and urban water supply, sanitation and water for production.

Chapter 8 presents the contribution of Environment and Natural Resources (ENR) CSOs and Uganda Water and Sanitation NGO Network (UWASNET). Chapter 9 Presents the cross-cutting issues including gender, HIV/AIDS and Pro-poor initiatives. Chapter 10 presents the Conclusions and Recommendations.

CHAPTER 2
PROGRAMME PLANNING, FINANCE AND CAPACITY DEVELOPMENT

2.1 Introduction

The Ministry of Water and Environment follows the Government of Uganda planning and budgeting guidelines and procedures as spelt out in the Public Finance Management and Accountability Act 2015 (PFMA 2015) hence implements the programme-based planning and budgeting system since the beginning of NDP III phase. This section therefore looks at planning, financing and capacity development under the Natural Resources, Environment, Climate Change, Land and Water Management Programme where the Ministry of water and Environment is the lead. The responsibility of planning and budgeting is spear headed by the programme working group which is responsible for setting priorities for implementation, identifying key policy and project requirements, plan and budget approval.

Programme budgets and plans are drived from the programme implementation action plan (PIAP) as developed under the NDP III and these guide subsequent annual plans going forward. It should be noted that water and environment contribute majorly to three programs namely

a) Natural Resources, Environment, Climate Change, Land and Water Management Programme.
b) Human capital; development programme
c) Agro- industrialization programme

2.2 Programme Budgeting

As stipulated in the Public Finance and Management Act 2105 and NDP III guidelines, the programme annual budget is driven from the National Development Plan III PIAPs. Therefore, planned outputs are based on selected priority projects under the PAIP, key strategic areas and projects that have high return to the economy. The table 1 below shows the PIAP funding requirements needed to achieve the set targets in the PIAP.

Table 1: Summary of Programme Investment Requirements in Billions of shillings

Investment categories	2020/21	2021/22	2022/23	2023/24	2024/25
Wage	32.076	46.3	48.615	51.046	53.598
Non -Wage	58.27	88.039	101.245	116.432	133.896
Development	596.098	848.899	948.91	955.13	925.212
Total	**686.44**	**983.24**	**1,098.77**	**1,122.61**	**1,112.71**

While table 2 below shows the indicative funding available in the same period. This shows a huge mismatch between the required funding and the available funding. It therefore goes without saying that chances of delivering on the targeted indicators as planned under the NDPIII are slim given the available level funding. Also note that most times the planned figures are less than the actual release hence mismatch between the plans and actual achieved outputs.

Programme MTEF allocations

Table 2 presents the programme budget allocation in the medium term. The projected funding is based on the Medium-Term Expenditure Framework (MTEF) allocation by the Ministry of Finance Planning and economic development.

Table 2: Programme Budget funding trends

	Approved		MTEF budget projections			
F/Y	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**	**2025/26**
Wage	32.076	46.3	43.44	43.44	45.612	47.8926
Non-Wage	58.27	76.039	80.93	80.02	84.021	88.22205
GoU Dev't	164.557	159.35	**137.5**	157.8	181.47	208.6905
External	408.029	299.396	191.67	191.67	220.4205	253.4836
Total	**662.932**	**581.085**	**453.54**	**472.93**	**531.5235**	**598.2888**

The figure above shows the shortfalls in the MTEF allocations to the ministry by almost 50% less in relation to the sector investment requirements. It should be noted that as the country grows and development takes shape, there are standards that must be met as they continue to be demanded. Therefore, the costs above represent the minimum requirements for the sector at to deliver the objectives of the sector with the minimum standard as measured by the set indicators.

2. 2 Programme Financial Performance

2.2.1 Programme Budget for FY 2021/22

The total allocation for the NRECCLWM programme for the FY 2021/22, was UGX **581.976bn** of which **UGX 281.689bn** was from Government of Uganda, UGX **268.21bn** was external financing (loans and grants) and UGX **32.077bn** was off budget. The programme's required budget as per NDPIII for the FY 2020/21 is UGX 848.899bn, of which only 68.4% (UGX 581.976bn) was appropriated in the MTEF leaving 31.6% unfunded.

Table 3: ENRCCLWM sub- Programme funding by sources for FY 2021/22

Sub programme	GOU	External	Off budget	Total
Disaster Management	15.09	69.24	0	84.33
Land Management	20.78	21.54	0	42.32
Natural Resources, Environment, Climate Change and Water Management.	245.819	177.43	32.077	455.326
Total	**281.689**	**268.21**	**32.077**	**581.976**

2.2.2 Budget share by Vote

The individual vote allocations are shown in Table 4. The proportional share of the budget by vote is depicted in Figure 1. MWE, and disaster management components had the biggest share of the budget. Minimum allocations were made to climate change and environment, yet they are key in achievement of the programme goals and objectives.

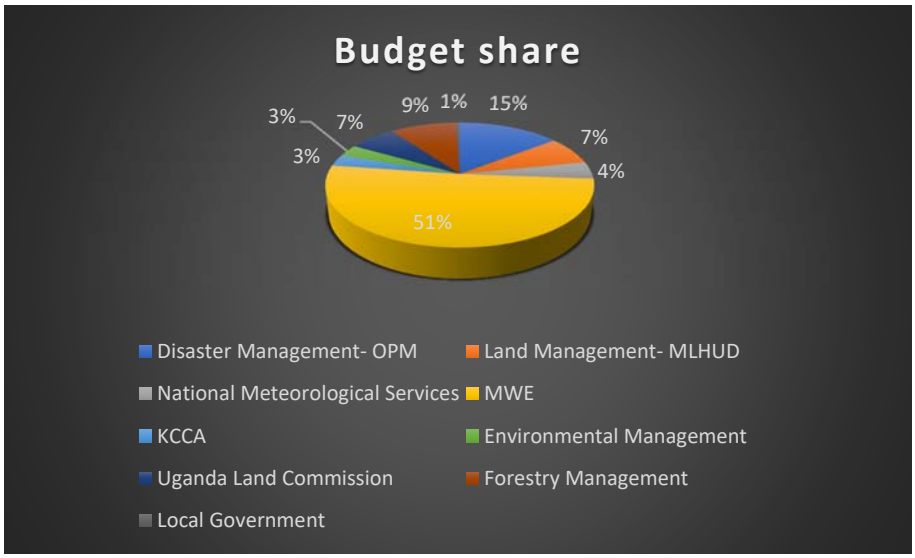


Figure 1: share of budget allocation by Votes under the ENRCCLWM Programme

Table 4: Programme Budget allocation by Vote FY 2021/22 as appropriated by Parliament

Vote	Programme Name	Wage	Non-Wage	Go U	Ext. Fin	Off budget Support	Total
003	**Disaster Management- OPM**	0.55	3.16	11.38	69.24		**84.33**
012	**Land Management- MLHUD**	6.2	10.91	3.67	21.54		**42.32**
109	**National Meteorological Services**	7.41	4.14	14.2	0		**25.75**
019	**Natural resources, Environment, Climate Change and Water Management -MWE**	8.36	20.01	77.42	177.43	13.459	**296.679**
122	**KCCA**	8.79	8.269	0	0		**17.059**
150	**Environmental Management**	6.72	10.17	0.99	0	0.891	**17.88**
156	**Uganda Land Commission**	0	0.15	38.81	0		**38.96**
157	**Forestry Management**	8.27	15.73	12.88	0	17.727	**54.607**
500 - 580	**Natural Resources Management- LG's**	0	3.5	0	0		**3.5**
	Total	**46.3**	**76.039**	**159.35**	**268.21**	**31.186**	**581.085**

2.4.4 Budget Performance

Out of the **UGX 581.085bn MTEF** allocations to the programme, **UGX 466.75bn** was released, representing 82% released from the treasury and of this **UG 426.77bn** was spend representing 94% absorption rate. In comparison to the NDP III financing targets, it means that only 43% of the NDPIII plan for the FY 2021/22 was financed (**UGX 426.77bn** released out of the NDP III budget of **UGX 983.24bn**). The detail of the approved budget is given in table 5 below.

Table 5: Releases and expenditure for the FY 2021/22 exclusive of off budget

Vote	Programme Name	Budget	Release	Expenditure	% of Budget Released	% of Release spent
003	Disaster Management-OPM	**84.33**	**33.95**	**32.9**	**40%**	**97%**
012	Land Management-MLHUD	**42.31**	**36.62**	**25.72**	**87%**	**70%**
122	KCCA	**17.06**	**18.37**	**17.63**	**108%**	**96%**
156	Uganda Land Commission	**38.96**	**43.06**	**42.43**	**111%**	**99%**
019	Water, natural resources management, Environment and Climate change -MWE	**296.679**	**194.409**	**168.259**	**66%**	**87%**
150	Environmental Management	**17.88**	**14.18**	**13.48**	**79%**	**95%**
157	Forestry Management	**54.607**	**43.167**	**42.757**	**79%**	**99%**
109	National Meteorological Services	**25.75**	**18.93**	**19.63**	**74%**	**104%**
500	Natural Resources Management- LG's	**3.5**	**3.5**	**3.5**	**100%**	**100%**
	Total	581.076	466.75	426.77	82%	94%

2.4.5 Off- budget- CSOs

Table 6 shows the contribution of ENR CSOs of **USD 2,664,876/=** of which, 34.6% was spent on forestry-related programs, and 48.8% was spent on weather, climate, and climate change. There has been a decline up from USD **2,860,836 in** FY 2020/21. The decline was largely explained by COVID-19 pandemic, post-COVID effects, and the war between Russia and Ukraine that have constrained international financial flow into the sector and countries at large.

Table 6: ENR-CSO Financing per sub-programme

Thematic area	Amount (USD)	Percentage (%)
Forestry	923,340	34.6%
Environment	192,078	7.2%
Wetlands	16,700	0.6%
Climate	1,300,300	48.8%
Water mgt	94,458	3.5%
Land Management	138,000	5.2%
Total	**2,664,876**	100.0%

2.4.6 Funding of Other Programmes under MWE

Table 7 shows the funding of components of other programmes: Human Capital Development (HCD) and Agro-Industrialisation. These are funded under Vote 019(MWE) and National Water and Sewerage Corporation (AIA component). The total budget allocation for FY 2020/21 to components of HCD and Agro industrialisation under MWE was UGX 1,460bn.

Table 7: Funding of components of other programmes (HCD & Agro industrialisation)

Programme	Vote	Sub-sub programme	Wage	Non - Wage	Go U	Ext. Fin	AIA	Arrears	*Total*
Human Capital Development	19	Rural Water Supply and Sanitation	1.567.	2.593	73.008	93.29	0	1	**169.89**
	19	Urban Water Supply and Sanitation	3.169	0.27	229.83	349.92	438	6.571	**1,027.77**
	500	Rural Water Supply and Sanitation- LG's	0	10	50.4	29.1	0	0	**89.50**
	500	Urban Water Supply and Sanitation- LG's	0	2.5	0	0	0	0	**2.5**
Agro-Industrialization	19	Water for Production	0.48	0.035	113.06	54.316	0	3	**170.892**
Total			**3.649**	**15.398**	**466.3**	**526.63**	**438**	**10.571**	**1,460.55**

Table 8 shows the budget performance of MWE including National Water and Sewerage Corporation (AIA) towards the outputs under the other two programmes of Agro industrialisation and Human Capital Development programmes. From above, it shows that the two programme have a higher percentage on MWE budget.

Table 8: Budget performance for components of other programmes under MWE (HCD & Agro- Industrialisation)

Programme	Vote	Sub-sub programme	Budget	Release	Expenditure	% Of Budget Released	% Of Release spent
Human Capital Development	19	Rural Water Supply and Sanitation	169.891	66.33	50.9	39%	77%
	19	Urban Water Supply and Sanitation	589.761	480.17	384.73	81%	80%
	500	Rural Water Supply and Sanitation- LG's	89.5	89.5	89.5	100%	100%
	500	Urban Water Supply and Sanitation- LG's	2.5	2.5	2.5	100%	100%
		National Water and Sewerage Corporation (AIA)	438	415	415	95%	100%
Agro-Industrialization	19	Water for Production	170.892	162.16	127.6	95%	79%
Total			**1,460.54**	**1,215.66**	**1,070.23**	83%	88%

The budget for FY 2021/22 was **UGX 1,460.54bn** and **UGX 1,215.66bn** was released representing 83% release of which UGX 1,070.23bn was spent representing 88% absorption rate. The absorption rate reduced from 97% in the FY 2020/21 mainly due to delayed project designs, certificate approvals and " no objections" especially on the externally financed projects since most of the task team leaders operated from outside the country since the covid-19 times.

Contribution by UWASNET members: The investment by NGOs/CSOs in water supply, sanitation, capacity development and research and Development was UGX 78.61 billion.

2.4.7 Grant and loan funded projects.

The programme receives support from the external financing financiers like World Bank, Arab Bank for Economic Development in Africa (BADEA), African Development Bank (AfDB), European Investment Bank (EIB) and French Dev't Fund (AFD) through development loans which comes as on budget funds and appropriated by Parliament. During the financial year 2021/2022, the programme's external financing budget stood at USD 447 million of which USD 136.2 million are grants and USD 312 million are loans. Funds received by the programme are appropriated as on budget funds and reflected as external funding in the tables above.

***Fiscal performance**:* The overall projects performance rating was generally satisfactory at 86% fiscal performance. 43% (9 projects) were rated satisfactory, 43% (9 projects) were rated moderately satisfactory by June 2022 and 14% or 3 projects were ranked unsatisfactory. Table 9 shows the performance of loans and grants. It should be noted that the physical performance is all in what was reported on above.

Table 9: Performance of grants and loans

WATER & ENVIRONMNET SECTOR-EXTERNAL FUNDING PERFORMANCE JUNE 2022												
Programme	**Project Title**	**Implementing Agency**	**Source of Funding**	**Date of effectiveness**	**Initial Closure Date**	**GRANT Amount Committed (US$ m)**	**LOAN Amount Committed (US$ m)**	**Amount Disbursed to by June 2022**	**Amount Spent by June 2022**	**% of Original Lifetime Covered**	**% Disbursed by June 2022**	**Fiscal Performance Rating**
NATURAL RESOURCES, ENVIRONMENT, CLIMATE CHANGE, LAND AMD WATER MANAGEMENT	(FIEFOC-II)	MWE/DWD	AfDB & NDF	42522	44926	5.6	76.7	67.91	67.69	92%	83%	Satisfactory
	Building Resilient Communities, Wetland Ecosystems and Associated Catchments in Uganda	MWE	GCF	42979	45901	24.14016		7.879	7	60%	33%	Moderately Satisfactory
	Enhancing Resilience of Communities to Climate Change	MWE/DWRM	ADAPTATION FUND	42856	44681	7.149		4.986111	4.691676	103%	70%	Satisfactory
	Investing in Forests and Protected Areas for Climate-Smart Development	MWE	IDA	44426	46203		81.35	1.45	0.45	18%	2%	Satisfactory

WATER & ENVIRONMNET SECTOR-EXTERNAL FUNDING PERFORMANCE JUNE 2022												
Programme	**Project Title**	**Implementing Agency**	**Source of Funding**	**Date of effectiveness**	**Initial Closure Date**	**GRANT Amount Committed (US$ m)**	**LOAN Amount Committed (US$ m)**	**Amount Disbursed to by June 2022**	**Amount Spent by June 2022**	**% of Original Lifetime Covered**	**% Disbursed by June 2022**	**Fiscal Performance Rating**
	Multi-National Lakes Edward and Albert Integrated Fisheries and Water Resources Management Project (LEAF)	MWE/DWRM	AfDB	42501	44561		7	6.9887	6.9887	109%	100%	Satisfactory
AGRO INDUSTRALISATION	NEXUS GREEN Development of Solar Powered Water Supply Systems	MWE	UK Export Finance	44233	45510		110.0616	10.075	5.4	40%	9%	Unsatisfactory
	Irrigation for Climate Resilience Project	MWE/WfP	IDA	44182	46142		169.2	9.6	0.34	29%	6%	Moderately Satisfactory
HUMAN CAPITAL DEVELOPMENT	Kampala Sanitation Programme Phase I	NWSC	AfDB	40237	42369		53.19	53.19	53.19	211%	100%	Moderately Satisfactory
	Kampala Sanitation		KfW	40238	42370	13.8	0	13.76	13.76	211%	100%	Moderately Satisfactory
	Programme Phase (supplementary)	NWSC	AfDB	43209	43951	0	26.85	26.31	26.31	207%	98%	Moderately Satisfactory

WATER & ENVIRONMNET SECTOR-EXTERNAL FUNDING PERFORMANCE JUNE 2022												
Programme	**Project Title**	**Implementing Agency**	**Source of Funding**	**Date of effectiveness**	**Initial Closure Date**	**GRANT Amount Committed (US$ m)**	**LOAN Amount Committed (US$ m)**	**Amount Disbursed to by June 2022**	**Amount Spent by June 2022**	**% of Original Lifetime Covered**	**% Disbursed by June 2022**	**Fiscal Performance Rating**
	Kampala Water Lake Victoria WATSAN Project I (KW-LVWATSAN -I)	NWSC	EIB	40661	42331	0	108.76	108.76	108.76	244%	100%	Moderately Satisfactory
		NWSC	AFD	40661	43062		108.76	108.76	108.76	170%	100%	Satisfactory
		NWSC	KfW	40661	43062	37.2		26.0028	26	170%	70%	Satisfactory
		NWSC	EU-IFT	40661	43062	9.92		9.8208	9.8208	170%	99%	Moderately Satisfactory
	Kampala Water - Lake Victoria Water & Sanitation Project -II (KW-LVWATSAN -II)	NWSC	AFD	43490	45657		173	108.99	73.02	58%	63%	Satisfactory
	Water Supply and Sanitation Programme - Phase II (WSSP-II)	MWE/DWD	AfDB	42501	44560		92.3	92.3	92.3	109%	100%	Satisfactory
	Water and Sanitation Development Project – North Phase 2	MWE/WSDF-N	KfW	43396	44926	9.484		4.2	4.04	88%	44%	Moderately Satisfactory

WATER & ENVIRONMNET SECTOR-EXTERNAL FUNDING PERFORMANCE JUNE 2022												
Programme	**Project Title**	**Implementing Agency**	**Source of Funding**	**Date of effectiveness**	**Initial Closure Date**	**GRANT Amount Committed (US$ m)**	**LOAN Amount Committed (US$ m)**	**Amount Disbursed to by June 2022**	**Amount Spent by June 2022**	**% of Original Lifetime Covered**	**% Disbursed by June 2022**	**Fiscal Performance Rating**
	Strategic Towns Water Supply and Sanitation Project (STWSSP)	MWE/DWD	ADB	43647	45473		62.48	25.54	25.54	45%	30%	Satisfactory
	Integrated Water Management & Development Project (IWMDP) MWE Component	MWE	IDA	43647	45628	21.5	166	26.9	12.5	55%	14%	Unsatisfactory
	Integrated Water Management & Development Project (IWMDP) NWSC Component	MWE & NWSC	IDA	43647	45628	7.5	85	8.2	0.8	55%	9%	Unsatisfactory
	South Western Cluster Towns of Masaka and Mbarara Project	NWSC	AFD	43479	45657		138.4	40.14	6.42	58%	29%	Moderately Satisfactory

2.3 Programme Monitoring and Reporting

During the FY 2021/22, project monitoring was largely limited due to constrained allocations to the vote as funds were directed towards economy recovery after the covid -19 effects. However, the programme carried out monitoring on large projects implemented by the ministry. The Ministry prioritised projects that had the largest investment in the budget majorly in the directorate of Water Development and water Recourses. Ministry of Water and Environment carried together with KfW carried out an appraisal mission. The delegation visited the following towns during the appraisal mission.

- Climate Resilience and Water Infrastructure Programme: Amuru Town Council , Alangi Rural Growth Center, Zeu RGC and Yumbe TC, proposed dam site on River Enyau and water and sanitation infrastructure in Arua City.
- DKTI: Pabbo Water Supply System (WSS), Bidibidi Zone V refugee settlement, Pawor water supply system and the proposed NUWS workshop site in Bobi.
- EU WASH in schools and health centres: Agole Primary School in Pabbo, Lagoro Primary School in Amuru District, Ayer Primary School in Kole District, Alero Health Centre in Nwoya District.

Monitoring was also done for the construction of Yumbe Feacal Sludge Treatment Facility in Yumbe District. This facility is expected to cover Yumbe District and its neigboring areas including the Refugee settlements. The aim of the field visit was to assess the progress of the ongoing construction works which is currently at 61%.

Routine monitoring and supervision of the status and restoration process of the demarcated riverbanks in all the 3 rivers of Rufuha (Ntungamo District), Nangaro-Kashenyi-Nyamiyaga (Rubanda District) and Kiruruma (Kabale District). It has been observed that generally the demarcated sections have been respected and there is ongoing natural regeneration in all the 3 rivers.

Photo 2-1: Monitoring the status of River Kiruruma (water levels have risen), Kabale District

CHAPTER 3: WATER RESOURCES MANAGEMENT

3.1 Introduction

Water Resources Management Sub-programme is responsible for achieving the programme objectives of ensuring the availability of adequate and reliable quality freshwater resources for all uses. It also contributes to the programme objective of increasing incomes and employment through sustainable use and value addition to water, forests, and other natural resources.

Its key results include (i) Increased water permit holders complying with permit conditions at the time of spot check (abstraction – surface water from 78 percent to 82 percent, groundwater from 76 percent to 81 percent and wastewater discharge from 63 percent to 68 percent); and (ii) Increase water samples at point of collection complying with national standards (water bodies to 65 percent by 2025 and supplies/water collection point to 80 percent by 2025).

3.2 Water Resource Management Outcome Indicators

Table 10 presents the Water Resources Management outcome indicators as outlined in the NDPIII programme level results framework. Overall, there was increased compliance with permit conditions when compared to the FY 2020/21. Compliance to ground water permits increased from 76.8 percent in FY 2020/21 to 78.7 percent in FY 2021/22. However, this increase was below the target of 79 percent. At the current rate of progress, the NDPIII target of 81 percent compliance with ground water permit conditions is likely to be achieved by 2025.

The compliance to surface water permit conditions increased from 78.4 percent in FY 2020/21 to 80.2 percent in FY 2021/22. This increase exceeded the target of 79.5 percent. At the current rate of progress, the NDP3 target of 82 percent compliance w to surface water permit conditions is likely to be achieved by 2025. There was slight increase in compliance with wastewater discharge permit conditions from 65 percent in FY 2020/21 to 66.2 percent in FY 2021/22. This increase exceeded the target 65 percent. At the current rate of progress, the NDPIII target of 68 percent compliance with wastewater discharge permit conditions is likely to be achieved by 2025.

Compliance for wastewater samples to national standards was 33.4% against the target of 68%. Compliance of Rural Water Supplies was 62.3% against the PIAP target of 80% for 2022. Compliance with national standards for water collection points- urban water was 77.2% against the target of 90%.

Table 10: Water Resources Management outcome indicators

Outcome	Indicators	Baseline	Achievements		Target
			2020/21	2021/22	2021/22
Objective 1: ***Assure availability of adequate and reliable quality freshwater resources for all users***					
Increased compliance to all water permit conditions	Compliance to ground water abstraction (%)	76	76.8	78.7	79
	Compliance to surface water abstraction (%)	78	78.4	80.2	79.5
	Compliance to wastewater discharge (%)	63	65	66.2	65
Enhanced water quality management	Percentage of water samples complying with national standards for wastewater discharges	30	48.2	33.4	68
	Percentage change in water samples complying with national standards for water bodies (Lake Victoria)	ND	ND	78	80
	Percentage change in water samples complying with national standards for water bodies (Lake Victoria)	Rural 41% Urban 60%	Rural 62.2 Urban 90%	Rural 62.3 Urban 77.2	80(Rural) 90(Urban)

Source: *DWRM/MWE.* ***ND*** *denotes No Data.*

The specific interventions and sub-interventions related to this sub-programme as outlined in NDPIII are:

(i) Improve coordination, planning, regulation, and monitoring of water resources at catchment level

a. Develop and implement integrated catchment management plans for water resources catchment areas.

A1: Develop Catchment Management Plans

During this FY 2021/22, The development of 4 catchment Management plans commenced. River Nyamugasani and River Kafu Catchments management plans have been developed to 15% while Okweng and Sezibwa catchment management plans have been developed to 5%. The development of these Catchment management plans is a multi-year activity and actual output is expected in the FY 2023/24. Relatedly, seven (7) micro catchment management plans have been developed and they include Ora, Anyau, Laropi, Ayugi, Nyimur, Awic and Mutunda. These plans are intended to facilitate sustainable development and utilization of water and related resources within the catchments and sub-catchments in general. The plans will facilitate the reversal of catchment degradation, increase ecosystem resilience and productivity, and improved community livelihoods/ socio-economic development.

A2: Water management measures implemented in priority sub-catchments.

- **Five (5) water management measures drawn from the catchment management plans and micro-catchment management plans have been implemented in priority sub-catchments as follows.**

1. 791,325 assorted tree seedlings have been distributed and planted in Nyamwamba catchment, river Sebwe catchment, Maziba catchment, river Tokwe catchment in Bundibugyo, river Semiliki catchment in Ntoroko as improvement to the basin vegetation cover covering 250.1ha of land.
2. 80.55ha of soil and water conservation technology demonstration gardens have been constructed in Upper stream Nyamwamba.
3. 82.8 km (13km of soil bunds, and 11.4km grass strips and, soil and water conservation measures along the hills of Nyakitokoli, (58.4 kms) on Sebwe in Kasese, Tokwe in Bundibugyo, Semliki in Ntoroko and in Agago districts) have been established and constructed.
4. 552.395 km of water retention channels, infiltration trenches, check dams, bench terraces have been constructed in Awoja, Aswa and Maziba catchments.
5. 640 ha of water harvesting and flood control structures were constructed in Awoja, Aswa and Maziba Catchments.

Photo 3-1: Soil and Water conservation measures in Nyakazinga Upstream Nyamwamba

Photo 3-2: Infiltration trenches constructed in Aswa catchment (Left) and Awoja catchment (Right)

- **One (1) feasibility study and detailed designs for priority catchment investment project was undertaken and packaged into bankable investment project against the target of 4**

During the FY2021/22, the consultants produced the final Environmental and Social Impact Assessment (ESIA), Resettlement Action Plan (RAP) and Compensation framework (CF). The documents were reviewed and validated by technical representatives from both countries.

The governments of Uganda and Kenya through the Nile Equatorial Lakes Subsidiary Action Program (NELSAP), an investment arm in the Nile Basin Initiative (NBI) identified the Angololo Water Resources Development project as a trans-boundary cooperative project for preparation into a bankable investment project. This project is aimed at enabling the republics of Uganda and Kenya to increase irrigated agriculture on 3,300Ha of land when fully developed. The project when fully implemented is expected to benefit at least 127,000 people from Tororo, Manafwa and Namisindwa districts in Uganda and Busia and Bungoma counties in Kenya directly or indirectly through creation of employment opportunities, agricultural production (irrigation), domestic piped water supply, livestock, and fisheries production.

The project is being funded by a grant from NEPAD Infrastructure Project Preparation Facility Special Fund (NEPAD IPPF Special Fund) as well as co-funding from the governments of Uganda and Kenya to the tune of USD 75,000 each.

- **235 water management infrastructures in form of small water harvesting check dams, soil and water conservation structures, percolation pits, gully plugs etc have been constructed against the target of 200.**

1. 149 water retention/percolation pits have been constructed (21 in Kirembe, 10 in Nyamurindira, 6 in Ruhanga and 3 in Kanyante in Maziba catchment, 50 in Aswa catchment, and 72 in Awoja catchment.
2. 84 gabions (7 in Kirembe, 14 in Nyamurindira and 15 in Ruhanga, and others in Kamatelong-Kapkwowet, Mukuti Piyonon in Kitowoi and Kwosir Sub counties.
3. Two (2) underground water harvesting tanks with a capacity of about 30m3 each, at Aadoka hotspot in Kumi district, Opeta-Bisina sub Catchment.

Before catchment restoration	*After catchment restoration*
	

Photo 3-3: Soil and water conservation measures established in Sebwe in Kasese district

- **55 stakeholders have been identified to benefit from income generating and livelihood opportunities and establish a revolving fund to help them implement income generating and livelihood activities**

1. The 55 are women and youth groups that have been established to benefit from start-up enterprises as incubators for alternative livelihoods and diversification of welfare. The start-up enterprises launched are involved include bar soap making, school board chalk making, baking cakes, tree nursery beds, fishponds, among others.
2. 4,157 improved Energy efficient cookstoves have been produced by 18 women Groups (Aswa-885 and Maziba-913 and Awoja-2,407); this has reduced encroachment on forests in search of firewood.
3. Fourteen (14No.) Water and Environment Cooperative Societies (WECS) were formed in some of the restoration sites to provide a revolving fund for supporting alternative income generating activities. The WECS were trained and assisted to register with the Ministry of Trade, Industries and Cooperatives (MTIC). The training covered Income Generating Activities (IGAs) including fish farming, shear nut value addition, apiary, tree nursery establishment and goat rearing. All the documents required for the WECS to operate including Memorandums of Understanding (MoU) between the Ministry of Water and Environment and the WECS, a financing agreement between the WECS committee and the WECS members, and Terms of Reference detailing WEC roles and responsibilities were prepared and approved by the MTIC and Ministry of Justice and Constitutional Affairs.

Photo 3-4: WECS being trained in Mazia Catchment (L) and Aswa Catchment (R)



THE COOPERATIVE SOCIETIES AMENDMENT ACT, 2020.

PROBATIONARY

Certificate of Registration

I hereby certify that I have this day registered the above-named Society and its bye-laws under the provisions of section 6(1) of the Cooperative Societies Amendment Act, 2020.

Photo 3-5: WECS executive swearing in (L) and one of the Certificates of registration (R)

Additionally, Communities in Nyamwamba catchment were sensitized, trained, and supported to start income generating activities as outlined below:

- **Fish farming -** 4 groups each comprising of 25 members were trained on fish farming**.** Four fishponds were excavated and 2 were stocked with fingerlings.
- **Beekeeping (apiary) -** 10 groups comprising 25 were trained on apiary. Procured 25 colonized apiaries for each group.
- **Horticulture -** 100 beneficiaries clustered in 4 groups were mobilised, trained, and supplied with seeds for tomatoes and cabbages.
- **Energy-saving technologies** - 120 persons were mobilised and trained. Seven demonstration centres were setup.


Photo 3-5: Energy-saving stoves made by Umoja women group and stocked fishpond for Kihara fish farmers

- The development of the Albert Water Resources Development and Management strategy commenced and is at 5% progress.

  The inception phase has been completed and the Baseline assessments have been finalized. Additionally, draft Water Resources Assessment Reports and Strategic Social & Environment Assessment (SSEA) reports have been finalized and submitted for review.
- **Review and amend the National Water policy and Act to address new developments, dam safety and challenges.**

  During this period, the review of the water policy was finalized and the updates have been made and the revised version will be sent again to cabinet for approval by end of November 2022. The revised policy will guide the Minister on how to improve the implementation of emerging issues and also highlights the importance of water, main sources of water, uses of water, measures to provide water for different uses, how to protect water sources, dangers of encroaching on the water sources and mechanisms to address encroachment.
- **Operationalize 4 Water Management Zones offices; establish and operationalize sub -zonal offices**

  Karamoja sub-zonal office under Kyoga Water Management zone was established, equipped and staff deployed to facilitate the implementation of water management measures and strengthening drought resilience for small household farmers and pastoralists.

b. Establish functional gender sensitive regional and zonal management committee for water resources.

- 4 gender sensitive Micro catchment management committees with at least 55% representation of females were formed as follows; Nyimur [22 members; 14 males and 9 females], Mutunda [22 members; 13 males and 9 females], Injudi [12 members; 8 males, 4 females and Amua 22 members; 16 males and 6 females], Also, the executive arm for Amua CMO was re-constituted

c. Operational Water information systems at the central level and in the 4 Water Management Zones

- Water Information System (WIS) linking to different databases within the Ministry of Water and Environment has been set up and is operational at the central level.
- Hardware equipment for the water information system has already been delivered and installed to Kyoga Water Management zone.

d. Water abstraction, wastewater discharge and water services regulated through permits

- ***Compliance to water abstraction and wastewater discharge permit conditions***

Compliance refers to the percentage of water abstraction and discharge permits holders complying with permit conditions. The permit conditions considered are: a) compliance to water abstraction volumes set by the MWE, and b) quarterly submission of data on compliance to permitted water abstraction and wastewater discharge standards including possession of wastewater treatment facilities.

Table 11 presents the permit type and conditions, number of permit holders and proportion of compliant permit holders in FY 2021/22. Overall, 351 permit holders of groundwater and surface water abstraction, and wastewater discharge were inspected, and 76.6 percent were found compliant.

Table 11: Compliance with water abstraction and waste discharge permit conditions FY 2021/22

Permit Type	Permit condition	Permits Holders inspected	Permits complying	Compliant (percent)
Groundwater	Abstracting within permitted amount	164	129	78.7
Surface water	Abstracting within permitted amount	116	93	80.2
Wastewater discharge	Effluent discharge	71	47	66.2
Total		**351**	**269**	**76.6**

Figure 2 below depicts the trend of monitoring compliance with permit conditions over 8 financial years. There was increase in the number of permit holders monitored from FY 2014/15 to FY 2019/20. However, there was a substantial reduction in the number of permit holders monitored in FY 2020/21 and FY 2021/22. This was attributed to CIVID-19 pandemic and limited funding.

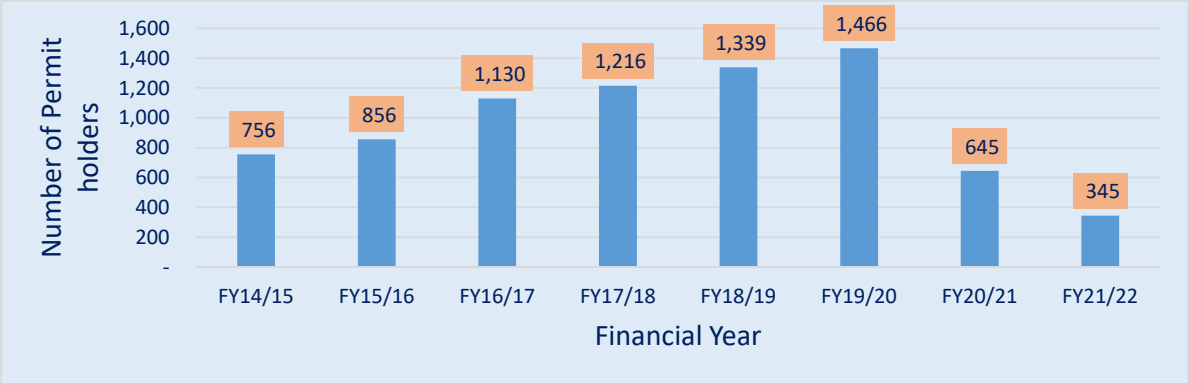


Figure 2: Trend of monitoring Permit Holders over the past 8 FYs

Issuance of water abstraction and wastewater discharge permits

Overall, 374 permits (199 new and 175 renewal) were issued in FY2021/22 compared to 351 permits issued in FY 2020/21. This represents a 6.6% increase in permits issued.

New permit applications

During FY 2021/22, 193 new applications for permits were received and 199 new permits were issued. The permits issued were higher than the new application because of the backlog of applications carried forward from the FY 2020/21. Some applications were not approved due to lack of required information like water source details, evidence of payment of permit processing fees and ownership of the necessary equipment. Details of the applications received and issued are presented in Table 12.

Table 12: Permits applications received and issued in FY 2021/22

S/N	Type of applications	Received	Issued	Percent
1	Groundwater	98	76	78
2	Surface water	52	91	175
3	Construction	8	3	3
4	Wastewater	32	24	38
5	Drilling	3	5	167
	TOTAL	**193**	**199**	**103**

Renewal permit applications

A total of 213 applications for renewal of permits were received out of which 165 (75.6%) permits were renewed. Some of the permits were not renewed because of non-compliance with permit conditions including (i) submitting self-monitoring data for abstraction and/ or discharge, (ii) non-payment of annual water use fees, and (iii) delayed or non-response to compliance issues raised.

Table 13: Summary of renewal permit applications received and issued for FY 2021/2022

S/N	Type of applications	Received	Issued	Percent
1	Groundwater	62	46	74.2
2	Surface water	45	29	64.4
3	Construction	07	07	100
4	Wastewater	34	21	61.8
5	Drilling	65	62	77.4
	Total	**213**	**165**	**75.6**

Figure 3 shows the trend of applications and issue of water permits over the past 9 financial years. There was a spike increase in the number of applications for new and renewal of permits in FY 2018/19. This was attributed to intensive awareness campaigns, continuous inventory, and mapping of potential water permit holders. However, the applications reduction of the number since the FY2019/20 has been due to the COVID-19 pandemic.

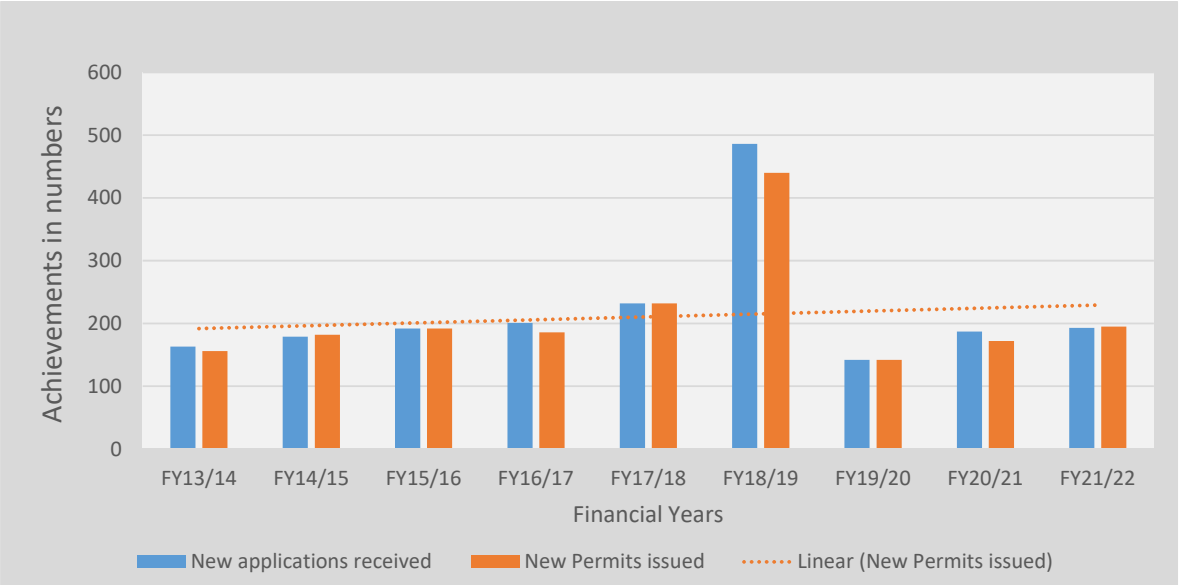


Figure 3: Trend of applications and issuance for water permits over the past 9 FYs

Regulation of borehole drilling in urban areas

To regulate the increasing demand of private boreholes in urban/gazetted water supply areas, permission to drill boreholes is issued to those who apply with sufficient evidence for a need of an alternative water supply source. Forty (40No.) requests were received out of which 27 were granted. The reason for rejection of many applications included poor sanitation around the proposed drilling site, existing boreholes within the vicinity and lack of adequate justification for an alternative source of water.

e. Environmental and Social Impact Assessments for water related projects reviewed

- 15 Environmental Impact Assessment (EIA) reports and 17 Environmental Audits for water resources related projects were assessed and reviewed and comments sent to NEMA for further communication to the developers

f. Increased water storage capacity to meet water resources use requirements

- During the Fy2021-2022, the demarcation of 279.8 km along rivers, Nyamwamba (20kms), Mpanga (20km) Kere (16.8km), Siti-Greek (21.3), Tabagon-Chepiakamiet (12.2km) and Karakilet-Lokokwayi & Kadukuye (48.1km), (94.6 kms) along the river Sebwe, river Tokwe and river Semiliki aswell as 42kmon Lake wamala in Mityana district were protected and restored using Concrete pillars and live markers.

Before catchment restoration	*After catchment restoration*
	

Photo 3-6 ***Restoration of river Sebwe in Kasese district***

(ii) Strengthen enforcement capacity for improved compliance levels

a. ***Dam Safety, Reservoir Regulation and Hydraulic Infrastructure Management***

- 5 major hydropower dams (Nalubaale, Kiira, Bujagali, Isimba and Karuma) were inspected to ensure safe operations and functionality of the spill way components, safety instrumentation in view of the maximum warning levels as well as determining the extent of the implementation of emergency plans.
- 20 mini hydropower plants (Kikagati HPP, Siti I HPP, Siti II HPP, Achwa I HPP, Achwa II HPP, Mpanga HPP, Nkusi HPP, Kabalega HPP, Mahoma HPP, Rwimi HPP, Kakaka HPP, Nyamagasani I HPP, Nyamagasani II HPP, Lubiliha HPP, Nyagak I HPP, Kisizi HPP, Ishasha HPP etc.) were inspected to ensure that the minimum environmental flows have been adhered to in view of competing water uses and ecosystem conservation.
- 10 hydraulic structures including bridges have had their designs reviewed to check their capacity to discharge the peak floods in view of the flood analysis arising from climate change as well as high sediment loads due to catchment degradation.
- Allocation Tools for 2 inland rivers (River Atar and River Mitano) have been developed to guide in allocation of water to permit holders. Water usage in the two rivers is at its peak and cannot accommodate additional major user.
- 8 Water Source Protection Plans mainly for hydropower developers were reviewed and approved. Supervision of the implementation of the plans is ongoing to minimize the threat that could affect the reliability of the various dam infrastructure for hydropower generation.
- Supported the Uganda Committee for Large Dams (UCOLD) through participation in Round Table meeting and stakeholders' meetings on management of the Nile Cascade dams. Uganda is member of International Commission for Large Dams (ICOLD).

(iii) Percentage of water samples complying with national standards

National Water Quality Monitoring

The national water quality monitoring network is issue-based for monitoring and assessment of water quality and comprises stations for monitoring:

1. Impacts of human activities on water quality.
2. Impacts of ground-water abstraction on water quality.
3. Compliance of Municipal and Industrial Effluents to Wastewater Discharge National Standards and indicator SDG 6.3.1 and
4. Compliance of Water Supplies to National Standards for Potable (Drinking) Water Quality and indicator SDG 6.1.1.

AMBIENT WATER QUALITY OF LAKE VICTORIA

The National Ambient Water Quality Monitoring program is a multi-objective and long-term monitoring of the country's surface-water bodies (lakes, rivers and streams). The Sustainable Development Goal (SDG) indicator used to measure ambient water quality is indicator 6.3.2 which is ***'The proportion of water bodies with good water quality'***. This indicator uses 5 key parameters namely electrical conductivity(EC), pH, dissolved oxygen(DO) and plant nutrients (nitrogen(TN) and phosphorus(TP)). For a water body to be considered to be of good quality, 80% of the values of the 5 key parameters measured over a period should be within the respective target values. Based on this criteria, Lake Victoria achieved 78% for the stations on the Ugandan side as shown in table 14 below.

Table 14: Water quality of selected stations on Lake Victoria

Parameter	Target	UL1	UL2	UL3	IMB	UL4	UL5	UL6	UP2	UP7	UP8
EC µS/cm	110	0	50	50	0	60	100	50	100	100	100
DO mg/l	6	100	75	75	100	100	100	100	63	67	50
TN mg/l	1	67	75	100	50	60	67	25	63	83	83
TP mg/l	0.2	100	100	100	100	100	100	100	100	100	100
Station average		68	75	81	63	80	92	69	82	88	83
Water body average											78

Industrial Wastewater quality

The Indicator used for this measurement is '***Percentage of water samples taken at the point of discharge complying with national standards for wastewater discharges***'. To assess compliance to national standards for wastewater discharge, the quality of effluent discharged by industries and municipal wastewater facilities into the environment is monitored.

In the FY 2021/22, a total of 302 wastewater samples were collected and analysed compared to 196 collected in FY 2020/21. This represents an increase of 54%. The compliance levels to National Standards for wastewater (effluent) discharges with respect to Total Nitrogen (TN), Total Phosphorus (TP), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) were 36.7%, 24.5%, 27.4% and 45.1 % respectively. Average compliance levels to National Effluent Discharge Standards stood at 33.4 % against a target of 68%.

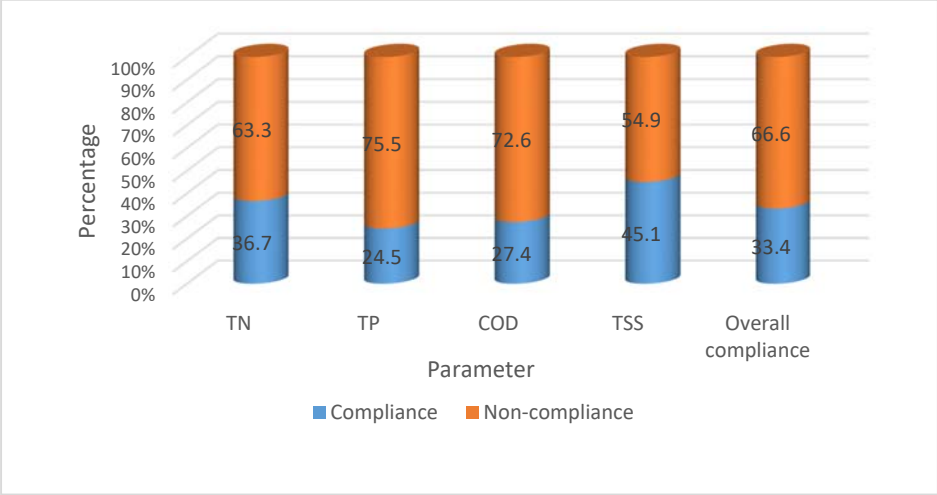


Figure 4: Compliance of industries to wastewater discharge standards

Note: Effluent discharge standards for TN, TP, COD and TSS are: 10mg/l, 5mg/l, 70mg/l and 50mg/l respectively

The five leading polluters were leather tanning, fish processing, textiles manufacture, sugar processing and municipal effluent discharges.

While some industries have installed wastewater treatment facilities, these facilities do not operate optimally due to a number of factors including inadequate capacities, poor designs and poor operation and maintenance.

Pollution reduction by Industries

To promote pollution reduction at source, the Ministry is working in collaboration with the Uganda Cleaner Production Centre (UCPC), to promote adoption of Resource Efficient and Cleaner Production (RECP) techniques and practices by industries located in the Inner Murchison Bay catchment. This approach aims at assisting industries and enterprises to adopt better practices in water, materials and energy use which in turn will contribute to less of useful resource being discharged into the environment and better effluent quality. Progress made include awareness raising and training of 25 persons from 13 industries and enterprises in the FY 2021/22.

Drinking water quality

The drinking water quality indicator is defined as ***'the percentage of water samples taken at the point of collection that comply with national standards for drinking water quality'***. Drinking water sources monitored are categorised into point water sources, mainly in rural areas and pipe water schemes found mainly in urban areas.

Table 15: Water samples collected, and water supply technologies covered by WMZ

Technology option	*Albert WMZ*	*Kyoga WMZ*	*Upper Nile NWMZ*	*Victoria WMZ*	*NWQRL Entebbe*	*Total number of samples*	*Percentage*
Borehole	176	425	31	158	584	1,374	36.6
GFS	39	0	0	27	82	148	3.9
Open Source	3	2	0	25	23	53	1.4
Piped Water	208	211	90	332	554	1,395	37.2
RWH	0	1	0	7	84	92	2.5
Shallow well	26	33	2	76	170	307	6.7
Dug well	22	17	0	12	3	54	1.5
Spring	104	38	1	142	97	382	10.2
Total	556	710	124	767	1,594	3,751	100.0

Water quality of rural water supplies

For purposes of this report, rural water supplies shall be defined as the technology options that include deep wells, shallow wells, protected springs, dug wells, and rain water harvesting systems (RWH) where water is collected from a point water source.

In the FY 2021/22, a total of 2,208 water samples were collected from rural water supplies from 96 districts. This was a 154% increase compared to 868 water samples collected in 2020/21. The increased number of samples were collected with additional financial support from UNICEF country office.

The National standard and SDG 6.1.1 recommend zero *E.coli* in drinking water. Based on this target, compliance of rural water supplies to *E.coli* by technology option was 71.6%, 54.8%, 43.8%, 34.1% and 19.34% for deep wells, protected springs, shallow wells, RWH, and open wells respectively.

Overall, the monitoring indicated that only 62.3% of the rural water sources provided water of acceptable quality based on the National Standards for Potable (Drinking) water quality. However, further analysis of the water quality trends indicates a general improvement in the quality of water provided from rural water sources as indicated in figure 5. Among the technologies prone to contamination for protected springs used for gravity flow schemes.

This improvement in quality of point water supplies is attributed to several factors including increased number of water samples and phasing out of technologies that are prone to contamination such as protected springs. Furthermore, less people are using open and unsafe water sources as safe water coverage increases.

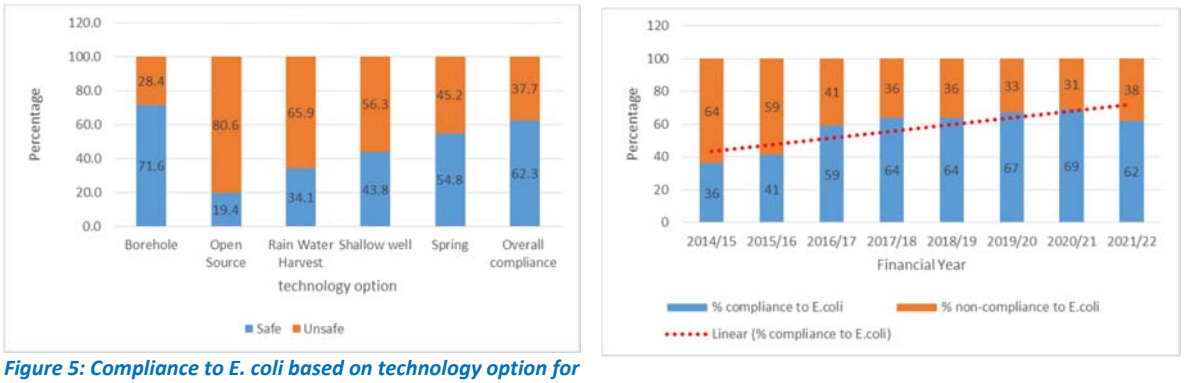


Figure 5: Compliance to E. coli based on technology option for 2021/22 and Compliance trend from 2014/15 for rural water supply

Water quality of urban water supplies

In the FY 2021/22, a total of 3,319 water samples were collected and analysed from 75 piped urban water supply systems serving large towns, small towns and rural growth centres (RGC) compared 985 water samples were collected in FY 2020/21. This represents 240% increase in samples collected. The increased number of samples were collected with additional financial support from UNICEF country office. Figure 6 show compliance of urban water supplies to the national drinking water standard based on *E.coli.*

The National standard and SDG 6.1.1 stipulate zero *E.coli* in drinking water. Based on this this target, compliance of urban water supplies to *E.coli* by technology option was 80.3% and 48.9%, for piped water (other than gravity flow systems) and gravity flow systems respectively.

Overall, the assessment indicated that only 77.2% of the water samples collected from urban water supplies did meet the National Standards for Potable (Drinking) water quality. However, further analysis of the water quality trends of urban water supplies indicates no significant change in the quality of water provided from urban water supplies over the last five years as indicated in figure 6

Figure 6: Compliance to E. coli based on technology option and compliance trend from 2014/15 for urban water supplies

- Overall, the assessment showed that 77.2 % of water samples collected from urban water did meet the National Standards for drinking water with respect to *E.coli*.
- 75% water samples from urban water supplies showed inadequate levels of chlorination.
- To improve water safety in urban water supplies, all piped water supply systems should as a minimum, have a chlorine disinfection unit.

Rapid water quality assessment in Refugee Settlements in Kamwenge district

A rapid water quality assessment was conducted on domestic water sources in Kamwenge district. The objective of the exercise was to assess the impacts of refuge settlements on ground water quality. The assessment which covered 375 water sources in 13 sub-counties was conducted with support from Water for People- an international NGO helping communities' access safe water. The sub-counties covered in the assessment were Bigodi town council, Bigulu, Bihanga, Busiriba, Bwizi, Kabambiro, Kabuga Town Council, Kahunge, Kahunge Town Council, Kamwenge, Kamwenge Town Council, Nkoma, Rwamwanja

The compliance level to National Standards for drinking water quality with respect to E.coli was 62% which was not significantly different from the national compliance level of 62.3%. Therefore, no significant impacts to groundwater quality can be associated with the refugee settlements.

Performance of the Water Quality Laboratories

The National Water Quality Management Strategy defines a three-tier laboratory system for Uganda with a National Water Quality Reference Laboratory (NWQRL) in Entebbe supported by Regional Water Quality Laboratories (RWQLs) and Basic Laboratories in different institutions and water supply schemes. The laboratories receive and analyze samples from both the department networks and external clients. External clients are served at a fee to generate Non-Tax Revenue (NTR).

Upgrade of the Laboratory Quality Management System at the NWQRL

A laboratory quality management system (LQMS) complying with the requirements of ISO/IEC 17025:2017 was established in the NWQRL as part of the processes to prepare the laboratory for accreditation. Key activities conducted during the FY including training of 24 technical staff in laboratory quality system documenting, laboratory quality system auditing and laboratory methods validation. Key outputs included development of various quality management system documents in line with the ISO/IEC requirements and verification of all Test methods used by the NWQRL.

Additionally, NWQRL participated in proficiency testing schemes by the Namibian Water Corporation (SADMET) for chemistry and National Laboratory Association (NLA) of South Africa for microbiology. Analysis of the results from the PT participation showed over 95% compliance level. This is an

indication that the laboratory staff at the NWQRL are competent and results being generated by the laboratory are reliable and meet international standards.

Capacity Enhancement of Regional Laboratories

To improve and upgrade the analytical capacity of Regional Water Quality Testing Laboratories (RWQT) laboratories, state of the art water quality analytical equipment and kits were procured and installed in all the RWQT Laboratories through support from the Integrated Water Management and Development Project (IWMDP). Among the equipment procured and installed were Reagent Free Ion Chromatography and an assortment of other laboratory and field sampling equipment for analysis of a wide range of water quality parameters. This has taken water quality testing services closer to stakeholders in local government levels.

Establishment of an Antimicrobial Resistance Surveillance program in the Water and Environment Sector

According to the United Nations Environment Program (UNEP), antimicrobial resistance (AMR) has been identified as a major global threat across the human, animal, and environmental sectors. The irrational use and poor disposal of antibiotics, and waste from humans and animals promote antimicrobial resistance (AMR) in the environment. While AMR containment programmes in the human and animal sectors are well established, those in the water and environment sector are not.

With support from the Infectious Diseases Institute of Makerere University, an AMR surveillance program in the water and environment sector was established at the NWQRL-Entebbe to bolster and streamline AMR containment efforts within the sector.

Photo 3-7 Newly acquired equipment for monitoring AMR in the water and environment sector.

Preliminary results of isolates from environmental samples showed high resistance to certain critically important anti-biotics in the animal and human health sectors as depicted in the graphs below.

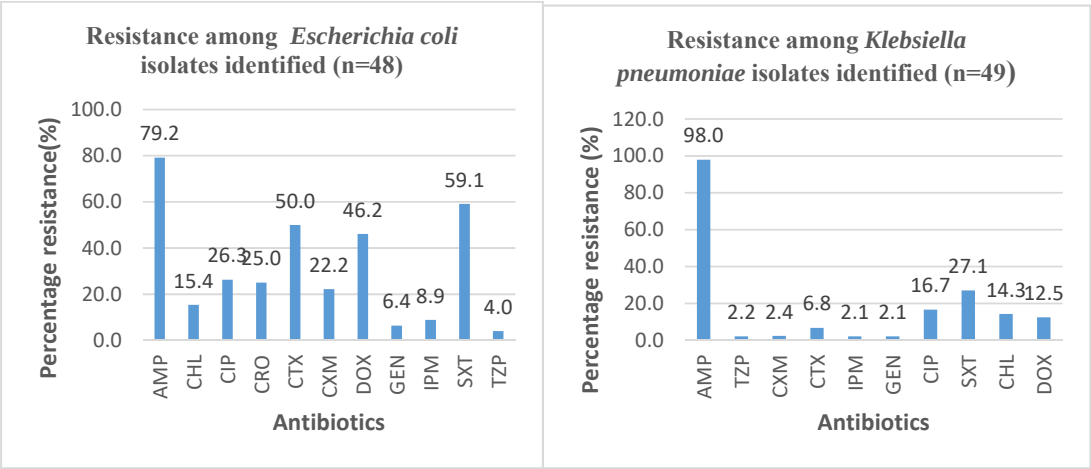


Figure 7: ***Percentage resistance to Escherichia coli and Klebsiella pneumoniae isolates isolates (n=48) identified for the period August 2021 - June 2022***

Note: Ampicillin-AMP; Chloramphenicol-CHL; Ciprofloxacin -CIP; Ceftriaxone-CRO; Cefotaxime-CTX; Cefuroxime-CXM; Doxycyclin –DOX; Gentamicin- GEN; Imipenem-IPM; Trimethoprim/ Sulphamethoxale- SXT; Piperacillin/ Tazobactam-TZP.

The three antibiotics with highest resistance to Escherichia coli (n=48) bacteria were ampicillin (79.2%), sulphamethoxale (59.1%) and cefotaxime (50%). While those highest resistance to Klebsiella pneumoniae (n=49) bacteria were ampicillin (98.0%), trimethoprim/ sulphamethoxale (27.1%) and ciprofloxacin (18.3%).

Implications of antimicrobial resistance (AMR) in the Environment

AMR get into the environment through discharge from municipal wastewater treatment plants and livestock farms where antibiotics are used. High resistance to certain critically important antibiotics has severe implications on animal and human health. AMR in the environment implies

- the environment is colonized by drug resistant organisms.
- humans and animals are exposed to resistant organisms to antimicrobial drugs through drinking water and other exposure roots.

Performance of the National Water Quality Reference Laboratory- Entebbe and RWQTL

A total of 13,078 water samples were analyzed by the National Water Quality Reference Laboratory (NWQRL) - Entebbe and the 3 Regional Water Quality Testing Laboratories (RWQTL) in Fort Portal, Mbale, and Lira. This represented a 45% improvement when compared to 8,994 water samples analyzed in FY 2020/21.

Table 16: Performance of NWQRL and RWQTL

Fort Portal RWQTL	Mbale RWQTL	Mbarara RWQTL	Lira RWQTL	NWQRL Entebbe	Total
935	1,462	0	807	9,874	13,078

Mbarara Regional Water Quality laboratory was non-operational due to lack of space and equipment. Plans are underway to have a laboratory constructed in Mbarara when funding becomes available.

Non-Tax Revenue (NTR)

NWQRL and the four RWQTL in Fort Portal, Lira, Mbale and Mbarara provide water quality analytical services to external clients at a fee following the GoU guidelines on collection of NTR. NTR is also, generated through sale of some water quality data to the public (mainly researchers and consultants)

In FY 2021/22, NTR amounting to UGX 447,572,000 was generated compared to UGX 348,068,394 collected in FY 2022/21. This represents an improvement of 22%. NTR performance per laboratory was Mbarara, UGX 2,360,000; Mbale, UGX 21,266,000; Fort Portal, UGX 25,222,000; Lira, 32,739,300

and NWQRL UGX 365,984,700. NTR collected by the laboratories has improved over the years as a result of acquisition of better equipment through various projects both donor and GoU funded.

Figure 8: Performance of laboratories by NTR collection

Challenges

i) Accumulated and un-paid electricity bills leading to disconnection of the laboratory power supply by UMEME and delayed sample analysis.
ii) Lack of specialized water transport thus making regular lake wide monitoring very expensive.
iii) Increasing water pollution of water resources
iv) Drinking water contamination during disasters such as floods and landslides
v) Low compliance levels to wastewater standards
vi) Inadequate funding for water quality management

Recommendations

1. Phase out completely, water supply technologies that are prone to contamination such as protected springs and shallow wells.
2. Continue to support industries to reduce pollution at source by adopting Resource Efficient and Cleaner Production Techniques
3. Procure a water vessel for water quality monitoring of Lake Victoria and construct a jetty for its docking at the Ministry facility in Entebbe and
4. Increase funding for water quality management activities.

Support to national, transboundary, and international Obligation (NBI, AMCOW)

MWE coordinates the national efforts to manage shared water resources. The overall objective is to secure and safeguard Uganda's interests in the shared water resources to ensure availability of water for ecosystem and national development needs. The strategic focus is on partnership and cooperative management initiatives of Nile Basin Initiative (NBI), Nile Equatorial Lakes Subsidiary Action Programme (NELSAP), African Ministers' Council on Water (AMCOW) among others.

Nile Basin Initiative (NBI)

Nile Basin Initiative was established in 1999 by 10 countries that share River Nile to harness the full potential of the common River Nile Basin water resources for sustainable socioeconomic development. It has been instrumental in development of tools and projects for equitable utilization of the common Nile Basin water resources of the partner states. The achievements were as follows:

- The government fulfilled part of its obligation to supporting international organizations by paying USD 150,000 towards NBI operations.

- The NBI secured funding from Global Environment Facility (GEF) through UNDP to implement a 5 year ground water project entitled ***"Enhancing conjunctive management of surface water and ground water resources in selected transboundary aquifers: Case study for selected shared groundwater bodies in the Nile Basin".*** The project aims at fostering effective utilization and protection of selected shared aquifers through improving the understanding of the available ground water resources and demonstrating conjunctive management that optimizes the joint use of surface and ground water. In Uganda the project is being implemented in the Mt. Elgon aquifer (Uganda/Kenya) and Kagera aquifer (Uganda, Tanzania, Rwanda, and Burundi).
  The Regional, International and National consultants were recruited. At national level, the project is coordinated through the International and Transboundary Water Affairs Department of MWE. The initial output of producing the Shared Aquifer Diagnostic Analysis (SADA) report for both aquifers was completed. The department participated in the Ground water project modelling activities for the 2 aquifers whose models are is currently estimated at 80% progress.
- Supported active participation of Uganda in regional cooperative meetings and joint stakeholders' fora including the 30th Nile Council of Ministers (Nile-COM) meeting in Dar es Salaam , Tanzania. A number of technical documents (Nile River Basin Management Plan, Nile River Basin Investment Programme, Nile Basin Wide Programme II (2022-2027), NBI Trans-boundary Policy, NBI Wetlands Management Strategy) were reviewed and approved.
- The 7th Nile Basin Development Forum (NBDF) is scheduled to be hosted by Uganda in October 2023. The Forum is a regional science–policy–practice dialogue forum organised by the Nile Basin Initiative (NBI) Member States and in partnership with development partners. Its main purpose is to exchange information and views on the steps necessary to achieve sustainable development of the shared Nile Basin water resources. Preparations for the event have started with the development of the draft Concept Note, themes and sub-themes for the forum.

African Ministers' Council on Water (AMCOW)

The African Ministers' Council for Water (AMCOW) was formed in 2002 in Abuja, Nigeria primarily to promote cooperation, security, social and economic development, and poverty eradication among member states through the effective management of the continent's water resources and provision of water supply services. The mission of AMCOW is to provide political leadership, policy direction and advocacy in the provision, use and management of water resources for sustainable socioeconomic development and maintenance of African ecosystems.
The achievements were as follows:

- The government fulfilled part of its obligation to supporting international organizations by paying USD 21,680 towards AMCOW operations.
- Participated in the preparation of the project proposal for the Groundwater for Deep Resilience in Africa, with support of Food and Agriculture Organization (FAO) as a GEF Agency. Letter of endorsement for the project has already been secured and forwarded to FAO.
- One officer was trained on the Pan African Water Supply and Sanitation Monitoring and Reporting system (WASSMO). Data collection for AMCOW-WASSMO report was completed and report compilation is at 60% progress.

Africa Investment Programme on Water Security, Climate Resilience, Development and Gender Transformation AIP- WACDEP – G

The Ministry of Water and Environment in collaboration with the Global Water Partnership Eastern Africa (GWPEA) is implementing the Africa Water Investment Programme Africa - Water Investment Support Programme to Water, Climate, Development and Gender (AIP- WACDEP-G). AIP WACDEP-G was developed as a regional program to trigger the long-term change process. It is intended to ensure that the preparation, development, governance and management of climate resilient water investments and institutional development advance gender equality. The program is currently piloted in Uganda. Its overall objective is *"to transform gender inequalities by promoting gender-*

transformative planning, decision-making and institutional development for climate resilient water investments in Africa." WACDEP-G is expected to be a 'game changer' across the water sector and beyond, addressing gender inequalities across Africa by taking a gender-transformative approach to development at the water and climate interface.

The department coordinated the gender analysis and development of the Gender Action Plan for Maziba catchment. The Gender Action Plan was developed jointly with Climate Change Department, Urban Water and Sewerage Services Department, Rural Water Supply and Sanitation Department and Local Governments of Kukiga, Kabale, Ntumgamo and Rubanda. This followed a rigorous capacity building exercise that was conducted on gender analysis involving 30 staff members who were equipped with skills of conducting gender analysis in projects, programs and policies.

Joint Transboundary catchment investment projects prepared and implemented

Adapting to Climate Change for Lake Victoria Basin Project (ACC-LVB)

The Lake Victoria Basin Commission, (LVBC) is coordinating the Adapting to Climate Change for Lake Victoria Basin Project (ACC-LVB). The project is supported by the Adaptation Fund through UN Environment to a tune of USD 5 Million grant for all EAC Partner States. The overall objective of this project is to "reduce vulnerability to the negative effects of climate change in the Lake Victoria Basin (Burundi, Kenya, Rwanda, Tanzania and Uganda), by building climate resilience". The project has five outcomes:

i) Strengthened institutional capacity to integrate climate resilience into transboundary water catchment management.
ii) Improved delivery of accurate and timely climate information – with an emphasis on transboundary water catchment management – to regional and national policy makers, technical officers and local communities.
iii) Climate change adaptation technologies transferred to communities to reduce their vulnerability to climate change.
iv) Regional resilience to climate change promoted through innovative, community-based projects.
v) Improved knowledge management frameworks for the collection and maintenance of regional knowledge in transboundary water catchment management and climate change adaptation practices.

Interventions for this project in Uganda were adopted from the Katonga Catchment Management Plan and hotspot areas where interventions are being implemented are Masaka (Buyaga Parish in Kyanamukaka sub-county and Kanywa Parish in Buwunga sub county) and Mubende (Bubanda Parish in Kigando sub county and Bushwabwera Parish in Kitenga sub-county).

The project demonstrated climate change adaptation technologies at selected project intervention sites:

i) Enhancing Ecosystem Resilience through Promotion of Energy Saving Stoves in Mpala, Serinya, Kitoma and Kanywa villages in Masaka and Kalungi village in Mubende. 128 household cooking stoves and 3 institutional cooking stoves were constructed. These are benefiting 2,058 persons in Kijjabwemi Church of Uganda (CoU) Primary School, St. Damian Primary School in Buyaga and Tekera Primary School in Lwega in Masaka District.

Photo 3-8: Training of Community Groups in construction of Household Energy Saving Stoves in Masaka District

Photo3-9 Improved household Sove (Rocket Lorena Stove) at a beneficiery's homestead in Masaka District

Photo 3-10: Institutional Energy Saving Stove at Kijjabwemi Church of Uganda (CoU) Primary School in Masaka District

ii) Enhancing Adaptive Capacity of Communities to Climate Change through Sustainable Pasture Management in Mubende where 20 acres of pasture demonstration plots were established in Rwobushumi village.

Photo 3-11: Demonstration gardens of sustainable pasture management for Cloris Gayana, brochiaria and Centro sema grass species in Rwobushumi Village, Mubende District

iii) Strengthening Community Resilience to Drought through Construction of two Communal Valley Tanks in Kyankungu and Kalungi villages, Mubende District. These are benefiting 3,400 community members, 102,000 Cows and 34, 000 Goats.

Photo 3-12:Watering pond for Rwobushumi Village before intervention

Photo 3-13: Site meeting with Water User Committee for Rwobushumi Valley Tank

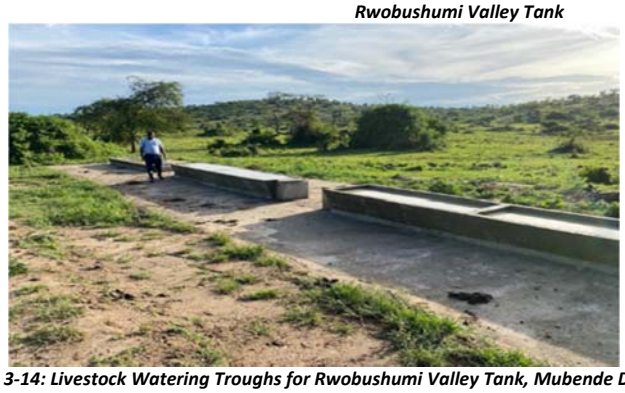


Photo 3-14: Livestock Watering Troughs for Rwobushumi Valley Tank, Mubende District

Communities developed sub-projects and four proposals were approved and funded for ecosystem restoration and putting into practice soil and water conservation measures. These proposals included:

a) Increasing wood biomass and energy efficiency through tree growing and construction of wood saving stoves for enhanced adaptive capacity of communities in Sserinnya and Mpala villages, Buyaga Parish in Kyanamukaaka Sub-county in Masaka District by Buyaga Rural Environment Conservation Initiative.
   272 household cooking stoves were constructed in Serrinya and Mpala Villages benefiting 1,088 persons and 231 Ha of land for agroforestry and woodlot were establishment.
b) Enhancing community resilience to droughts through soil and water conservation measures in Mijunju and Nkoma villages, Buyaga parish, Kyanamukaaka sub-county Masaka District - Nkoma Tutambulire Wamu Group
   So far 20 acres of land is under soil and water conservation measures through use of contour bunds.
c) Building resilience of water stressed rural community through ecosystem-based adaptation along River Nabakazi in Kalungi Rwabagoma and Buswabwera villages in Mubende district by Kalungi Agali-Awamu Womens' Group.
   80 acres of land are under Climate Smart Agriculture including contour bunds and mulching.
d) Implementation of ecosystem-based adaptation (EbA) measures to enhance the resilience of local communities and natural ecosystem through restoration and management in River Nabakazi catchment zone of Katonga wetland.
   An apiary demonstration site with 50 beehives has been setup as eco system-based adaptation and alternative income generating venture along River Nabakazi.
e) Strengthening the resilience of communities and fragile ecosystems to climate change impacts through promotion of climate smart agriculture, and water conservation technologies in Rwobushumi Village, Kiyonga Parish in Kigando Sub- County, Mubende District by Kyankungu Youth Farmers Group. 6.5 Ha of land are under Climate Smart Agriculture including contour bunds and zai pits.
   20 rainwater harvesting tanks were installed and are benefiting 257 persons (Males 118 and Females 139).

These interventions have resulted into more than 5,458 persons from 500 households benefitting from water conservation practices, up to 200 Ha under climate-smart agriculture, and up to 100 Ha of land restored using an Ecosystem-based Adaption approach.

Photo 3-15 Training of Abagahe Kweterana Group in bee keeping in Mubende District

Integrated Water Resources Management in Lake Victoria Basin Program (LVB-IWRM)

Supported the implementation of regional Integrated Water Resources Management in Lake Victoria Basin (IWRM-LVB) program coordinated by Lake Victoria Basin Commission (LVBC). The programme seeks to reduce effluents into Lake Victoria through High Priority Infrastructure Investment projects in the major cities and town within Lake Victoria Basin. In Kampala, the program is focusing on the rehabilitation/upgrading of wastewater ponds and ancillary sewerage network in the greater Luzira catchment.

A Project Identification Study for South-East of Luzira Catchment Area (SOLCA) including a Preliminary Environmental and Social Risks Screening and initial Scoping commenced. Under this programme 5 high priority investments (HPIs) have been identified and submitted for consideration in the next funding phase of the programme. The programme is funded by Federal Government of German through KfW/ European Union.

The Multinational Lakes Edward and Albert Integrated Fisheries and Water Resources Management (LEAF II) Project

This project was a multinational operation jointly financed by AfDB Loans and grant resources from GEF. The project's estimated total cost was UA16.76million, comprising an ADF resources of UA 11.00 million (UA 5 million as loan to Uganda and UA 6 million as grant to DRC), a co-financing of GEF grant of UA 5.532 million (US$ 8.1 million) and a UA0.228 million contributions from NELSAP.

The project objective was to ensure sustainable utilization of allied natural resources of the Lakes Edward and Albert Basin through harmonized legal framework and policies. This was achieved by supporting interventions in two domains viz: (a) fisheries resources development and management and (b) integrated water resources management. The project contributed to broad-based poverty alleviation and improvement of livelihoods of people, by supporting sustainable management of shared natural resources of the LakesEdward and Albert basin, which many communities depend upon.

The project contributed to alleviating poverty and promoting food security in the Lakes Edward and Albert Basin, as elaborated below.

Overall impact: As a result of the Project, an enabling environment for transboundary cooperation was created; capacity of government institutions to promote environment-friendly interventions in the use of the Lakes' resources was strengthened; alternative incomes opportunities and food security for men and women in the fishing community was promoted; fish stocks increased to sustainable levels; health, hygiene and sanitation conditions at the fish landing sites and fishing villages greatly improved; water quality in the lakes and other water sources improved; the catchments and wetlands,

and the biodiversity was conserved. The project also contributed to improved governance in the environmental sector through establishment of 5 Catchment Management Organizations.

Social-economic impacts: The project had major social-economic impacts which included household revenue improvement; maintaining of social cohesion; health improvement; increased proportion of households that are both food and nutritionally secure; and securing fisheries (through increased export value of fisheries, increased fisheries sector growth rate, reduced average travel time, reduced transportation costs for fish, and increased labour productivity in the fisheries value chain). The anticipated negative impacts such as conflicts related to inequitable access to the project resources, land tenure, conflicts between local communities, STD/HIV/AIDS proliferation, etc. were appropriately mitigated as proposed in the project ESMP through adoption of local frameworks for an inclusive and equitable access to the infrastructure and natural resources.

The project also contributed to job creation for local communities in the Lakes' regions. The project generated direct local employment opportunities to about 15,000 persons (43% women) through its interventions while another 67,000 persons (48% women) had other direct benefits.
Other unanticipated or additional positive outcomes included:

a) **Influx of business enterprises:** The modern landing sites, access roads and reliable water sources provided has led to an increase in business enterprises in the project areas by both the project beneficiaries and non-beneficiaries. Businesses such as markets, restaurants, commercial rental structures, shops and boda-boda operators have sprouted.
b) **Increase in Local Governments' revenues:** As indicated above, there has been an influx of business enterprises including the constructed facilities which intern generated more local revenue to the concerned District Local Governments.
c) **Improved access to essential social services:** The construction of the community access roads have eased safe and timely access to health centres. Prevalence of water borne disease, particularly dysentery and children diarrhoea has greatly reduced as a result of water and sanitation facilities while the distance women and children walk to collect water has also reduced.
d) **Reduced accidents on the lakes:** The project-supported national and regional lake patrols, coupled to other national enforcement efforts have greatly reduced the number of accidents on the two lakes. This is attributed to minimized use of illegal boats and overloading which used to cause frequent accidents and deaths.
e) **Reduced Illegal fishing:** In the Lakes Edward and Albert, Illegal, unreported and unregulated fishing (IUU) performed by small-scale fisheries constitute a serious issue to conserve the fish stock. Illegal fishing has been reduced due to additional patrols.

Gender impacts: The project enhanced women's economic empowerment and increased the space for women's participation in decision making processes. The project ensured the inclusion of women in the Community-based Catchment Management Organizations, Catchment Management Committees, Landing site Management Committees, etc. Gender specific action plans were integrated within the 5 developed catchment management plans. The project also supported training of women in various technical skills (leadership, financial literacy, improved drying system, cage fishing, alternative livelihoods, etc.). Gender inequality was therefore reduced through the project interventions.

Environment impacts: In line with the African Development Bank's Integrated Safeguards System, the Lakes Edward and Albert Integrated Fisheries and Water Resources Project was assigned environmental classification of category 2. The Project generated significant positive environmental and social impacts through promotion of ecological integrity of the Lakes' natural resources and ensuring sustainable livelihoods. The positive impacts of the project included: (i) reduced siltation and sedimentation of the lakes; (ii) improved water quality in the lakes; (iii) reduced overfishing and improved fish stocking; and (iv) restored and protected watersheds/catchments and river' buffer areas.

3.3.1.3 Create a critical mass of human resource to undertake enforcement of set standards and regulations.

i) 62 drilling firms, 20 Hydrogeological firms and 68 individual hydrogeologists were licensed to develop the water resources and enhance professionalism in water resources management.
ii) 941 persons (329 female and 612 male) were trained in various short course including (a) Integrated Water Resource Management (IWRM) as a tool for integrating climate change adaptation and community managed disaster risk reduction, (b) Water Source Protection planning and implementation, (c) Uganda's climate resilience in water, environmental and civil infrastructure project (d) Sustainability service monitoring for RWSC (e) Ground water regulation, licensing and allocation, (f) implementation of the SDG 6 Manual, (g) Rooftop rainwater harvesting for climate change adaptation in Uganda, (h) Decentralized Climate Financing, (i) Groundwater - making the invisible resource visible, (j) Supporting Uganda's Climate Resilience in Water Resources Management and Assets analysis.
iii) Five staff members from the Directorate of Water Resources Management (DWRM) and stakeholders from the Ministry of Energy and Mineral Development (MEMD), Electricity regulatory Authority (ERA), Uganda Electricity Generation Company Limited (UEGCL), Uganda Electricity Transmission Company Limited (UETCL), National Environment Management Authority (NEMA) and Hydropower operators were trained in the determination of environmental flow.

Water resources institute progress and achievements FY2021/2022

The Water Resources Institute (WRI) was established in March 2018. It is part of implementation of the Water Sector Reforms and a response to the wide consultations that pointed out the need to address water resources related issues such as pollution, climate variability, and reduction in water availability, and to balance water needs for agriculture, energy, industry, and households in the country. Water Resource Institute aims to be a Centre of excellence in the conservation, development and management of water related resources for sustainable development of Uganda

Water Resources Institute is planned to be a semi-autonomous Institute that undertakes the following tasks:

- Integrated capacity building courses for officers joining the water sector in the country,
- Conduct basic and applied research,
- Implement outreach activities related to research
- Human resources development, and
- Promote policy dialogue on water related issues

3.3.1.4 Build partnerships, collaborations and cooperation with water and environment stakeholders to enhance management and development of water related resources

In line with the Water resources institute 10-year Strategic and 5-year Business Plan, the Institute identified 18 potential partners to collaborate with in the implementation of the key action areas. The Institute held meetings with 14 potential partners to discuss potential areas of collaboration and engagement to achieve its objectives under its 4 strategic areas of focus (i) applied training, (ii) research, (iii) dialogues and (iv) outreach. The partners engaged include among others UN bodies, development partners, CSOs, religious and cultural institutions, private sector, and academic institutions. Through these engagements 2 MoUs were signed with Buganda Kingdom and International Water Resource Centre (IRC) and 2 Partnership Agreements were signed with Water Aid Uganda and Water for People.

Water Resources Institute developed the Policy for engaging the retired professionals in Water and environment sector activities. The policy was approved by the Ministry leadership and an advert was made in Newspapers inviting interested professionals to submit their expressions of interest to participate in the programme. 55 professionals submitted their expressions of interest. The applications were evaluated and 50 professionals qualified to be engaged in various activities of the

Ministry of Water and Environment. 37 professionals submitted their financial proposal and signed framework contracts each for 18months with MWE to provide services.

3.3.1.5 Undertake relevant applied research aligned to development needs and existing gaps

Applied Training

In this FY 2021/22, the WRI organized, supported and conducted **14** short course trainings of both national and international in nature involving a total **941 (329** females **and 612** male**)** participants. This represents 70% achievement of the target of 20 applied trainings. The target was not achieved because of COVID-19 pandemic and limited resources. The trainings were conducted on cost sharing arrangements and in collaboration with various institutions and organizations such as IGAD, GIZ-NatuRes, CapNet, Nile-IWRM, World Bank, K-Water, IIRR, UNHCR, Deltares, and British Geological Survey (BGS) among others.

Mentorship Programme

The WRI piloted the Water Resources Institute-Mentorship program (WRI-Mentorship Program) focusing on young and mid-career women professionals and entry level female graduates that have recently joined MWE. The first priority was given to women in the mainstream MWE at the center from all the 3 Directorates (DWD, DWRM and DEA). Out of the 30 mentees, 26 completed the mandated minimum of 4 sessions to qualify for graduation. 10 strategic mentors were recruited to pilot the WRI-Mentorship programme which ran from November 2021 to March 2022 with technical support from Girls for Girls (G4G) and Contour Consults Limited. The mentorship programme is intended to awaken women capacity in management and development of water and environmental resources, and to promote gender equality and inclusion in accessing senior jobs in water and environment sector.

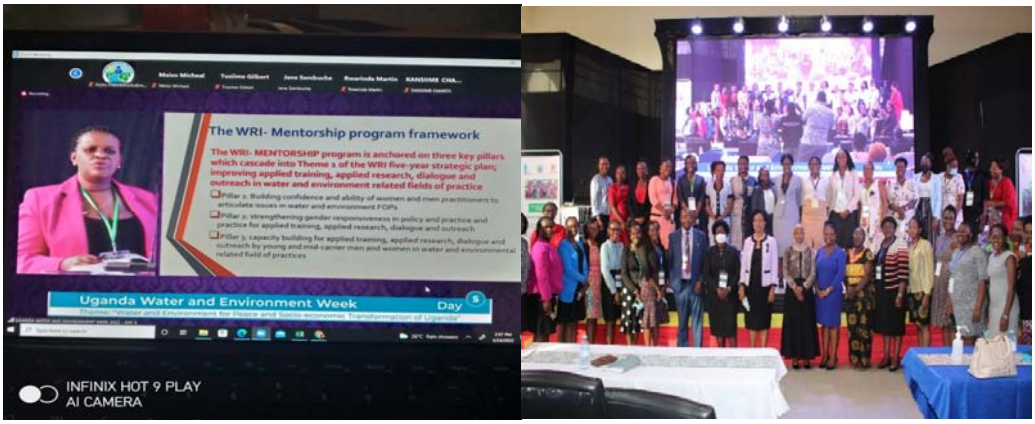


Photo 3-16: Group photo of mentors and mentees for the Pilot WRI-Mentorship Program 2021/22

Table 17 presents the technical and non-technical topics conducted during the pilot mentorship program.

Table 17: Topics covered under piloting mentorship programme

Technical	Non-Technical
leadership & Technical delivery method	Introduction of the Mentorship program
Strategic Planning and Finance	Courageous Leadership
Benefits of financing Mechanism for Water and Environment sector in Uganda	Building Trust
Project management in the Ugandan Context	Art of communication
Benefits of Project Management to infrastructure and asset management	Negotiating for self and others
Sanitation and Hygiene	Confidence building
Integrated Water Resources Management	Decision making

Internship Program

Water Resources Institute in Partnership with UNHCR, Oxfam and Water Mission Uganda launched a graduate trainee internship/placement program offering a 12-month skilling in Water, Sanitation and Hygiene (WASH) to 20 enterprising students who graduated in period of 2020-2021. The objective of this programme was to foster gender equality in the field of Engineering and Public Health. The Programme was opened to female engineering and male public health graduates. Six male public health officers and 4 female engineers were placed in various refugee settlements. Two female engineers got the opportunity to trainee as interns at Deltares in the Netherlands for 12-months. Table 18 presents the organization where the internship was done, name of the trainee, location, and field of specialization

Table 18: WASH Interns under mentorship programme

No.	Organization	Name	Location	Discipline
1	Oxfam	Alex Akaka	Rwamwanja office	Public Health
2	Water Mission Uganda	Tuwune Rogers	Rhino	Public Health
3	Water Mission Uganda	Kimunyu Ferdinand Treasure	Bidibidi	Public Health
4	Water Mission Uganda	Delight Salamula M. Cajo	Bidibidi	Engineer
5	Water Mission Uganda	Kyomuhendo Beatrice	Bidibidi	Engineer
6	Water Mission Uganda	Emmanuel Magal ok	Bidibidi	Public Health
7	Water Mission Uganda	Kampame Allan	Imvepi	Public Health
8	Water Mission Uganda	Paul Mutegeki	Imvepi	Public Health
9	Water Mission Uganda	Arinaitwe Brenda	Kiryandongo	Engineer
10	Water Mission Uganda	Norman Otim	Kiryandongo	Public Health
11	Water Mission Uganda	Evelyn Lydah Awori	Deltares, The Netherlands	Engineer
12	UNHCR	Racheal Nalwoga	Deltares/ Netherlands	Engineer

Implementation of recommendations of UWEWK2021

Six thematic working groups were established to implement the recommendations of UWEWK2021 as presented in Table 19.

Table 19: Thematic Working Groups for implementing the recommendations of UWEWK2021

Thematic working group	Key Messages from UWEWK2021	Lead Institutions
Capacity Development and Empowerment	• Empower the communities especially the youth and women with skills, knowledge, and tools to sustainably preserve water and environment resources while creating jobs and employment. • Raise awareness among the communities and build their capacities to balance development and conserving of water and environment resources. • With water and environment shocks on the rise, absorptive, adaptive, and transformative resilience capacities should be promoted.	UWASNET and Environment Alert
Technology and Scientific Innovations	• Disruptive technology (digitalization, internet, drones, e-services, social media, etc.) should be adapted for managing water and environment resources with clear incentives for research, development, and adaptation. This shall optimize resource utilization and efficiency while scaling up application. • Data sourcing and repository- improve data collection, synthesis and use to guide interventions that enhance water and environment security.	WWF and Water for People

Thematic working group	Key Messages from UWEWK2021	Lead Institutions
	• To harness latest advances in adoptable technologies and smart precision innovations that preserve resources and enhance management efficiency.	
Resilient Urban growth and industrialization	• Early and advance planning for urban growth and industrialization to ensure availability of water resources. • Develop and implement a green development strategy to safeguard ecosystems through a green economy, industrialization, and cities .	GIZ-NatuRes and WaterAid Uganda
Research and Development	• Strengthen Institutions and Institutes to promote use of research to guide interventions for water and environment security. • Value the stock of water and environment resources and their contribution to social and economic transformation of Uganda to guide planning and lobbying for additional resources. • A national audit system and scorecard should be developed and continually presented to motivate conservation and utilization of water and environment resources.	Makerere University and ACODE
Financing of Water and environment management and development	• Politicians and decision makers should be made to understand the role of water and environment in maintaining peace and security. • Need for a special fund/budget allocation for protecting water resources and environment to enable the achievement of the NDP III and SDG goals. • Increase investments in water and environmental resources. • Increased investment in flood control in Kampala Metropolitan Area can lead to 4.2% increase in the country's GDP in 20 years and for the country in general, enhanced flood control can bring about 190 bn dollars to GDP.	IRC and CSBAG
Cross-cutting areas	• Partnership- Strengthen partnerships in advancing global/regional agenda and related policies and strategies in water and environment security • System integration - integrate and coordinate stakeholders, sectors, resources, systems and programs to have holistic approach to ensuring water and environment security. • Shift from a linear economy to a circular and creative economy through implementing the existing enabling policies and strategies.	FRA and Care Uganda

The thematic working groups (TWGs) have been holding meetings to brainstorm on actions areas needed to implement the recommendations of UWEWK2021. Through these meetings, the thematic working groups provided input into the Concept Note for UWEWK2022. Each of the groups was expected to regularly report their progress to the National Organizing Committee of UWEWK for information and advice, and to present reports to stakeholders during UWEWK2022.

Held a pre-UWEWK2022 National dialogue on Financing Water, Sanitation, Hygiene, Environment and Climate Change under the theme "*Re-thinking the Water, Sanitation, Hygiene, Environment and Climate Change Financing Priorities amidst the different shocks."* This was organized under Thematic Working Group "Financing of water and environment management and development" in partnership with Water Aid Uganda, Water for People, IRC and CSBAG. Other TWGs spearheaded activities and sessions during the UWEWK2022 event. For instance, the "Research and Development" TWG was responsible for research, review, and training of presenters of policy, scientific and practice papers. Technology and scientific innovation TWG developed and implemented a University scientific innovation competition (hackathon) during the UWEWK2022.

The UWEWK 2022 was held under the overall theme of "***Water and environment for peace and socio-economic transformation of Uganda***" from 20th -25th March 2022. The sub-themes were (a) Promoting peace and stability through water and environment resources management and development, (b) Building resilience to various risks and shocks, (c) Financing Water, Environment and Climate Change, (d) Partnerships and inter-sectoral collaboration in water and environment management and development.

Pre-event activities were held from 3rd -18th March 2022 and they included:

- 450km Walk for Water, Environment and Climate Change (3rd -18th March 2022) from MWE Headquarters (Kampala) to Lira City via the Eastern route. It involved several activities along the route such as restoration of the environmental through tree planting, awareness campaign, engaging cultural and religious leader on issues of water, environment, and climate change.
- Celebration of UWEWK in 6 regional de-concentrated units of MWE. This involved radio and television talk shows, awareness campaign, environmental restoration, symposium, and regional Youth debates.
- Clean up exercise in Nakawa Division in Kampala involving cleaning and raising awareness on water and environment resources management and development. Four markets of Luzira, Kitintale, Port Bell and Kirombe were involved. The exercise was organized by MWE in partnership with NWSC, KCCA, Nile Breweries Limited, local leaders and local communities on 18th March 2022.
- Conducted water and Environment Week Marathon in Fort Portal and Kampala on 20th March 2022.
- Held water and environment Sunday with the pastoral message on the UWEWK2022 in all the churches under UJCC (Uganda Joint Christian Council) on 20th March 2022.

Photo 3-17: Walk for Water, Environment and Climate Change Clean up exercise in Nakawa Division

The main event was held from 20-25 March 2022 and included the opening ceremony that was live streamed on UBC and NBS televisions, Social Media Platforms and zoom. It was graced by the Vice President of Republic of Uganda, H.E. Jessica Rose Epel Alupo who was the Guest of Honor. A keynote address on the overall theme of the week was proceeded by the high level dialogue of 6 panelists from experienced personalities from across the globe.

Photo 3-18: Amb. of German H.E Hans von Schroder; Ms Elsie G. Attafuah UNDP Resident Rep; H.E Hon. Rtd. Major Jessica Alupo; Hon. Beatrice Anywar, Min. State for Environment, Owek. Mariam Nkalubo Mayanja – Min. of Environment and Bulungibwansi, Buganda Kingdom, and Dr Joseph Shevel, President, Galilee International Management Institute

The weeklong event was closed by Rt Hon. the first Deputy Prime Minister Rebecca Alitwala Kadaga. The Parallel Sessions held within the week included:

- Eight short course applied trainings.
- 62 scientific, policy and practice paper presentations.
- 22 side events including project and report launches, panel discussions, dialogues, graduation of mentees of the WRI- Mentorship, field visits, the National youth debate, career talk among others.
- University students innovating solutions to WASH challenge.
- 41 exhibitors from MWE and other government institutions/agencies, Development partners, private sector, academic, media, Civil Societies Organization, partners and sponsors.

Photo 3-18: The Rt Hon. the First Deputy Prime Minister Rebecca Alitwala Kadaga presenting an award to Dr Florence Grace Adongo, with Hon Breatrice Anywar, Minister of State for Environment looking on

Summary of key messages from UWEWK2022

Key messages from UWEWK2022
a) Water reuse (especially for domestic wastewater) is possible for Uganda to reduce pollution in Lake Victoria and have more water for agriculture.
b) Water availability is likely to be compromised due climate change if we do not ensure efficiency in agriculture and domestic water use.
c) Education is the most powerful weapon which you can use to mitigate climate change.
d) The loss of forests and wetlands through massive use of biomass fuel for cooking/combustion combined with other drivers which include expansion of agricultural land, rapid urbanization, and puts pressure on our water and environment resources.
e) The climate change crisis is interconnected to peace and stability and this is the reason we need environmental justice.
f) Peace is living in a safe and clean environment
g) There is need for clear understanding of the message and accountability for the resources used.
h) Water should be put at the centre of planning.

Key recommendation from UWEWK2022

Key recommendation
On Water and environment resources for peace and security • **Development interventions need to focus on building resilient population which are able to with-stand shocks and have improved livelihood in order to ensure peace and security.** • **The Uganda People Defense Forces should be engaged in awareness creation, mobilization and building capacity for environmental protection.** • **The existing view of the water, agriculture, and energy and ecosystems nexus should be expanded to include security for stability and safeguarding against security risks related to water and environment.** • **There is need for MWE to have its own team of rangers that enforce the environment laws to address issues of accountability and answerability of the Ministry on Water and Environment related issues.**
On Coordination and cooperation • **There is need for integrated approach to planning, management, and development of water resources beyond the current programme arrangement. Optimize partnerships and harness the synergies among stakeholders(Private sector, religious institutions, NGOs, academia, and government).** • **Facilitate inter and intra-sectoral dialogue and knowledge exchange, thereby allowing for continuous learning and adaption of approaches for the improvement of Uganda's Water and environment resources.** • **Work in collaboration to explore and develop innovative ways and incentives to change people's mind-set in conserving the environment.** • **Technical people should be included in the bilateral agreements and or related engagements in order to articulate the scientific perspective of the subject matter.** • **Establish a strong network of external advocates as the water sector so that water and environment drive the national development agenda.**
On Water and environment resource development and management • **There is need for mind-set change at institutional, organizational and individuals levels to be able to harness water and environment resources for social economic transformation.** • **The impact of Refugees as an integral part of the water and environment management should be given due attention.** • **Planning management of Water and Environment resources should take into consideration of the wider political, social, and economic relationships at all levels.** • **Local knowledge is key to the planning and design of the infrastructure, it should be incorporated in new infrastructure development processes.** • **Conservation of water and environment resources requires expanding alternatives for livelihoods and financing to vulnerable people.** • **Sustainable Water and Environment intervention should create income, assets, and education for communities.** • **It is imperative that the large disparity of access to water and sanitation between urban and rural areas is given priority.** • **There is need to develop industrial symbiosis i.e., one industry's waste to be an input to another.** • **All the service delivery models should be climate resilient.**
On Research and development • **Strengthen the capacity of the WRI to foster and initiate research and development that directly address development challenges in order to contribute to a coordinated structured approach of collaborative planning and implementation.** • **There is need to act now and generate evidence on what is being done and build resilience to climate change related shocks.** • **Use the existing data and capacity to create or develop delivery solutions to solve the risks and shocks related to water and environment resources.**
On Green growth implementation • **There is need to monitor the state and adoption of green growth technologies and sustainable waste management practices in industrial parks.** • **There is need to harness the investment opportunities in the Green Growth Strategy and rally investors and other development partners to drive the agenda for Green Growth Strategy.**

Monitoring water and environment resources

- **There is need to develop capacity to generate, analyze and use real time data to monitor water and environment orchestrated impacts and make informed decision.**
- **Establish a more robust early warning system which is simple and acceptable to all stakeholders especially the smallholders/communities in order to ensure adaptation and managing risks and shocks.**
- **Integrate water and climate change monitoring and information systems into the existing IMS within the sector.**
- **Use the existing data and capacity to create/develop delivery solutions to solve the risks and shocks.**
- **Involve communities (cultural and religious institutions) and their local knowledge to achieve resilience against risks and shocks.**
- **Align monitoring and reporting mechanisms including digital reporting to the Green**

On financing water and environment resources

- **Increase sector financing and optimizing use of resources.**
- **There is need to lobby Ministry of Finance Planning and Economic Development to allow the Ministry of Water and Environment to retain at least a 50% of the environment levy collected at source in order to strengthen the resilience and environment protection.**
- **Embrace investment which doesn't affect our water resources and condemn deforestation and degradation of the environment.**
- **There is need for regulations that are stable and avoid policy reversals in order to attract private sector funding streams.**
- **Engage the Private sector and incentivize the scaling up of their investment in Water and Environment beyond the corporate social responsibility through innovative financing.**

On policy

- **Ensure implementation of environmental policies and regulations in a consistent and impartial manner at all levels.**
- **Fast track the enforcement of the policy which compels all manufacturers of plastic waste to follow all their materials and collect them from the end user for recycling.**
- **Integrate youth, and children into the sector and ensure that vulnerable groups have a formal link in the Ministry for them to express their interests and rights and for their voices to be heard.**

3.3.1.6 Ensure effective early warning and early action for sustainable efficient utilization of water resources

The MWE operates and maintains a hydrological network of surface water stations on all major open water bodies, groundwater stations for aquifers and a limited number of strategic rainfall stations. The network has a total of 221 monitoring stations of which 63 groundwater, 115 surface water and 43 weather stations.

However, the collection of data across the country is faced with several challenges including severe wet weather. In the FY 2020/21 heavy rainfall caused flooding/washing away of 21 surface water stations.

With the support from GIZ/EU administered through the Nile Basin Initiative (NBI), 43% of the damaged stations were rehabilitated and upgraded to automated recording and transmission. 48% of the stations have been repaired using temporally means to enable continued recording of data until a permanent solution is found and 9% of the stations were washed away by the floods.

Groundwater Monitoring

Groundwater monitoring is a relatively new concept in Uganda. To date there are 63 groundwater monitoring stations distributed around the country. They are divided into 2 types depending on the purpose i.e. (i). Monitoring the effects of climate variability on groundwater levels (41 Stations) (ii). Monitoring the impacts of motorized groundwater abstraction on aquifers (22 stations). The figure 9 that follows shows the status of functionality of the stations that monitor the effects of climatic variation on groundwater levels. During the reporting period, 19 groundwater monitoring stations distributed around the country provided information on the effects of climate on the groundwater while 6 stations provided information on the impacts of motorised abstraction on aquifer systems. Springs were not monitored and 18.6% of the groundwater sources were reported to be none

functional due to low yields during this time. It should be noted that 85% of the Ugandan population depends on groundwater for domestic water supply, and the rate of borehole drilling is 800 boreholes per year.

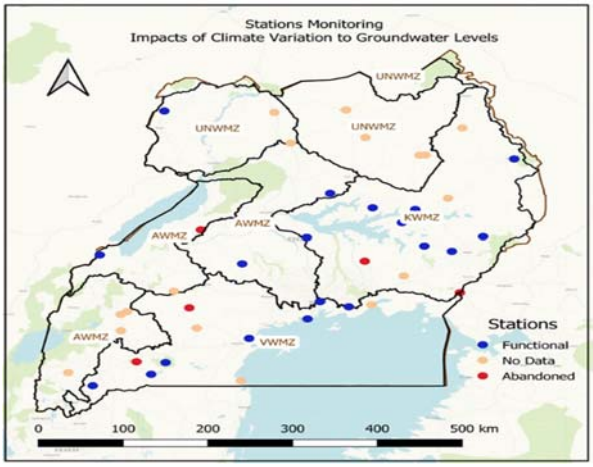


Figure 9: performance of groundwater monitoring network

Hydrological Assessments

The assessment covered water levels, floods and droughts in the major basins including Lake Victoria, Lake Kyoga, and Lake Albert. The results are presented below.

Lake Victoria

The assessment involved estimating the residual Net Basin Supply (NBS) into the lake during the FY 2021/22 and evaluating its impact on lake levels. Figure 10 presents the hydrograph which shows:

- Higher inflows were received during the March-April-May (MAM) season.
- More inflow received in 2021 than in 2022.
- There were no net inflows received during the June-July-August (JJA) season for both years except for August 2022.
- Low values of NBS observed during the September-October-November-December (SOND) 2021.

The information revealed by the NBS during different rainfall seasons along with its impact on lake levels provided basis for regulating the outflow from Lake Victoria during 2021/22. The impact of regulation is demonstrated in the hydrographs of Lakes Victoria, Kyoga, and Albert for the years, 2021 and 2022. As an outcome of proper management of Lake Victoria, there was no lake shoreline flooding on all the three major lakes of Victoria, Kyoga and Albert.

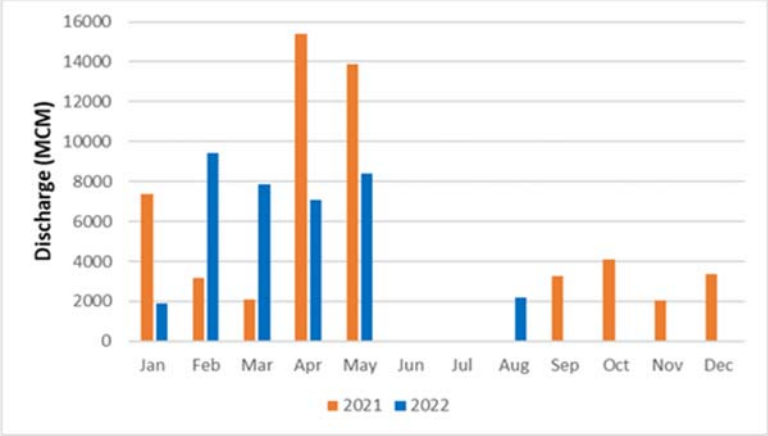


Figure 10: Monthly Net Basin Supply for FY 2021/22

The outcome of the management of Lake Victoria was regular advisories of the outflow from Lake Victoria and intensified monitoring of lake levels using real-time instrumentation resulted in a regulated drop in levels that are well below the historic maximum recorded level. Although on a declining trend, the levels are high enough and have continued to sustain water supply systems and have allowed optimal production of hydropower. Furthermore, several socio-economic activities previously affected by the high lake levels have resumed. Figure 11 depicts Lake Victoria water levels in FY 2020/21 and FY 2021/22.

Figure 11: Lake Victoria Water Levels During FY 2020/21 and 2021/22 FY

Lake Kyoga and Lake Albert

A declining trend in water levels of Lake Kyoga and Lake Albert was observed due to regulation of Lake Victoria outflows (*figure 12 and figure 13*). Water supply systems and run-of river hydropower systems continued to operate well. There was a significant reduction in lake shoreline flooding since most land previously submerged is now dry ground.

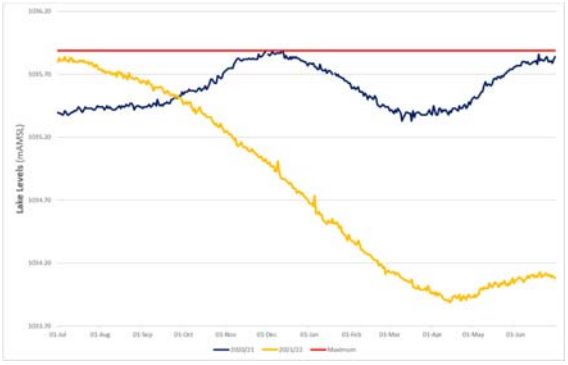


Figure 12: Lake Kyoga Water Levels in FY 2020/21 & FY 2021/22 2021/22

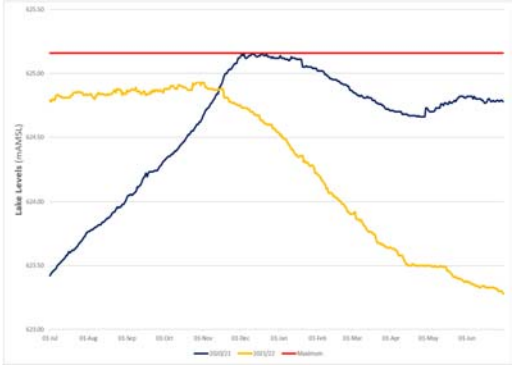


Figure 13: Lake Albert Water Levels in FY 2020/21 & 2021/22

Hydrological Information

Hydrological variability poses one of the greatest threats to the Uganda's increasing population. There is an increasing number of people at risk from water-related hazards and rapidly growing demands on water resources for various uses. However, there is currently no national system capable of assessing the current status of surface and groundwater systems or predicting how they will change in the immediate future. The Department completed an assessment of the requirements for establishing a water resources modeling and forecasting unit which will provide a national platform for generating and sharing hydrological information products.

The plan is to provide this crucial information needed to help citizens understand the current status of the Uganda's freshwater systems and adapt in light of the near-future outlook. It is expected that by harnessing new technologies and linking up with other initiatives, it will be possible to better answer questions like: "How much water is there in Uganda's rivers at the moment?", "Is the current situation normal?", and "How might the national flood/drought situation change in the coming few months?". In light of the above, the Department piloted the development of seasonal streamflow forecasts using global data in order to demonstrate the importance of hydrological information products in sustainable development.

Streamflow Forecasts

Streamflow forecasts are outlooks of future flows based on either sub-seasonal or seasonal time scale. A seasonal time scale corresponding not only to Uganda's rainfall seasons but also to those in the Greater Horn of Africa (GHA) was chosen because of the availability of meteorological forecasts. For the pilot, streamflow forecast was carried out in 8 major drainage basins of Uganda. Figure 14 shows the major drainage basins of Uganda.

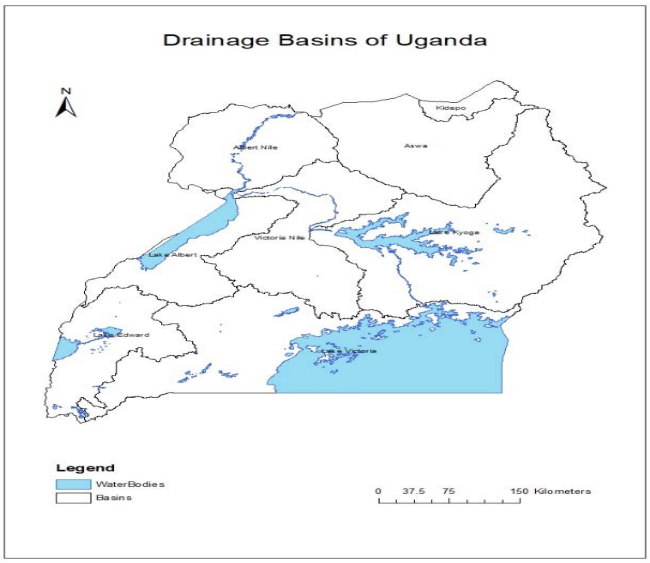


Figure 14: Major Drainage Basins of Uganda

Meteorological forecast forcing data from the European Commission for Medium range Weather Forecast (ECMWF) global climate model was used to generate streamflow. The forecast for September-October-November-December (SOND) indicated between average to below average flows in six basins of: Lake Victoria, Lake Kyoga, Lake Edward, Lake Albert, Victoria Nile and Albert Nile. Aswa and Kidepo basins were expected to have between average and above average flows with possibility of flooding in Aswa basin. The seasonal rainfall and streamflow forecasts are both similar in the basins of; Lake Victoria, Aswa, Kidepo and parts of Lake Kyoga and Victoria Nile.

The observed differences may be attributed to the differences in the number of models used. Streamflow forecasts were generated using one global climate model (ECMWF) as opposed to the average of 8 global climate models used in rainfall forecasts. However, there is agreement in rainfall and streamflow forecast for November and December. This information may be useful to several sectors. For example, it can guide on storage of water in reservoirs for irrigation and hydropower production. This information will be available for the public to access on the Water Information System (WIS) of the Ministry. Figure 15 depicts the seasonal streamflow forecast for September, October, November, and December (SOND) 2021.

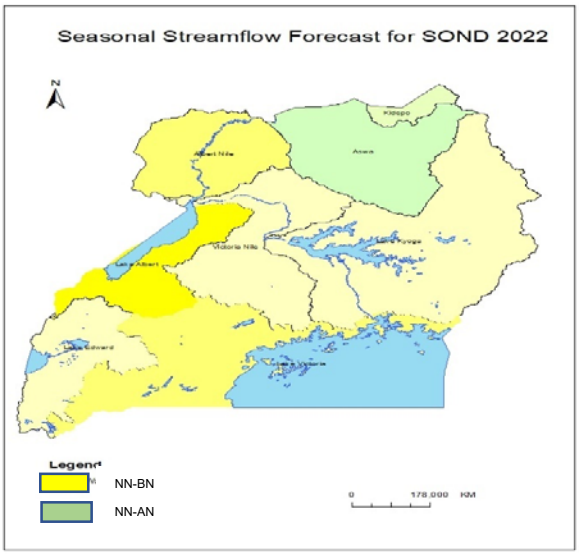


Figure 15: Seasonal Streamflow Forecast for SOND 2021

Real-time Telemetry Monitoring

Hourly real-time transmission of water levels of Lake Victoria at Jinja station continued throughout the FY2021/22. This enabled manager to track the trend of water levels in time thereby making informed decisions. Similarly, real-time transmission of water levels on Rivers Kafu and Manafwa was maintained. However, the data is yet to be processed into information for publication on the Water Information System (WIS).

Hydrological Yearbook

The Annual Yearbooks which brings together some of the principal datasets relating to river flows and groundwater levels throughout the country was published. The Hydrological Yearbook gives an overview of the hydrological situation. The Terms of Reference for a consultant to prepare the book were finalized and the procurement was ongoing.

Hydrology Monitoring for Wetland

With support from the United Nations Development Programme under the project "Restoration of Wetland Ecosystems and Associated Catchments in Uganda", piloted two wetland water balance assessments on Manafwa-Namatala and Kandekye wetlands to evaluate the impact of climate change and human activities on the extent of wetlands. The inputs were obtained from the June-July-August-September (JJAS) 2022 climate outlook in conjunction with maximum abstractions and potential discharges from activities within the wetlands. After reviews and scaling up the process, the results may be used by the Wetland Management Department to form part of a wetland monitoring protocol.

Manafwa-Namatala Wetland Water Balance Model

The Manafwa-Namatala wetland system is located in Eastern Uganda. A numeric water balance model was set up using meteorological forcing data from ECMWF global climate model operated by the Global Flood Awareness System (GLOFAS) and routed using LISFLOOD hydrological model. Historical hydrological stations at the upstream of the wetland were used for bias correction. The model simulation results showed that the wetland water surface elevations would first drop by about 15 centimeters between 01/06/2022 and 20/08/2022 and thereafter rise slightly by about 12 centimeters up to 27/09/2022. It is possible that the model underestimated the impact of climate change and human activity on the wetland due to lack of a good record of observed data from the newly

established stations. The Department will review and incorporate new observed data in order to improve the skill. Figure 16 shows the location of Manafwa – Namatala Wetland.

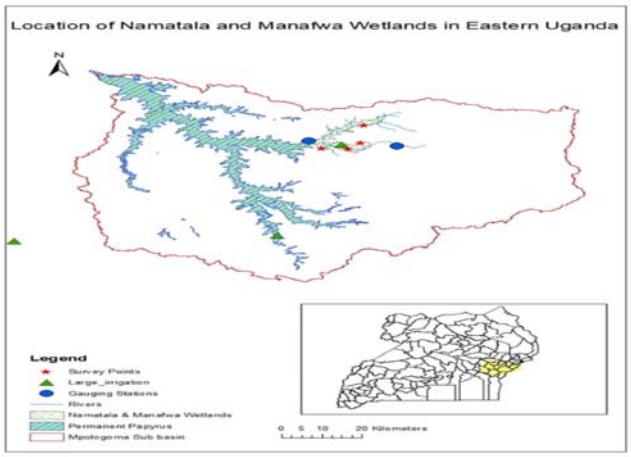


Figure 16: Location of Manafwa-Namatala Wetland

Kandekye Wetland Water Balance Model

The Kandekye wetland is located in Sheema District in the upper most reaches of Rwizi sub-basin within Victoria Water Management Zone (VWMZ). The wetland drains into River Rwizi which subsequently flows into Lake Victoria via the Kooki lakes (Mburo, Kachera, Nakivale, Kijanebarola) system. A numeric water balance model was set up using meteorological forcing data from ECMWF global climate model operated by the Global Flood Awareness System (GloFAS) and routed using LISFLOOD hydrological model. Historical hydrological stations at the upstream of the wetland were used for bias correction. Model simulation results showed very small fluctuation in the wetland water surface elevations during the entire simulation period. It is possible that the model underestimated the impact of climate change and human activity on the wetland due to lack of a good record of observed data from the newly established stations. Figure 17 shows the location Kandekye Wetland.

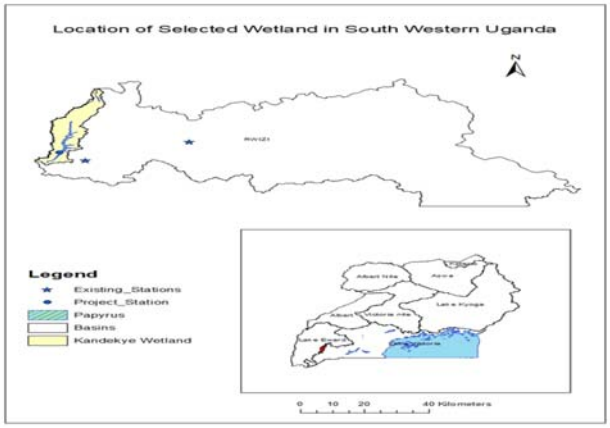


Figure 17: Location of Kandekye Wetland

Aswa and Manafwa Flood and Drought Early Warning System

With the support from the UNICEF, two flood and drought early warning systems in Aswa and Manafwa basins were established. The pilot systems which utilize global climate data were under operational testing before they could be used to issue early warning information to communities that might face both direct and indirect impacts within 21 districts including Manafwa, Abim, Agago, Alebtong, Amuria, Amuru, Gulu, Kaabong, Kapelebyong, Karenga, Kitgum, Kole, Kotido, Lamwo, Lira, Omoro, Otuke, Oyam and Pader.

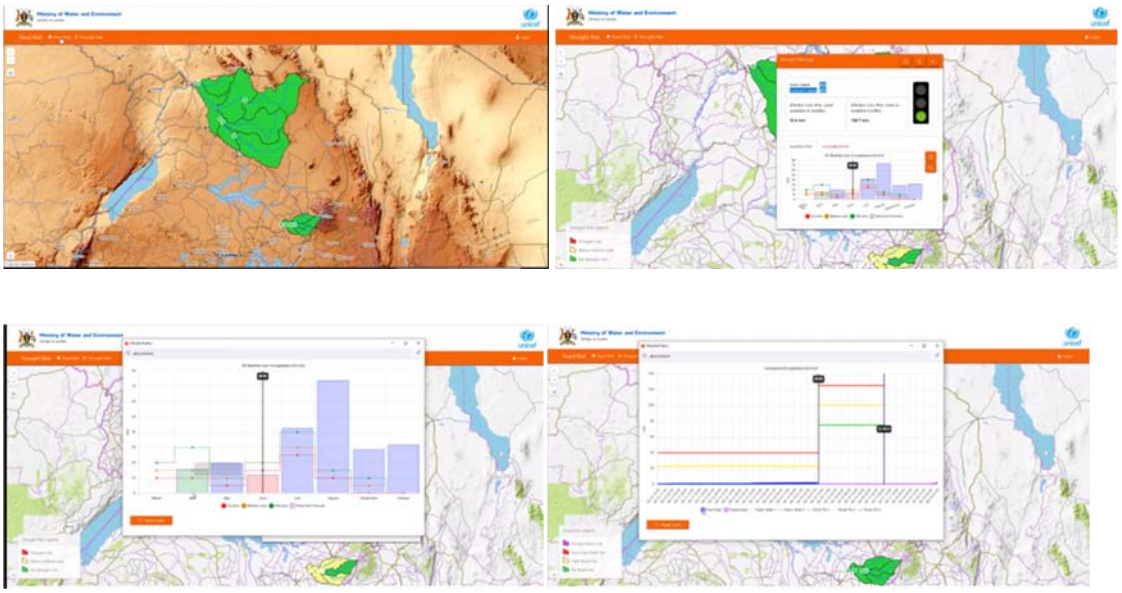


Figure 18: Flood and Drought Early Warning System for Aswa and Manafwa Basins

Groundwater Assessments

Table 20 presents the groundwater assessment activities conducted during the FY 2021/22

Table 20: Groundwater assessment activities conducted in FY 2021/22

Item	Description	Output	Remarks
1	Diagnostic assessment of two (2) Transboundary (shared) Aquifers	Shared Aquifer Diagnostic Assessment – Baseline report on Mount Elgon Aquifer prepared Aquifer level Consultative workshop conducted	Aimed at enhancing knowledge and understanding of the aquifer, to inform sustainable development of the groundwater resource. This is especially by promoting conjunctive utilization of surface water and groundwater
		Shared Aquifer Diagnostic Assessment – Baseline report on Kagera Aquifer prepared Aquifer level Consultative workshop conducted	
2	Feasibility study on enhancement of change resilience in drought prone areas to improve water security	Feasibility Studies for Surface and Subsurface Sand dams in Dopeth Catchment of Kotido and Kaabong Districts, Karamoja Subregion.	Aimed at improving Water Security in drought prone areas
3	Climate and Vulnerability Risk Assessment in Water and sanitation in Uganda	Climate and Vulnerability Assessment Report April 2022.	
4.	Rapid groundwater assessment for emergency water supply to Flood-affected communities in Bbaale and Galilaya SubCounties, Kayunga District	Groundwater potential Assessment report	Aimed at providing potable water supply to resettlement camps of flood affected communities
5	Preparation of Cost estimates for implementation of the Revised National water Policy 2021	Cost Estimates for implementation of the National Water Policy, 2021	

CHAPTER 4
NATURAL RESOURCES, ENVIRONMENT AND CLIMATE CHANGE

4.1 Introduction

Natural Resources, Environment and Climate Change (NRECC) Sub-programme is responsible for achieving the programme objectives of

1) Increase forest, tree and wetland coverage, restore bare hills and protect mountainous areas and rangelands
2) Maintain and/or restore a clean, healthy, and productive environment
3) Promote inclusive climate resilient and low emissions development at all levels
4) Increase incomes and employment through sustainable use and value addition to water, forests and other natural resources.

Sub-programme Outcome Indicators

- Increase land area covered by forests from 9.1% to 15%.
- Increase the proportion of land area covered by wetlands from 8.9% to 9.57%
- Increase permit holders complying with ESIA conditions at the time of spot check from 40% to 90%.
- Increase accuracy of Meteorological Information from 60% to 90%.
- Increase the percentage of automation of weather and climate network from 30 to 80
- Average Annual Change in a Green House Gas (GHG) emissions (MtCO2e) from 1.39 to 1
- Increase the proportion of green jobs to total jobs from 25 to 38.

Sub-programme Interventions

(i) Develop and implement wetland and forest management plans.
(ii) Develop a national green growth financing and investment plan.
(iii) Demarcate and gazette conserved and degraded wetlands.
(iv) Procure equipment for monitoring set standards on air, noise, water resources and soil pollution.
(v) Create a critical mass of human resource to undertake enforcement of set standards and regulations.
(vi) Undertake sensitization campaigns on the permitted levels of pollution and penalties for exceeding thresholds thereof.
(vii) Strengthen conservation, restoration of forests, wetlands and water catchments and hilly and mountainous areas:
   a. Promote rural and urban plantation development and tree planting including the local and indigenous species.
   b. Formulate economic and social incentives for plantation forests.
   c. Promote application of performance based sustainable forest management criteria for all forest sector development aspects and scale up agroforestry as a climate smart agriculture practice.
   d. Establish dedicated fuel wood plantations necessary to contribute to achieving or exceeding net biomass surplus levels.
   e. Develop wetland management plans to support gazetting and demarcation of existing wetlands.
   f. Restore the natural integrity of degraded wetlands to their ecological functionality.
   g. Ensure the protection of rangelands and mountain ecosystems.
   h. Implement national targets on threatened/endangered species, restoration of natural habitats, management of invasive alien species with support and participation of local communities and indigenous peoples.

i. Identify and declare special conservation areas to raise the conservation status of areas outside protected areas that are important biodiversity areas.
j. Integrate environmental management in all disaster and refugee response interventions.
k. Improve the management of districts and private forests.
l. Leverage technology to strengthen enforcement capacity for improved compliance to standard agro-forestry practices.

(viii) Mobilise and significantly increase financial resources from all sources to conserve and sustainably use natural resources and mitigate disasters.

(ix) Assure a significant survival rate of planted tree seedlings.

(x) Develop and implement a framework that reduces adverse per capita environmental impact of cities (air quality and waste management practices).

(xi) Mainstream environment and natural resources management in policies, programmes and budgets with clear budget lines and performance indicators:

a) Improve coordination, regulation, and monitoring of environment management at both central and local government levels.
b) Strengthen control and management of chemicals, pollution, and environmental disasters.
c) Increase funding for decentralized environment management.

(xi) Formulate and implement vehicle emission standards and sustainable management of chemicals to curtail the high levels of air, land, and water pollution particularly in urban areas.

(xii) Integrate education for sustainable development in national curricula at all levels for an environmentally literate citizenry.

(xiii) Undertake applied research and innovation on sustainable consumption and production to ensure resource use efficiency to reduce domestic material consumption per capita.

(xiv) Building capacity for climate change adaptation and mitigation including hazard/disaster risk reduction:

a) Promote continuous integration of climate change and disaster risk reduction in planning, budgeting, and reporting.
b) Undertake issuance of carbon footprint certificates to support the industrial sector move towards carbon neutrality.
c) Finalize the development of a national Green House Gas Inventory and its Monitoring, Reporting and Verification system. Review Uganda's 2015 Nationally Determined Contributions in light of local emerging issues and new global climate change action ambition.

(xv) Promote natural resource accounting to improve the national income measurement:

a) Undertake economic valuation of selected ecosystems and their services.
b) Integrate natural capital and ecosystem service accounting into the system of national accounts

(xvi) Build sectoral, institutional and local government capacity in natural capital accounting.

(xvii) Mainstream climate change resilience in programmes and budgets with clear budgets lines and performance indicators:

a) Scale up use of renewable energy through off-grid electrification and Liquefied Petroleum Gas.
b) Build gender response capacity in climate change monitoring and evaluation systems through integration in local government performance assessment and national monitoring frameworks.
c) Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
d) Establish eco-friendly municipal and city waste collection and sorting facilities, and systems for recycling and reuse as a remedy for immense methane emissions from open landfills.
e) Formulate green and climate change resilient and mitigative building codes for the housing sub-sector.

(xviii) Implement resolutions from negotiation of carbon projects and develop bankable projects.

(xix) Develop local finance solutions tailored to micro, small and medium enterprises engaged in sustainable production and generation of climate change responsive technologies.

(xx) Build partnerships with stakeholders to formulate instruments such as climate and green bonds.

(xxi) Increase investment in value addition to environment and natural resources products and services:

a) Increase funding for promoting non-consumptive uses of the natural resources.
b) Mobilise and significantly increase financial resources from all sources to conserve and sustainably use natural resources.

(xxii) Increase awareness on sustainable use and management of environment and natural resources:

a) Develop a clear communication strategy on sustainable natural resource management.
b) Undertake targeted sensitization campaigns with information packaged in forms tailored to the information needs of recipients.
c) Build strategic partnerships with other players such as private sector, cultural institutions, media, and politicians.

(xxiii) Promote research, innovation, and adoption of green appropriate technology to foster sustainable use and management of Water Resources & ENR:

a) Develop a clear research agenda for this programme in partnership with relevant stakeholders
b) Undertake relevant applied research aligned to development needs and existing gaps

(xxiv) Promote forest cluster-based wood processing industries.

(xxv) Support local community-based eco-tourism activities for areas that are rich in biodiversity or have attractive cultural heritage sites.

(xxvi) Promote payment for ecosystem services, biodiversity offsets and benefit sharing arising from use of biological resources.

The implementing Agencies include Ministry of Water and Environment (MWE), Ministry of Local Government (MLG), Ministry of Energy and Mineral Development (MEMD), Ministry of Tourism and Wildlife and Antiques (MTWA), National Environment Management Authority (NEMA), National Forestry Authority (NFA), Uganda Wildlife Authority (UWA), Uganda National Meteorological Authority (UNMA) and Environment and Natural Resources Civil Society Organizations (ENR CSOs)

4.2 NRECC Outcome Indicators

4.2.1 Percentage of Land Area covered by Forests

According to the National Forestry Authority Land Use and Land Cover Biomass Study (2019, unpublished), Uganda registered a reduction in forest-land cover from 24.1% in 1990 to 9.5% in 2015 and subsequently registered an increase in forest cover to 12.3% in 2017 and 13.3% in 2019. This was attributed to restoration of the degraded forests through planting trees and allowing the natural forests to regenerate after evicting encroachers. In the FY 2021/22 the area of natural forest cover of the Central Forest Reserves (CFR) increased from 456,679 Ha to 468,008 Ha. Industrial forest plantations in the Central Forest Reserves increased from 143,611Ha to 149,460 Ha. Figure 19 depicts the trend in the forest land cover from 1990 to 2019.

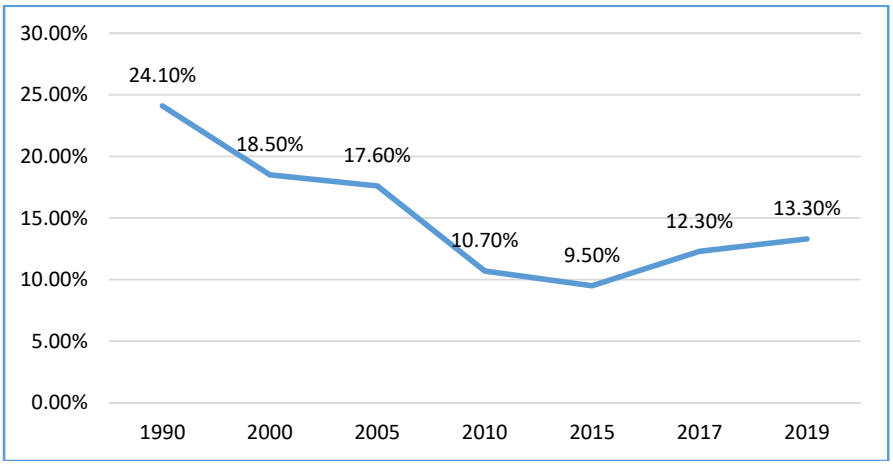


Figure 19: Trend of forest land cover from 1990 to 2019.

Table 21 presents the trend of forest cover and other land uses from 1990 to 2019. It shows that between 1990 and 2019 the farmland increased by about 2.2 million Ha from 8,401,550 Ha in 19190 to 10,607,875 Ha in 2019. Conversely, the forest cover reduce by the same area from 4,933,730 Ha in 1990 to 2,729,159 Ha in 2019. This suggests that increase in subsistence farming negatively impacts on the forest cover.

Table 21: Trend of forest cover against other land uses from 1990 to 2019

Land Use-Land Cover Class	1990	2000	2005	2010	2015	2017	2019
Broadleaved plantations	18,682	9,844	14,786	20,995	43,733	336,548	228,118
Coniferous plantations	16,384	11,498	18,741	43,743	63,546	303,204	86,236
THF high stocked	651,106	703,926	600,955	564,948	525,134	524,189	518,073
THF low stocked	273,060	226,549	191,693	120,756	104,592	102,150	156,774
Woodlands	3,974,498	2,834,730	2,778,044	1,448,869	1,201,985	1,239,176	1,739,958
Bushland	1,422,254	4,007,891	2,968,685	2,371,776	1,970,692	1,664,429	273,405
Grassland	5,115,446	2,793,950	4,063,594	5,068,269	5,103,796	5,121,004	5,531,494
Wetland	484,028	838,537	753,038	810,445	716,721	785,703	877,337
Subsistence farmland	8,401,550	8,916,053	8,847,640	9,772,224	10,275,557	10,003,444	10,607,875
Commercial farmland	68,446	103,327	106,629	134,915	255,934	182,396	165,003
Built up	36,571	26,315	97,270	98,449	135,593	138,722	259,502
Water bodies	3,689,580	3,680,870	3,706,467	3,689,346	3,750,237	3,746,221	3,701,338
Impediment	3,741	1,857	7,804	10,614	7,828	8,162	10,235
Total Area of Uganda	24,155,347	24,155,347	24,155,347	24,155,347	24,155,347	24,155,347	24,155,347
Forest Cover	**4,933,730**	**3,786,547**	**3,604,219**	**2,199,309**	**1,938,990**	**2,505,266**	**2,729,159**
Land Area	20,465,767	20,474,477	20,448,880	20,466,001	20,405,110	20,409,126	20,454,009
Forest % of land area	**24.10%**	**18.50%**	**17.60%**	**10.70%**	**9.50%**	**12.30%**	**13.30%**

Source: NFA GIS Mapping and Biomass Study (2019)

4.2.2 Percentage of Land Area covered by Wetlands

As of 2015, the wetland coverage was at 13% of Uganda's surface area with 21,526km^2 as intact wetlands (8.9%) and 9,885km2 as degraded wetlands. The highest level of degraded wetlands was found in the eastern region with 40% followed by Central with 26%, Northern 18% and Western 17%. This means that the country loses 293km2 of wetlands every year and if this trend is not reversed, Uganda is likely to lose more 7,325km2 by 2040.

In response to this trend, the Wetlands management Department is increasing investment in wetland management through wetland restoration, demarcation of wetland boundaries, development of management plans among others.

4.2.3 Increase permit holders complying with ESIA condition at the time of spot check

THE DESSS conducted, inspection and compliance monitoring of 12 entities including the following(SINO Minerals Limited, Kampala Cement Industries, Tororo cement Industries, Hima cement Industries, Yummy bakery Limited, trans Uganda distribution, crest foam Limited company, wispro (U) Limited, lake bounty Limited, Britania Allied Industries, Mukwano Detergent Company, and Mega Industries . Of these, 8 were complying with ESIA conditions and 4 have since improved their compliance after being issued with environmental improvement notices.

4.2.4 Air Quality Index PM2.5

Not assessed during the FY 2021/22.

4.2.5 Average Annual change in Green House Gas (GHG) Emissions (MtCO2e)

The estimated annual change in Greenhouse gasses was 1.15 Million Tonnes of Carbon dioxide equivalent. The Department updated its inventory to FY 2020/21. It was maintaining the annual average emission for the inventory year (2017).

4.2.6 Climate Change Vulnerability Index

Developed a draft Climate Risk Vulnerability Assessment (CRVA) report. Technical reviews of the report was ongoing by the different technical focal points across the Ministries, Departments and Agencies (MDAs) and Non-state actors.

4.2.7 Percentage Change in the Accuracy of meteorological Information

Accuracy of a seasonal forecast refers to the percentage of reliability or precision of a predicted forecast in relation with what is observed or measured on ground. Accuracy is always given in terms of percentage range.

The Accuracy of forecast for FY2021/2022 was 70-75%. This was lower than the Accuracy of forecasts reported in FY 2020/2021 which was 75-80%. However, the NDP III target for FY 2021/22 of 72% was achieved with average accuracy of 72.5%. The lower accuracy of forecasts compared to that of FY 2020/21 was attributed to changes in the climate systems such as the occurrence of tropical cyclones (Gombe and Halima) which diverted moist air inflow into the eastern Africa region resulting in the disruption of the onset of seasonal rainfall (March to May 2022) and causing dry conditions in the country.

4.2.8 Percentage automation of weather and climate network

The percentage of automation of weather and climate network increased from 62% in FY 2020/21 and 64% in FY 2021/22. 94 out of the 146 districts had at least an automatic weather station installed compared to 92 districts in FY 2020/21.

The NDP III target for the FY 2021/22 of 50% was achieved with an addition of 2 Automated Weather Stations (AWS(in Bukwo and Kiruhura) to the network of stations making a total of 196 spread over 93 districts across the country from 194 stations spread over 91 districts in FY 2020/2021.

4.2.9 Increase the proportion of green jobs to total jobs from 25 to 38.

A number of forestry investments provided green jobs to the citizens of Uganda including employment of plantation establishment, nursery establishment, carpentry, crafts making from rattan and other forestry climbing plants, honey production and processing, ecotourism, and nature-based enterprises. During the reporting period, an estimated 200,000 people were employed in the different forestry enterprises(20%) against the annual target of 1,000,000 green jobs provided by the entire forestry sector.

4.3 Progress of Implementation of Interventions

4.3.1 Strengthen conservation, restoration of forests, wetlands and water catchments and hilly and mountainous areas

Promote rural and urban plantation development and tree planting including the local and indigenous species

There were a number of initiatives that contributed to increased area of planted forests in Uganda. These initiatives where part of the government campaign to plant and grow up to 40 million trees under the Running Out of Trees-ROOTS campaign. A number of partners were mobilized under the ROOTs campaign including churches, schools, corporate companies, and traditional and cultural institutions. The projects that made a significant contribution to the campaign included tree growing under the Farm Income Enhancement and Forestry Conservation Project (FIEFOC), Investing in Forests and Protected Areas for Climate Smart Development-IFPA-CD), the private investor plantations established on CFRs, and the support through a number of projects managed and coordinated by the district local governments. A total of 26,394,856 assorted tree seedlings were planted. Sixty six districts[2] reported planting trees under different initiatives.

The DESSS initiated a Programme for establishment of green belts in 5 cities (Gulu, Lira, Soroti, Mbale and Jinja) supported Soroti City to establish green belts in the City. A total of 21,550 trees were planted along the City roads, schools, and city public areas.

Develop and implement wetland and forest management plans

In order to promote performance based Sustainable Forest Management (SFM), 9 Forest Management Plans (FMPs) were prepared for Kalagala-Itanda falls, Kotido, Buvuma Islands, Mpanga, Matiri, Kasana-Kasambya, Bunya, Mwenge Kabongo, and Kalagala falls. This was lower than the target of 11FMPs. A cumulative total of 53 out of the targeted 55 FMPs were validated for implementation in line with National Forestry and Tree Planting Act (NFTPA) 2003, Forestry Regulations of 2016 and National Forest Standards.

The USAID/Uganda Biodiversity for Resilience Activity (B4R) supported National Forestry Authority (NFA) sector offices of Kotido, Kitgum and Kaabong to complete detailed threat assessments in the following Central Forest Reserves (CFRs) disaggregated by Districts: Kaabong Sector: Lwala, Morungole, Timu, Nyangea Napore. Kitgum sector: Napono, Rom, and Kotido sector: Akur, Alerek, Ating, Kano. The assessment identified and profiled threats to the CFRs, including underlying drivers specific to each CFR. The forest management plans for the CFRs will be adapted to mitigate the threats, forest degradation and improved management of the forest landscapes.

[2] Arua, Budaka, Bududa, Butebo, Buikwe, Bukwo, Bulambuli, Bundibugyo, Bunyangabu, Bushenyi, Butambala, Buyende, Gomba, Hoima, Ibanda, Iganga, Jinja, Kabale, Kakumiro, Kazo, Kasanda, Kayunga, Kiboga, Kwania, Kyankwanzi, Kyenjojo, Masaka, Masindi, Mityana, Mukono, Mitooma, Moyo, ,Kaberamaido, Soroti, Kibuku, Kibaale, Madi Okollo, Kalaki, Lyantonde, Namisindwa, Namayingo, Ntoroko, Otuke, Pakwach, Rukiga, Rukungiri, Soroti, Wakiso, Zombo, Lira, Ssembabule, Bukomansimbi, Busia, Bugweri, Kyegegwa, Nabilatuk, Mbale, Rakai, Kanungu, Kalungu, Kiryandongo, Isingiro, Kyotera, Kiruhura, Sheema, Luweero, Kabarole

In addition, USAID/B4R Activity provided institutional support to NFA on Collaborative Forest Management (CFM) of the forest reserve areas by the local CFM groups and communities. To-date, 5 new CFM groups have been formed with support from USAID/B4R Activity in the central forest reserves of Napono (Agago), Rom (Kitgum), Kano &Akur (Abim). The new CFMs will be supported to develop and implement collaborative forest management plans for the respective areas, with close supervision from NFA.

Ensure the protection of rangelands and mountain ecosystems

In order to ensure the protection of forests, rangelands, and mountain ecosystems, 504.38km of forest reserve boundaries were re-surveyed and marked in all 16 management areas across the country (9 Ranges and 7 Plantation areas).This constituted 34.7% (3,381.38km) of the total 9,755km of 506 CFRs boundaries re-surveyed, demarcated and maintained under National Forestry Authority.

1.265 million Ha of 506 CFRs were protected from illegal activities and encroachment across the country through forest law enforcement patrols supported by the environmental Protection Police in 16 management areas across the country (7 plantation areas and 9 Ranges).

The DESSS carried out profiling of hilly and mountainous areas in Northern and Eastern Uganda. This profile will be used to assess levels of degradation and come up with relevant interventions.

The Hon. Minister of Water and Environment participated in a high level segment during the launch of 2022 as the International Year of Sustainable Mountains Development as declared by the UN General Assembly and co-sponsored by 40 national governments including Uganda.

Restoration of forests

11,329 Ha out of the targeted 20,560 Ha of degraded CFRs were restored with threatened high value indigenous tree species and bamboo. This constituted 52.64% (468,008 Ha) of the targeted 889,115 Ha natural forest cover on Central Forest Reserves in the country.

The area and productivity of industrial forest plantations on Central Forest Reserves (CFRs) increased from 143,611 Ha to 149,460 Ha. This represents 58.1% of the targeted 257,475 Ha.

The USAID/Uganda Biodiversity for Resilience Activity (B4R), through the Strategic Investment Fund (SIF) initiative for small and medium scale enterprises supported restoration planting of 300,000 trees around Rom and Napono Central Forest Reserves in Kitgum and Agago respectively, through the Sub-grant partner Kijani Forestry Limited. Tree species planted included *gravelia robusta, terminalia glaucenscenes, tectona grandis, Maesospsis eminii.*

The restoration campaign is implemented through the community nursery hub targeting community areas adjacent to CFRs. The efforts seek to mitigate key threats, including fuelwood extraction and agricultural expansion to reduce pressure on the forest reserves. Agroforestry training was also conducted for the 18 groups (257 farmers) in Kitgum and Agago participating in the forest restoration project. The Kijani agroforestry initiative supported by USAID/B4R Activity promotes sesame growing as the main crop integrated with the trees for diversified production and land use management.

USAID/B4R Activity, in partnership with the private sector partner, Golden Bees Limited, is promoting beekeeping enterprises targeting Collaborative Forest Management (CFMs) groups in the Kidepo central forest reserves of Lowala, Timu, Morungole, Nyangea Napore and in Budongo. A total of 780 farmers have received apiary training. Each of the trained farmers will be equipped with 4 beehives. This is part of the support to CFMs to strengthen collaborative forest management and protection.

With funding from USAID, UBF supported several community-based organisations (CBO) to carry out activities aimed at increasing forest cover: in Kikuube District, 110 Ha of Bugoma CFR were planted

with indigenous tree species and a 1.0 Ha botanical garden established, 53.4 Ha were planted with indigenous tree seedlings on community land and 120 Ha put under Agroforestry initiatives on private land. 96 Ha of woodland were restored in Karenga District in Karamoja.

Formulate economic and social incentives for plantation forests

IFAP-CD project confirmed the Approach to be used to deliver a plantation subsidy grant scheme in 6 clusters in the country including Albertine, Mubende, Central, Northern, South-Western and Victoria for large plantations and an economic incentive grant scheme for small holder plantations. Detailed modalities were being finalized and the scheme is expected to commence in the FY 2023/24.

Promote application of performance based sustainable forest management criteria for all forest sector development aspects and scale up agroforestry as a climate smart agriculture practice

A plan to implement agroforestry activities in 18 districts[3] was embedded in the IFPA-CD project. The Ministry of Water and Environment in partnership with the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) was in advanced stages of developing an Agroforestry strategy and action plan for 10 years. The Strategy has 6 objectives (i) Enhancing Coordination and Institutional arrangements, (ii) Capacity Building, (iii) Technology Development and Innovations, (iv) Knowledge management, extension, and access to appropriate inputs, (v) Agroforestry Value Chain Development and (vi) Resource Mobilization. The Uganda Forestry Policy which is being finalized covers Agroforestry, trees on farm and forestry extension.

Establish dedicated fuel wood plantations necessary to contribute to achieving or exceeding net biomass surplus levels

The GCCA+/CRWEE projects supported by European Union and Kingdom of Sweden was implemented in 9 districts in the Central Cattle Corridor[4], 4 districts in the Karamoja[5] and 8 districts[6] in the West Nile region. Its major objective is promoting bioenergy plantations to reduce the rate of deforestation, increase carbon sequestration and household incomes through woodlots.

With funding from USAID, UBF supported CBOs to carry out activities aimed at increasing availability of fuel and pole wood to reduce pressure on natural forests. In Masindi District, 77 Ha of woodlots were established around Budongo Forest. On the other hand, 13.5 Ha of woodlots were established in Karenga District in Karamoja.

Develop wetland management plans to support gazetting and demarcation of existing wetlands

Two gender sensitive wetland action plans were developed covering 656.67 Ha of Nyemo-Odongi wetland in Abim Town Councilnand Myene-Minakuku Town Council in Oyam District.

A total of 1,170.60 km of wetland boundaries were demarcated with 132.3km of wetland boundary demarcated in Wangcerewani wetland (50km in Aswa system) in Pader Town Council, Agada wetland (60km in Tochi system) in Minakulu Sub-County-Oyam District, and Okochew wetland (10km in Aswa system) in Alango Sub-County in Otuke District. Chosan cholol wetland (6.3km) in Nakapiripirit and Arocha wetland (6km) in Kwania -Abongomola Sub-County. Mujuruga wetland (62.3km) in Kamwenge district, Kengeya wetland (15km) in Rubirizi district and Nyamuhizi wetland (31km) in Mitooma district were demarcated with live markers. 200km of Nyamuhizi, Agu and Ntungwa restored wetlands were surveyed and demarcated with either pillars or live markers.

[3] Kamwenge, Kyegegwa, Kikuube, Kiryandongo, Terego, Yumbe, Adjumani, Obongi, Moyo, Lamwo, Kibaale, Kakumiro, Kagadi, Hoima, Koboko, Madi-Okolo, Amuru

[4] Nakasongola, Luwero, Nakaseke, Mubende, Kiboga, Sembabule, Kalungu, Gomba and Lyantonde

[5] Nakapiripirit, Moroto, Abim and Napak.

[6] Arua, Adjumani, Zombo, Yumbe, Koboko, Nebbi, Maracha and Moyo

Initial activities leading to the cancellation of land titles in wetlands and compensation were initiated. These included collection of information on land title from volunteers, mobilizing stakeholders and creating awareness (eligibility, procedure, valuation). Funds for these activities were released and awaiting guidance from the Compensation Committee and Ministry of Lands Housing and Urban Development (MoLHUD) on compensation of Bonafede occupants.

Restore the natural integrity of degraded wetlands to their ecological functionality

Restored 12,875.50 Ha of degraded wetlands with 800 Ha in Mpanga gouge wetland in Nyabbani and Ntara Sub-Counties in Kitagwenda District and 1,950 Ha of Ogwenyere wetland (Tochi system) in Oyam, Wangtula-Lapurupuru wetland (Aswa system) in Otuke district and Okole wetland in Lira city. 3,000 Ha of degraded wetlands (1,000 Ha restored in the districts of Butebo, Tororo and Kumi in Eastern Uganda) and 2,000 Ha in Ihimbo-Mushakwe and Kidubule Ibamba wetlands located in the South-Western districts of Rukungiri and Rubirizi were restored.

Construction of 2 water retention facilities at Mazuba wetland in Namutumba District and Tirinyi in Kibuku District was at 80% complete. Four soil and water conservation structures were constructed in the catchments adjacent to the restored wetlands. Carried out 2 feasibility studies for the development of bankable projects. These are intended to be used as a resource mobilization tool to restore the degraded wetlands in the Country.

Restored 230.3 Ha of degraded ecosystems. 200 Ha were maintained and restoration of 100 Ha commenced but not completed due to inadequate funding. 1000 pillars were procured. 52.7 Km of the river and lake protection zones were assessed for demarcation.

The degraded ecosystems restored and maintained were:

- 15 Km of banks of River Wambabya in Hoima district were assessed, leaders and communities adjacent to the river sensitized, coordinates for the 100-metre protection zone obtained.
- 15 km of River Nile in Nazigo Subcounty in Kayunga district were assessed, coordinates for the 100-metre protection zone obtained, investments were profiled, leaders of 11 villages adjacent to River Nile were sensitized.
- 22.7 km along the 200-meter protection zone of Lake Kwania were assessed and communities sensitized in preparation for demarcation and restoration of 40 Ha.
- Under the Irrigation for Climate Resilience Project (ICRP) of Water for Production, 230.3 Ha of degraded sections of the protection zone of River Mishumba in Rwoho Central Forest Reserve in Isingiro District were restored using indigenous seedlings.
- 200 Ha restored along River Nile in Kangulumira Sub-County in Kayunga District, Butagaya and Budondo Sub-Counties in Jinja District and Njeru Municipality were under maintenance to ensure that bamboo planted is not destroyed by human activities.
- NEMA supported the restoration of about 100 Ha out of the targeted 250 Ha through the engagement of local people in the rehabilitation of River Muzizi in Kyenjojo district and River Rwizi catchments in Mbarara City.
- NEMA carried out reconnaissance work for the restoration of the Nabisasoro-Lubigi Wetland System in Wakiso District and monitored the wetland catchments of the Nomuremu-Rushebeya-Kanyabaha-Kashambya (up to Kisizi Falls) and South Kirumura wetland systems in western Uganda. Key findings were the need to create consensus and increasing knowledge regarding the conservation and restoration of degraded ecosystems. In order to have an impact on the restoration efforts, the government must map and categorize wetlands and implement payment for eco-system services.

Implement national targets on threatened/endangered species, restoration of natural habitats, management of invasive alien species with support and participation of local communities and indigenous peoples

The Forestry Sector Support Department (FSSD) of the Ministry of Water and Environment is the Scientific authority on Flora under the CITES obligations. The Scientific authority manages, regulates, and designs conservation strategies and plans for the appendix II listed species of CITES. The species of significance in Uganda include *Osyris lanceolata* and *Prunus Africana.*

FSSD under the CITES Tree Species Programme, carried out a study in selected districts of the Karamoja and Elgon regions, to assess the current use, processing, production, and regulation of Sandalwood (Osyris Lanceolata) trade in Uganda. An inventory report was prepared and the results indicate that Uganda is not ready for trade for the next 10 years. A *Prunus africana* assessment was carried out in a number of districts[7] from March to June 2022 to establish stocks of *Prunus Africana* across the country and update the database for all farmers. The findings from this inventory were needed to provide a fresh approach to computation of the national quota as well as be part of Non-Detrimental Findings to justify publication of Uganda's export quota.

With support from the FIEFOC 2 Project Integrated Natural Resources Management, up to 470.07 kms of rivers that flow into irrigation schemes in the 5 irrigation scheme catchments of Mubuku 2, Ngenge, Doho 2, Manafwa, Tochi and Wadelai were restored mainly with bamboo and other tree species.

Photo 4-1: Restoration along River Manafwa

Photo 4-2: Restoration along River Tsutsu in Bududa.

An assessment (supported by IFPA-CD project) was conducted in selected National Parks and Central Forest Reserves to know the extent of invasive species with the support of local communities.

Identify and declare special conservation areas to raise the conservation status of areas outside protected areas that are important biodiversity areas

No action was implemented in FY 2021/22

Integrate environmental management in all disaster and refugee response interventions

The DESSS undertook compliance monitoring, inspection, and awareness creation on environmental management in refugee camps in 10 refugee settlements in West Nile and Southwestern Uganda including Bidibidi, Majji, Lobule, Nyumanzi, Rhino |Camp, Palorinya, Kyangwali and Nakivale. The key challenges noted include lack of environmental screening for the various projects within the refugee settlements, poor management of waste and high dependency on fuel wood which is contributing significantly to deforestation.

The IFPA-CD project has a component which covers refugees settlements including establishment of woodlots to increase availability of wood fuel, Agroforestry, and supply of wood fuel to Persons with

[7] Buikwe, Mukono and Masindi, Kabarole, Kyenjojo, Kyegegwa, Bundibugyo, Hoima, Kikuube, Kagadi, Kakumiro, Rukungiri, Kabale, Kisoro, Rubirizi, Mitooma, Bushenyi, Kasese

Special Needs. The procurement of Technical Assistance is in advanced stages. The interventions are expected to commence in the FY 2023/24.

Improve the management of district and private forests

District Local Governments receive Natural Resources Grant to support restoration of the district forests and enhance regulation and compliance with mitigation measures for infrastructure investments financed by the World Bank. The grant is also used for monitoring and providing technical support to communities.

District Local Governments using locally generated revenue and partner support opened and maintained 339 kms of forest boundary, provided technical backstopping to 12, 683 farmers, trained 22,628 farmers in forestry management and restored up to 1,578 Ha of Local Forest Reserves (LFRs).

279,832ha (22%) of CFRs was managed under licensees, MoUs and CFM agreements. 103, 839 Ha (8.2%) of forests reserves were under collaborative forest management with local communities and 176,155 Ha (13.9%) were managed under Public Private Partnerships through MoUs and licensees in CFRs. The National Collaborative Forest Management (CFM) policy (2020) mainstreams forest management with gender and equity requirements , supports implementation of the Parish Development Model (PDM), livelihood and conservation partnerships with stakeholders including local communities, Urban Authorities , Civil Society, Faith based and cultural institutions and promote payment for ecosystem services and benefit sharing arising from use of forest resources.

Leverage technology to strengthen enforcement capacity for improved compliance to standard agro-forestry practices

MWE in partnership with the Uganda Timber Growers Association and support from the FLEGT Programme of EU/FAO prepared a framework for tracking and tracing wood traded or harvested. This framework will provide a foundation for instituting a traceability system in future.

Mobilise and significantly increase financial resources from all sources to conserve and sustainably use natural resources and mitigate disasters

A World Bank Project (Investing in Forests and Protected Areas for Climate Smart Development) became effective on 19th August 2021. This project is implemented by the Uganda Wildlife Authority, National Forestry Authority and the MWE. It is a USD 178.2 million project with potential additional financing of USD 25 million during the project lifespan. This project is intended to promote sustainable management of forests in the protected areas (National parks for tourism services provision and CFRs) and to enhance the restoration of degraded areas in the refugee hosting communities in 18 districts.

A USD 39 million Project titled “Accelerating Uganda’s REDD+ Strategy Implementation, and Upscaling Forest Landscape Restoration (FLR) in the Northern Moist Farmlands and Karamoja Landscapes of Uganda” is under preparation in collaboration with the IUCN as the Accredited Entity. The Concept Note to the GCF was submitted, comments were provided and addressed. The full proposal was under preparation.

The REDD+ processes have also attracted a number of potential buyers of carbon credits, and so far, two main projects are under consideration (i) the Lowering Emissions through Accelerating Carbon Financing(LEAF) Coalition in which the future credits (2022 - 2026) if sold shall provide financing for conservation and sustainable forest management. It is expected that up to USD 40 million could be mobilized annually through this stream. (ii) a pilot Albert REDD+ project implemented by the Wildlife Conservation Society with up front project financing from SHELL Energies Inc is under preparation. Up to USD 150 million is expected to be mobilized over the crediting period of 30 years.

Increase funding for promoting non-consumptive uses of the natural resources

Under the World Bank funded project of USD 178.2 million, about 45% of the financing is towards improving sustainable management of forest areas to enhance non-consumptive uses like tourism promotion and development as well as improving infrastructure.

UBF impacted livelihoods through a community resilience approach that promotes alternative livelihood options, as opposed to total dependence on biodiversity. The target communities in Kikuube, Masindi, and Karenga were taken through different capacity building sessions to give them skills to develop sustainable enterprises.

A total seed fund of UGX 31,652,000 was disbursed to Village Savings and Loan Associations (VSLA) groups in both regions which increased access to funding for the group members enabling them to borrow and establish alternative income generating activities as opposed to the environmentally destructive income sources. Apiary was promoted as an enterprise that contributes to conservation through linkage to woodlot establishment and forest conservation. 450 beehives were distributed to 17 VSLA groups, bringing positive impact to the lives of 425 beneficiaries.

Assure a significant survival rate of planted tree seedlings

Survival of tree seedlings supplied to the farmers is compromised by a number of factors including lack of sufficient technical advice provided by the forestry staff to the farmers due to limited human resource and financing to facilitate the engagement with farmers. For the tree seedlings supplied the average survival rate was 66%.

With funding from USAID, UBF is exploring the use of hydrogel as a strategy to improve seedling survival in West Nile. The outcome of this will be reported in the FY 2022/23 report. In the projects supported to carry out tree planting, it was discovered that weeding the seedlings during the dry season exposed them to the effects of adverse weather. Spot weeding during the dry season exposed the seedlings to sun heat, leading to a low survival rate. The trees left under canopy of weeds or crops had a higher survival rate of up to 75% as compared to those spot-weeded whose survival rate was an average of 60%.

4.3.2 Maintain and/or restore a clean, healthy, and productive environment

Develop and implement a framework that reduces adverse per capita environmental impact of cities (air quality and waste management practices)

No action was implemented in FY 2021/22

Mainstream environment and natural resources management in policies, programmes and budgets with clear budget lines and performance indicators.

NEMA and its partners (UGIFT and USMID) mentored 130 local governments. As a result, they have included environmental and natural resource management into their development plans and budgets. NEMA facilitated training sessions for Ministries, Agencies, and Local Governments which focused on mainstreaming environmental principles and concerns across sectors and local governments, including the Parish Development Model. NEMA conducted meetings with Ministries, Agencies and Local Governments to discuss the demarcation of the limits of the Samuka Ramsar site, the cancellation of land titles in wetlands, anticipated projects in the Rwenzori sub region, and the use of wetlands for irrigation. The purpose of these engagements was to foster strategic decision-making on sustainable management and use of delicate ecosystems like wetlands, riverbanks, and lakeshores.

Improve coordination, regulation, and monitoring of environment management at both central and local government levels

NEMA supervised and mentored 130 local governments exceeding the target of 40. The focus was on their roles and duties in decentralized environment management. To ensure the utilization of the district environmental information centers, 114 (81.4%) out of the 140 centres were assessed. The findings show that 56 (49%) were active, 41 (36%) were semi-active, and 17 (15%) were dormant.

NEMA conducted climate change risk assessments in the districts of Kikuube, Buliisa, Ntoroko, and Bundibugyo. The rapid evaluation conducted with the help of drones concentrated on mapping environmentally damaged areas, such as lakeshores, riverbanks, and mountainous and hilly regions vulnerable to the effects of climate change, such as floods and landslides.

Reviewed Environment and Social Impact Assessment (ESIA) Reports for twenty (20) projects. Two projects were assessed for environmental impacts, 16 projects were screened for likely environmental impacts and 21 projects were assessed and submitted to NEMA for consideration. The projects included:

- Six projects including water for the Oil Refinery in Hoima District, the Kingfisher shoreline protection system and the Jetty structure construction works, and the Environment and Social Impact Studies for Oil Palm growing in Mayuge, Kyotera, Masaka and Kalungu Districts.
- Reviewed feasibility, ESIA and RAP reports for the Angololo Multipurpose project that is going to be implemented on river Malaba Malakisi between Kenya and Uganda.
- Assessed one wastewater discharge in Kabale District for threats of pollution to community water sources.
- Reviewed 7 water projects, 1hydropower generation project, 2 mining projects, 2Oil and Gas Projects reports submitted to NEMA.
- Fifteen water supply projects including 5 water storage facilities (valley tanks and valley dams and 10 small scale irrigation schemes were screened and project briefs prepared and submitted to NEMA for certification. A small scale irrigation project at Gili Gili in Arua District was screened and the environment and social management plans prepared.
- Under the One Health Approach, the MWE supported mainstreaming of environment concerns in the Standard Operating Procedures (SOPs) for assessing designation of Points of Entry (POEs) in the country.
- Reviewed the Environmental and Social Impact Statement (ESIS) for the proposed establishment of Smallholder Oil Palm growing in Masaka District, supported the ESIA process for the Refugee Settlement at Palabek and Host Communities in Palabek-ogill, Palabek-gem and Palabek- kal Sub-Counties in Lamwo District.
- Supervised Nexus Green, a consultancy firm contracted to prepare 21 Solar Powered Water Supply and Irrigation Project Briefs for Abim, Cheporchorch-mudat, Amus-Bukedea, Accumet-Kapelebyong, Alucokok-Katakwi, Bulangira-Kibuku, Iriiri-Napak, Ocaapa-Serere, Kokumu-Soroti, Bukinda, Buyamba, Kaihura, Kimbugu, Kyamuhunga, Lwanda, Lwemiyaga, Pakele, Agii TC, Akaidebe-Nambieso-Kwania, Gborokonyo-Waka-Obongi, Ijujo-Pajakir-Moyo, Adhambe-Paidha-Zombo, Athuma Central-Athuma-Zombo towns, Mpumu Mukono District. The Project Briefs were finalized and submitted to NEMA for approval.
- Inspected 62 projects and 61 District Local Governments to assess the implementation of environmental laws and regulations. Details of projects inspected are presented below:
    - Fifteen projects inspected for compliance were Lake Bounty, Trans Uganda Ltd, Yummy's Bakery, Crest Foam U Ltd, Wispro U Ltd, Britannia Allied Industries, Sino Minerals Investment company, Mukwano Detergent Company, Megha Industries Ltd, in Buikwe and Mukono, Mayuge Sugar Ltd, Abacus, Gold star, Hong Tu, Rainball, Lia Ning China Middle East Paper Company.
    - The Ministry of Water and Environment together with Ministry of Health inspected 7 Districts including Entebbe International Airport, Mirama Hills in Ntugamo, Mutukula in Rakai District, Wanseko in Buliisa District, Kaiso Tonya in Hoima District, Sebirogo, Suam in Bukwo and Kokwochaya in Amudat for implementation of environmental concerns under the One Health Project on Tackling Deadly Diseases in Africa (TDDAP) hosted by the Infectious Diseases Institute.

- Nine districts of Kween, Ngora, Soroti, Butaleja, Bundibugyo, Mukono, Buikwe, Masindi, Kabale were inspected for compliance. It was established that these districts lacked proper wastewater treatment plants and wastewater was being channeled into wetlands.
- Eight Water Facilities including Valley Tanks and Valley Dams in Nakansongola (1), Gomba (2), Sebambule (2) and Lyantonde (2) and a Small Irrigation Project in Kayunga were inspected for compliance with Environment and Social Safeguards.
- Four Sub-Counties including Kangulumira in Kayunga District, Njeru Municipality in Buikwe District and Butagayaya and Budondo in Jinja District were monitored to assess the status of restored riverbanks.
- Five Districts of Wakiso, Busia, Tororo, Kikuube and Buliisa were monitored to assess the level of implementation of environmental concerns under the One Health Approach, supported by Infectious Diseases Institute.
- Six districts of Kiboga, Kyankwanzi, Mubende, Butambala, Gomba and Mpigi were supervised and supported to implement environment management related activities in their districts.
- Infrastructure projects in 10 districts of Kamwenge, Kasese, Bundibugyo, Bunyagabu, Ntoroko, Kabarole, Lira, Amolatar, Oyam, Amuru were monitored and supported to comply with Environment and Social Safeguards.
- Inspected Kampala Cement quarry site in Bulambuli, Agu GCF Wetlands restoration site, Valley Tanks in Opiyai in Soroti under Water for Production, Asuret Seed Secondary School in Soroti, demarcation and restoration of River Tabagon under EURECCA the project in Kween, Kween road quarry site, Benet Health Centre 3 in Kosiiri Sub-County in Kween, Doho 2 Irrigation Scheme in Butaleja and Kangalaba Health Centre 3 in Butaleja for compliance with environmental management plans.
- Inspected Butaleja, Tororo, Busia, Kiboga, Kyankwanzi, Mubende, Manafwa, Bududa, Namisindwa, Kalaki and Kaberamaido for environment management compliance.
- Monitored 31 districts of Oyam, Agago, Kitgum, Zombo, Gulu, Lira municipality, Lira, Lamwo, Kiryandongo, Kwania, Arua, Nebbi, Pakwach, Moyo, Adjumani, Buikwe, Buvuma Island, Jinja Municipality, Njeru Municipality, Kamuli District, Kamuli Municipality, Bugweri, Buyende, Butaleja, Namayingo, Butebo, Namutumba, Kibuku, Pallisa, Butaleja, and Budaka for environmental compliance.
- Three fecal sludge facilities in Ishogororo in Ibanda District, and Kasali in Kyotera district and in Kanungu District, and 5 municipal waste collection facilities in Mbarara, Hoima and Fort Portal cities, Kasese and Kabale Municipalities were inspected and supported to comply with environment laws. A dumpsite at Aler Composting and Dumping Site in Lira Municipality was inspected and its management guided on how to strengthen Social, Health and Safety Safeguards.

Strengthen control and management of chemicals, pollution and environmental disasters

The UNEP has approved a grant of USD 250,000 through the DESSS for the implementation of a project titled 'Strengthening National Capacity to Implement Control Procedures under the Rotterdam, Stockholm Basel and Minamata Conventions in the Republic of Uganda''. The project will among others develop strategies and guidelines for the sound management of waste and chemicals in Uganda.

Increase funding on decentralized environment management

A Concept Paper on increasing funding to local governments was prepared and submitted to MoFPED.

Formulate and implement vehicle emission standards and sustainable management of chemicals to curtail the high levels of air, land and water pollution particularly in urban areas

No Action taken in FY 2021/22

Integrate education for sustainable development in national curricular at all levels for an environmentally literate citizenry

NEMA collaborated with Kabale University and Stuart University in Mbarara on Education for Sustainable Development (ESD) projects including compound greening, tree planting, and waste management. Due to NEMA's ESD interventions, these Universities were able to incorporate environmental, natural resource management, and sustainable development activities into academic and extracurricular programmes. Ibanda District Local Government organized community-based environmental education and educator training. NEMA facilitated the development of community-based education action plans for the Nyamarebe, Kicuzi, Ishogororo, and Ruciri sub-counties.

In line with the Education for Sustainable Development (ESD) Strategy and School Environment Education Program (SEEP), NEMA conducted an evaluation of ten schools in eastern Uganda and Greater Kampala Metropolitan Area. The schools sampled in eastern Uganda were Papoli Christian Primary School, Tororo Army Primary School, Rubongi Primary School, and Molo Primary School in Tororo district, Madera Boys and Nakatunya Primary Schools in Soroti City. In Greater Kampala Metropolitan Area, the schools sampled were Kizito Secondary School in Namugongo, Gayaza High School in Wakiso, St. Kizito Secondary School in Mbuya Parish, and Queen of Peace in Rubaga Division.

The conclusions of the quick assessment of ESD and SEEP were: The bulk of the schools have "talking compounds" and were delineated in accordance with NEMA guidelines. Within their boundaries, the schools have orchards and vegetable gardens which they maintain. The prolonged droughts caused loss of many planted trees which necessitated the need to plant more trees. Evasive alien species like golden dodder and termite invasion are problems at some schools like Molo and Rubongi. This has negatively impacted on the life and development of the trees. Due to a lack of funding for water tanks and gutters, rainwater harvesting was not widely practiced. The majority of schools (70%) use some form of waste management, maintain clean grounds, and incorporate environmental education in their curricula.

The schools have supported agroforestry involving the teachers growing food in school woodlots. Teachers and students work together in caring for the trees which increased the survival rate of trees. Papoli Primary School used a portion of the development fee (UGX 5,000) paid annually for each student to promote environment education.

Other schools like Poyameri Primary School visited Papoli Primary School to learning about promotion of the environment. This promoted information transfer and portrayed the high-performing schools as centers of excellence in greening initiatives. Some schools use a whole school approach, where the school community (consisting of teachers, parents, and students) participates in project planning, budgeting, and implementation. This promotes ownership of the school projects and helps to ensure the results are sustainable over the long term.

Undertake applied research and innovation on sustainable consumption and production to ensure resource use efficiency to reduce domestic material consumption per capita

The DESSS undertook training of 6 industries to promote use of cleaner production in order to increase on resource use efficiency.

4.3.3 Promote inclusive climate resilient and low emissions development at all levels

Building capacity for climate change adaptation and mitigation including hazard/disaster risk reduction

No Action taken in FY 2021/22

Promote continuous integration of climate change and disaster risk reduction in planning, budgeting and reporting

Developed capacity of 40 District technical staff from Nakasongola and Mbarara on how to use the Intergovernmental Panel on Climate change (IPCC 2006) tool and guidelines for the compilation of GHG emissions from cattle and trained them on the GHG inventory management system, including data entry, analysis, and reporting.

Four sector teams from Energy, Waste, Agriculture, Forestry and Land Use Change, Industrial Processing and Use (IPPU), and relevant stakeholders from MDAs were trained on the Monitoring, Reporting and Verification (MRV) system.

Developed Briefing Paper on the Elements of National Adaptation Communication (ADCOM). The process was supported by the National Adaptation Plan (NAP) Global Network. Uganda will develop a separated ADCOM to communicate adaption actions and needs.

Undertake issuance of carbon footprint certificates to support the industrial sector move towards carbon neutrality

This activity is still pending because the Climate Change Regulations and Carbon frameworks were yet to be developed.

Finalize the development of a national Green House Gas Inventory and its Monitoring, Reporting and Verification System (MRVS). Review Uganda's 2015 Nationally Determined Contributions in light of local emerging issues and new global climate change action ambition.

Developed the national climate change action plan including updating the NDC up to 2030 and submitted to United Nations Framework Convention on Climate Change on 12th September 2022. NDC resource mobilization and implementation draft is available. Uganda will require to mobilize domestic financing of USD 4.1 billion for unconditional adaptation and mitigation actions including for mitigation of climate change impacts during exploitation of oil and gas. This translates into a funding gap of UGX 1.5 trillion annually by 2030.

International Reporting

Developed and submitted to UNFCCC Secretariat the First Biennial Update Report on the status of national greenhouse gas emissions by sources and removals by sinks (e.g., forests and wetlands), climate mitigation actions including needs and support.

Developed and submitted to UNFCCC Secretariat the third National Communication (2022) which provides information on national greenhouse gas emissions, measures to mitigate and facilitate adaptation to climate change.

4.3.4 Promote natural resource accounting to improve the national income measurement

Undertake economic valuation of selected ecosystems and their services

No Action implemented in FY 2021/22

Integrate natural capital and ecosystem service accounting into the system of national accounts

With support from World bank, the construction of forest ecosystem accounts is ongoing. It was being built on the initial work done in 2020 in which a framework for the Forest, Lands and Wetlands Ecosystem Accounts were constructed.

Build sectoral, institutional, and local government capacity in natural capital accounting

No Action implemented in FY 2021/22.

Mainstream climate change resilience in programmes and budgets with clear budgets lines and performance indicators

Developed tools for climate and disaster risk screening (CDRS tools) and built capacity of state and non-state actors. Six sectors of Agriculture, Health, Transport, Energy, Water and Environment and Infrastructure were trained on how to use the tools.

Climate Budget Tagging was piloted in Water and Environment, Agriculture, Works, and Transport Sectors in collaboration with Ministry of Finance, Planning and Economic Development.

Scale up use of renewable energy through off-grid electrification and Liquefied Petroleum Gas
Ministry of Energy and Mineral Development is taking lead.

Build gender response capacity in climate change monitoring and evaluation systems through integration in local government performance assessment and national monitoring frameworks
Developed capacity needs assessment tools and conducted Capacity needs assessment (CNA) on Gender and Climate Change for District Local governments. The trainings were conducted at national and districts levels and with non-state actors.

District officials who were interviewed and trained included the Chief Administrative Officers, District Natural Resources Officers, Health Officers, Production Officers, Fisheries Officers among others. The nine districts visited under the Global Climate Change Alliance plus(GCCA+) project were Nakasongola, Luwero, Nakaseke, Mubende, Kiboga Sembabule, Kalungu, Gomba, and Lyantonde. Districts which were visited under the CRWEE project were in Karamoja (Nakapiripirit, Moroto, Abim and Napak) and West Nile (Arua, Zombo, Nebbi, Maracha, Adjumani, Moyo, Koboko and Yumbe).

Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
With funding from USAID and EU, UBF supported various CSOs to carry out awareness raising amongst communities within the Albertine Rift Valley, West Nile and Karamoja regions. In total over 1000 community members were trained in various aspects related to climate change mitigation and adaptation including energy saving technologies.

Establish eco-friendly municipal and city waste collection and sorting facilities, and systems for recycling and reuse as a remedy for immense methane emissions from open landfills
No Action was implemented in FY 2021/22.

Formulate green and climate change resilient and mitigative building codes for the housing sub-sector
No Action was implemented in FY 2021/22.

Enhance outcomes from negotiation of carbon projects and develop bankable projects
The process of developing regulations and guidelines for carbon markets commenced. A carbon registry, a carbon crediting and trading mechanism, an emissions trading scheme and other instruments as agreed Under the Paris Agreement (2015) will promote voluntary cooperation to reduce greenhouse gas emissions. All these will require financial support and building capacities for the country to benefit from carbon trading.

National Adaptation Plan (NAP) for Strengthening Adaptation planning (SAP) in Uganda received Green Climate Fund through United Nation Environment Programme (UNEP) to strengthen adaption planning in Uganda. To date the project cooperation agreement has been signed, bank accounts opened and the Climate Change Department is planning a launch of the NAP process.

Enhanced cooperation with multilateral bodies (UNFCCC, UNDP, GCF and GEF) through participation by Uganda delegation in the different meetings like Conference of parties 26, the Subsidiary Bodies of Implementation meetings in Bonn, Adaptation board meetings, and World Bank Group meetings among others.

There are a number of upcoming pilot carbon projects[8] initiated post COP 26 held in Glasgow. For these projects, feasibility studies were concluded and development of full carbon projects and negotiations will be conducted in the subsequent financial years.

Develop local finance solutions tailored to micro, small and medium enterprises engaged in sustainable production and generation of climate change responsive technologies

No Action was implemented in FY 2021/22.

Build partnerships with stakeholders to formulate instruments such as climate and green bonds

No Action was implemented in FY 2021/22.

Increase incomes and employment through sustainable use and value addition to water, forests and other natural resources

No Action was implemented in FY 2021/22.

Increase investment in value addition to environment and natural resources products and services.

A number of wood processing industries were setup including Veneer and Plywood processing industries, Sawn timber. 25 veneer industries were established. The IFPA-CD project has initiated plans to set up a state of the art wood processing hub at Nyabyeya Forestry College for purposes of capacity building, as well as support efficient wood processing hubs in different parts of the country through a grant scheme. It is expected that this hub shall commence operations during the FY 2024/25.

Increase funding for promoting non-consumptive uses of the natural resources

No action was implemented in FY 2021/22

Mobilise and significantly increase financial resources from all sources to conserve and sustainably use natural resources

76,956,738 against the target of 40,000,000 of assorted quality seedlings from 32 nurseries and verified seed sources (Bamboo, Indigenous and exotic species) were supplied and planted. The survival rate was 70% across the country.

Prefeasibility and feasibility of the Forest Resources Development and Management project was ongoing The project aims at increasing Uganda's forest cover from the current 13.3% to 15%, increase annual seed production from 20 tons to 40 tons and assorted annual seedlings from 40 million to 80 million by 2025.

With funding from USAID, UBF disbursed UGX 962,714,343.00 to CBOs operating in both the Albertine Rift and Karamoja. The funds were aimed at various conservation activities around refugee settlements and other community areas.

Increase awareness on sustainable use and management of environment and natural resources

A number of awareness campaigns about sustainable management and use of forestry resources were conducted. A total of 183 radio talk shows were conducted for the Local Governments. 92 awareness meetings, 4 radio talk shows and 11 seminars were conducted as detailed below:

- As part of the Water and Environment Week, 9 awareness events on environment were held in the 4 regional offices to sensitize people on environment issues in Uganda.

[8] Albert REDD+ pilot project implemented by WCS, FRECAR—Natural Forest Regeneration for Enhanced Carbon Absorption in the Albertine rift implemented by WWF.

- On the Buganda Kingdom Environment Day, 2 awareness meetings were held with the leadership of the Buganda Kingdom at Lubiri, Mengo to discuss proper management of the environment and natural resources.
- A meeting was held in Luwero District to discuss Joint monitoring of Lwajjali wetland hotspots in the three local councils of Seeta, Namuganja, and Busoke in Busiika Town council. Two meetings were held at Bamunanika and Myanzi to sensitize communities on proper use of environmental resources.
- Under the One Health Approach, the Department of Environment Sector Support Services together with Ministry of Health held a seminar at Hotel Africana in Kampala to brief the Media on the risk of Anti-microbial Resistance due to poor disposal of medical waste. Two seminars were held in Kampala and Jinja to discuss the role of Ministry of Water and Environment in the implementation of the National Anti-microbial Resistance Action Plan.
- Nine trainings were conducted in Arua, Gulu, Lira, Mbale, Soroti, Kabale, Mbarara, Jinja and Masaka on the role of District Local Governments in the implementation of the National Action plan for Antimicrobial Resistance under the One Health Approach. 19 Districts of Mbale, Tororo, Kween, Busia, Arua, Kalangala, Hoima, Buliisa, Kikube, Kyotera, Kasese, Nakasongola, Luwero, Kayunga, Buikwe, Lyantonde, Nebbi, Kanungu and Kisoro were trained on One Health Approach and Health Security and supported the establishment of multi-sectoral, District One Health Teams.
- Ten online trainings were conducted for 10 Civil Society Organizations on adopting the "One Health Approach" to ensure health security in the country. The CSOs included the Anti-Corruption Action for Sustainable Development, Bukedea Poverty Monitoring Association (BUPOMA), Coalition for Health Promotion and Social Development (HEPS-Uganda), Community Health and Education Support-Uganda (CHESU), Community Transformation Foundation Network (COTFONE), Global Forum for Development (GLOFORD) and Holistic Initiative to Community Development (HOLD).

  Other CSOs trained were Kabarole Research Centre (KRC), Kanungu Community Efforts for Rural Transformation (KOCOERT), Karamoja Community Initiative for Development (KACIDE), Kick Corruption out of Uganda (KICK-U), Masaka CITY NGO Forum, Mawogola Community Development Initiatives (MACODEIN), Navigators of Development Association (NAVODA), Recreation for Development and Peace- Uganda (RDP-Uganda), Teso Anti-Corruption Coalition (TAC), The Women, Support Initiative (TWOSI), Transparency International-Uganda (TIU), and Uganda Debt Network (UDN).
- A 3-day meeting was held at Colline Hotel in Mukono to train 20 District Community Development Officers from High-risk districts of Ntoroko, Amudat, Nakapiripirit, Kabarole, Luwero, Kasese, Buliisa, Iganga, Kikube, Moyo, Bunyangabu, Bundibudgyo, Nakaseke, Kayunga, Wakiso, Bulamuli, Packwach, Kampala, Yumbe and Zombo on the One Health Approach and health security.
- Four radio talk shows on CBS Radio (2) and Radio One (2) were conducted to sensitize the public on the One Health Approach and health security as part of creating awareness prior to the World One Health Day on November 3, 2021.

The draft National State of the Environment Report (NSOER) for 2020/2021 was produced. Thematic chapters are undergoing technical review and the final report is expected to be published by end of FY 2022/23.

World wetlands day celebrations 2022 were conducted in Masaka City. Awareness materials including 500 T-shirts, 5 banners and 1000 booklets were distributed. The event was used to take stock of the achievements, challenges, and the emerging issues for wetland management and forward.

Develop a clear communication strategy on sustainable natural resource management.
No action was implemented in FY 2021/22.

Undertake targeted sensitization campaigns with information packaged in forms tailored to the information needs of recipients

NEMA developed and disseminated Information Education and Communication (IEC) material including Press statements, media programmes and news conferences. Due to inadequate funding, few IEC materials were produced and adopted online publicity through NEMA website and social media platforms The National WED 2022 Celebration was held on 5 June 2022 in Luwero district. The theme was "Our Earth, Conserve for Life". It involved public education, speeches, and restoration of degraded ecosystems through tree planting.

In order to increase public awareness of environmental issues such plastic pollution 9 public/media statements were disseminated. A press conferences was held to highlight the new strategic direction that NEMA had adopted to improve service delivery. Media excursions to environmentally sensitive areas in the Greater Kampala Metropolitan Area were conducted. TV and radio talk shows were conducted on environmental challenges, such as plastic pollution, climate change, and biodiversity loss.

Build strategic partnerships with other players such as private sector, cultural institutions, media and politicians

50 stakeholder partnerships were established with corporate, cultural, religious, educational institutions and community based organizations were engaged for promotion of national tree planting and restoration of forests. These included Tooro and Buganda kingdoms, private sector including Uganda Breweries Limited, Stanbic Bank, TotalEnergies, Tree Adoption Uganda, Mount Elgon Tree Growing Enterprise, Uganda National Farmers Federation, ECOTRUST and Roofings Limited etc.

Tree planting campaigns were conducted through NFA tree planting, Community Tree Planting Project NCTPP, Parish Development Model (PDM), Saw log Production and Grant Scheme (SPGS), Private tree farmers, Refugee hosting communities under UNHCR project, Church of Uganda, Buganda Kingdom, Parliament, Conservation Organizations (WWF), WCS, World Bank and USAID under Investing in Forests and Protected Areas Project.

The MWE, MTWA and the MAAIF within the framework of the Greater Virunga Transboundary Collaboration Treaty signed an MoU for the management of the environment and natural resources in the greater Virunga landscape specifically to address issues of combatting illegal trade in forestry products, wetland management, combatting illegal fishing, coordinating watershed management, harmonization of laws and policies as well as improving livelihood of the communities at both national and regional level.

Promote research, innovation and adoption of green appropriate technology to foster sustainable use and management of Water Resources & ENR

No action was implemented in FY 2021/22

Develop a clear research agenda for this programme in partnership with relevant stakeholders

No action was implemented in FY 2021/22

Undertake relevant applied research aligned to development needs and existing gaps

The National Forestry Resources Institute(NaFORRI) undertook research on tree improvement particularly for Eucalyptus clones. Research work continued on pest and diseases affecting planted trees, fruit trees and bamboo trees. Research was done on soil and water conservation in the highlands of Mt. Elgon. Research work on growth potential and other important attributes of Hass Avocado, Macadamia trees for Macadamia nuts and cashew nut tree was done.

Promote forest cluster-based wood processing industries

With support from WWF, some clusters of wood processors in some districts[9] have been supported with supply of efficient wood processing equipment in form of sawmills. This has led to the development of cooperatives as well as increase in the number of jobs to different people.

Support local community-based eco-tourism activities for areas that are rich in biodiversity or have attractive cultural heritage sites

With support from World Bank to IFPA-CD, interventions have been initiated to support community-based ecotourism enterprises around areas of Budongo, Echuya, Bungoma, Kalinzu and in selected National Parks and Wildlife Reserves.

NFA licensed the development of 5 out of the 23 ecotourism concessions in partnership with the private sector to support local community-based eco-tourism activities in CFRs that are rich in biodiversity and have cultural heritage sites. Five ecotourism licenses were monitored including Kitubulu 3 Ha by African Sceneries Limited, Kyampisi 3 Ha, Kajansi CFR 3 Ha - Forest Escape for a forest park. Kalinzu Ecosite by Victoria Falls Company was at 65% completion. In Zoka CFR in West Nile, 25 foreign male visitors were received, 215 in Kalinzu, 173 in Mpanga and 13 in Mabira CFRs.

Promote payment for ecosystem services, biodiversity offsets and benefit sharing arising from use of biological resources

No action was implemented in FY 2021/22

Implementation of Reforms

Transfer the command of Environment Police Force from Ministry of Internal Affairs to NEMA and NFA

NEMA convened several meetings to discuss the necessity of having full control over the Environment Police Force instead of the Ministry of Internal Affairs. Agreement is yet to be reached.

Establish Environmental Courts within the Judicial System

No action was implemented in the FY 2021/22.

Establish (put in place and equip) District Focal points for the Uganda National Meteorological Authority (detach from District Natural resources/Environmental Officers)

4.4 Challenges, Emerging Issues and Recommendations

4.4.1 Challenges

(i) Most of the facilities inspected did not have certificates of approval from NEMA and did not clearly document the waste management processes, the volumes generated or the final points of waste disposal. Waste is disposed of in ecologically sensitive areas.
(ii) Some projects /facilities did not allow inspectors in their premises to inspect, making it difficult to document how the projects/ facilities were impacting on the environment and the communities.
(iii) Most projects/ facilities did not have Personal Protective Equipment (PPE) for their workers, which exposes the workers to health risks.
(iv) Most projects/ facilities did not have staff responsible for environment management to guide projects or facilities on management of waste or cleaner production mechanisms to minimize pollution and ensure compliance with environmental laws and regulations.
(v) Inadequate funding affected the number of projects/ facilities inspected, districts monitored and hectares of degraded areas restored.
(vi) Restoration of degraded ecosystems was also hampered by people who claim ownership of land within protected areas who wanted compensation to allow restoration activities.

[9] Rukungiri, Kasese, Rubirizi, Mitooma, Kanungu

(vii) Plastic waste disposed of indiscriminately ended up in drainage channels and on people's land, causing blockage of water ways, flooding, creation of breeding areas for mosquitoes and destruction of farmland.

(viii) Lack of clear boundaries for some protected areas, has made it difficult to protect riverbanks from encroachers. Many acquired land within the protection zone and claim lack of knowledge of the physical boundaries for riverbanks

4.4.2 Emerging issues

(i) COVID 19 outbreak made it difficult for departmental staff to engage with communities on environmental management, which exacerbated encroachment and degradation of riverbanks and lakeshores

(ii) Floods due to climate change covered areas beyond the boundary line originally marked as protection zones of riverbanks and lakeshores, making it difficult to advise communities to extend further outwards.

(iii) Floods and landslides due to climate change affected densely populated areas and therefore affected communities moved to relatively safe areas but also prone to disasters. This has led to degradation of other areas, exposing them to more floods and landslides.

(iv) Poor disposal of clinical waste is increasing Antimicrobial Resistance (AMR). Private clinics and some health centres are disposing of medical waste haphazardly, leading to pollution of water sources, exposure of communities to infectious diseases but also increasing antimicrobial resistance.

(v) Influx of refugees who settle in forest reserves and wetlands is a major threat to conservation. Forest reserves and wetlands are being degraded by refugees who target them because they are under government custody. Once settled, refugees convert forests and wetlands to farmland but also cut down trees for timber and wood.

(vi) Climate change is causing unpredictable rainfall and prolonged dry spells, affecting restoration of degraded areas.

4.3.3 Recommendations

(1) All certificates of approval of projects or developments should be shared with Lead Agencies to enable them monitor the level of compliance of these projects/ developments.

(2) Funding for Environment and Natural Resources Management should be increased to increase compliance monitoring and enforcement, protection of fragile ecosystems and restoration of degraded ecosystems.

(3) Areas prone to floods and landslides should be identified, affected people systematically resettled and surveyed, demarcated, and gazetted as Special Conservation Areas.

(4) All hospitals, health centres and clinics should be required to incinerate clinical waste to prevent pollution, exposure of communities to infectious diseases and to reduce antimicrobial resistance in the country.

(5) Refugees should be resettled in designated places after conducting Environment and Social Impact Assessment with a clear plan to manage environmental and social impacts.

(6) District Local Governments and Urban Authorities should enact and implement ordinances or bylaws to protect ecologically sensitive areas. ,

(7) There is a need for NEMA, including the EPF and regional offices, to acquire more environmental monitoring tools like GPS, laboratory equipment, noise meters, and cameras.

CHAPTER 5
LAND MANAGEMENT

5.1 Introduction

The Land Management Sub-programme is responsible for achieving the programme objectives of strengthening land use and management. It is responsible for ensuring rational and sustainable use, and effective management of land in Uganda. It aim at attaining land tenure security, especially for customary land (which remains largely unsurveyed and unregistered) and lawful and bona fide occupants on registered land. It is responsible for:

(i) Supervision and monitoring of Land Management Institutions.
(ii) Implementation of the Land Information System (LIS) and support its integration with other Government systems.
(iii) Provide technical support, advice and guidance to the Lands, Housing and Urban Development sector and other Ministries, Departments and Agencies.
(iv) Sensitize the public on land matters.
(v) To conduct Land dispute resolution.
(vi) Establishing geodetic controls and ensuring quality assurance for cadastral jobs and surveys in the country.
(vii) Surveying of Government land and international boundaries.
(viii) Issuance of titles and general conveyance.
(ix) Conducting timely and reliable property valuations for Government and the public.
(x) Coordinating Land Sector reforms including planning and implementation processes.

It has two outcome indicators (i) Percentage of titled land increased from 21% to 40%, and (ii) Percentage Change in Land Conflicts.

Sub-programme Interventions

i) Complete the rollout and integration of the Land Management Information System with other systems.
ii) Fast-track the formulation, review, harmonisation, and implementation of land laws, policies regulations, standards and guidelines.
iii) Undertake a comprehensive inventory of Government land.
iv) Capitalize the Land Fund to ensure access to land by lawful and bona fide occupants.
v) Strengthen the capacity of land management institutions in executing their mandate geared towards securing land rights.
vi) Promote land consolidation, titling and banking.
vii) Acquire land for infrastructure/utility corridors.
viii) Promote tenure security including women's access to land.
ix) Establish the National Spatial Data Infrastructure (NSDI) to enhance data integration for planning and development.
x) Develop and implement a Land Valuation Management Information System (LAVMIS).
xi) Promote integrated land use planning.

5.2 Land Management Outcome Indicators

5.2.1 Percentage of titled land increased

The total land titled/registered increased from 22% in 2020/21 to 22.4% in FY 2021/22. The increase was less than the NDPIII target 29% for the FY 2021/22. At the current rate progress the NDP III target of 40% of the total land titled/registered is unlikely to be achieved by 2025. The Sub-programme require additional funding to accelerate the rate of progress.

5.2.2 Percentage Change in Land Conflicts

A total of 5,808 land conflicts were reported out of which 3,146 were mediated/ resolved. This represents 54.16% of reported land conflicts mediated/resolved. This means that the percentage of

mediating/resolving land related conflicts increased from 42.67% in FY 2020/21 to 54.16% in FY 2021/22.

5.3 Progress of Implementation of Interventions

5.3.1 Complete the roll-out and integration of the Land Management Information System with other systems

The roll out was implemented in the period of 2015-2019 and resulted in the establishment of the Land Information System (LIS) for the entire country including 22 Ministry Zonal Offices (MZOs) and the National Land Information Center (NLIC). The Ministry launched the online public portal https://ugnlis.mlhud.go.ug. The public portal is used to directly access land services including:

a) View of the cadastral division map of Uganda.
b) Check status of land transactions
c) Land Searches.
d) Locating land parcel.
e) Identifying the MZO that serves your district.

The screenshot of the interface of the UgNLIS public portal is presented in figure 20.

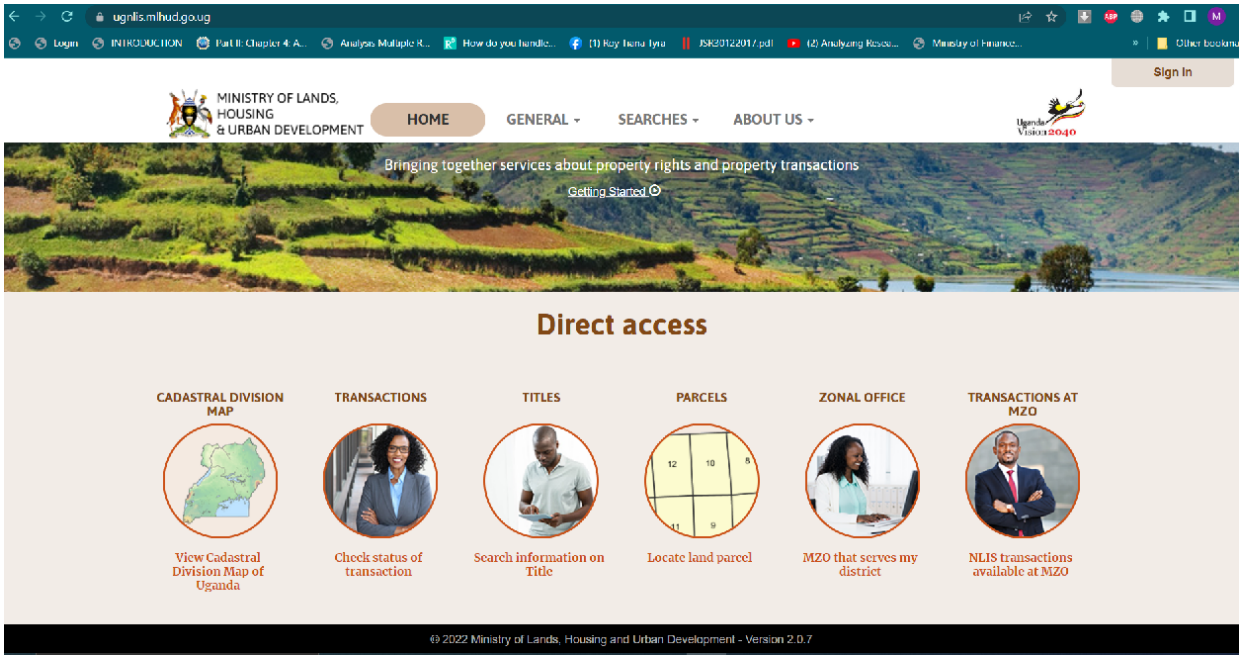


Figure 20: Screenshot of the interface of the UgNLIS public portal

Sixty three topographic maps were updated and disseminated to 4 Districts of Gulu (18), Luweero (9), Nakasongola (18) , Omoro (9) and Mayuge(9).

5.3.2 Fast track the formulation, review, harmonization and implementation of land laws, policies, regulations, standards, and guidelines

- Held 9 Committee meetings to review the RIA for the Land Acquisition, Resettlement and Rehabilitation Policy (LARRP).
- Conducted 11 Committee meetings and 4 review meetings on the proposals of revised Land Act.
- National Land Policy disseminated in 8 districts of Wakiso, Kamwenge, Katakwi, Hoima, Mityana, Kasanda, Gomba and Mubende during “Barazzas”/public meetings on land matters.
- Law Review Working Group and Secretariat were appointed and established respectively.

5.3.3 Undertake a comprehensive inventory of Government land

- Collected UGX 13.352 Billion shillings revenue as non-Tax Revenue in Premium and Ground rent.

- 795 lease transactions were processed comprising 370 for men, 219 women and 206 Companies/Firms on Government land.
- Processed 46 Land titles for Government institutions.
- Status of government land captured in the inventory.

5.3.4 Capitalize the Land Fund to ensure access to land by lawful and bonafide occupants

- 6,314 households of lawful and bona fide occupants were issued with certificates of title.
- Acquired/compensated 3,130 Hectares of Land from 61 men, 23 women, 5 couples and 16 companies for Lawful and bonafide occupants.
- 7,807 certificates of titles were transferred to lawful and bonafide occupants including 6,900 for Bunyangabu and Rwampara Districts, and 907 for Kibaale District.
- 3,167 subdivisions surveys were conducted for Mubende (1,200) and Kakumiro district (2,167).
- Four sensitization and consultative meetings were conducted for District and Local Leaders in Bunyangabu, Mbarara, Kakumiro and Kibaale Districts.

5.3.5 Strengthen the capacity of land management institutions in executing their mandate geared towards securing land rights

- District Land Officers (DLOs) and District Land Boards (DLBs) of Gomba, Mityana, Kassanda, Mubende, Rwampara, Buteleja, Abim, Arua, Iganga, Mbale, Kikuube, Hoima and Nakasongola were trained in Land management.
- 180 Area Land Committees (ALCs) of Gomba, Mityana, Kassanda , Mubende, Rwampara, Buteleja, Abim, Arua, Iganga, Mbale, Kikuube, Hoima and Nakasongola were trained in Land management.
- 29 DLOs and 29 DLBs of Kyenjojo, Fort Portal, Jinja, Buikwe, Mukono, Kakumiiro, Kibaale, Kyegegwa, Rakai, Kyotera, Bukomansimbi, Omoro, Gulu, Amuru, Isingiro, Kayunga, Kamuli, Buyende, Lwengo, Lyantonde, Kalungu, Hoima, Masindi, Kikuube, Masaka, Kiruhura, Mbarara, Rwampara and Ntungamo; and 8 MZOs of Masaka, Mbarara, Masindi, Gulu, Mukono, Kibaale, Fort Portal and Jinja were supervised and technically supported in land management.

5.3.6 Promote land consolidation, titling, and banking

4032 Certificate of Customary Ownership (CCOs) were processed and issued in Northern Uganda in partnership with DINU for Agago (1,017 family CCOs), Apac (1537 family CCOs), Maracha (1,448 family CCOs) and Karamoja (30 CCOs for the indigenous communities/Communal Land Associations (CLAs) in Karamoja region to theTepeth and Pokot out of which 42% of beneficiaries are female).

Photo 5-1 Beneficiaries in Agago District (Left) and Maracha District (Right) issued with CCOs

- 14 Communal Land Associations (CLAs) in Karamoja region were formed and certificates issued
- 38,976 titles issued.
- Conducted Training of Trainers (TOT) for persons to carryout Rapid Physical Planning Assessment.
- 9 Barrazas/Public meetings on land matters were held covering Wakiso (1), Kamwenge(1), Katakwi (1), Hoima (1), Mityana (2), Kassnada (1), Gomba (1) and Mubende(1).

5.3.7 Promote tenure security including women's access to land

- Systematic Land Adjudication and Certification (SLAAC) were implemented in Parishes in 13 Districts across the country.
- Developed the Terms of Reference for the Consultant to review the SLAAC Manuals and improve the SLAAC Tool. The procurement of the consultant was initiated under CEDP-AF project.

- 29,639 applications for freehold titles were cleared by the Land Management Institutions of Mbarara district, Rwampara, Ibanda, Kiruhura and Mbarara City.

5.3.8 Establish the national Spatial Data Infrastructure (NSDI) to enhance data integration for planning and development

- Initiated the procurement of the Consultant to enhance and densify the Continuously Operating Stations (CORS) network/ UGRNF.

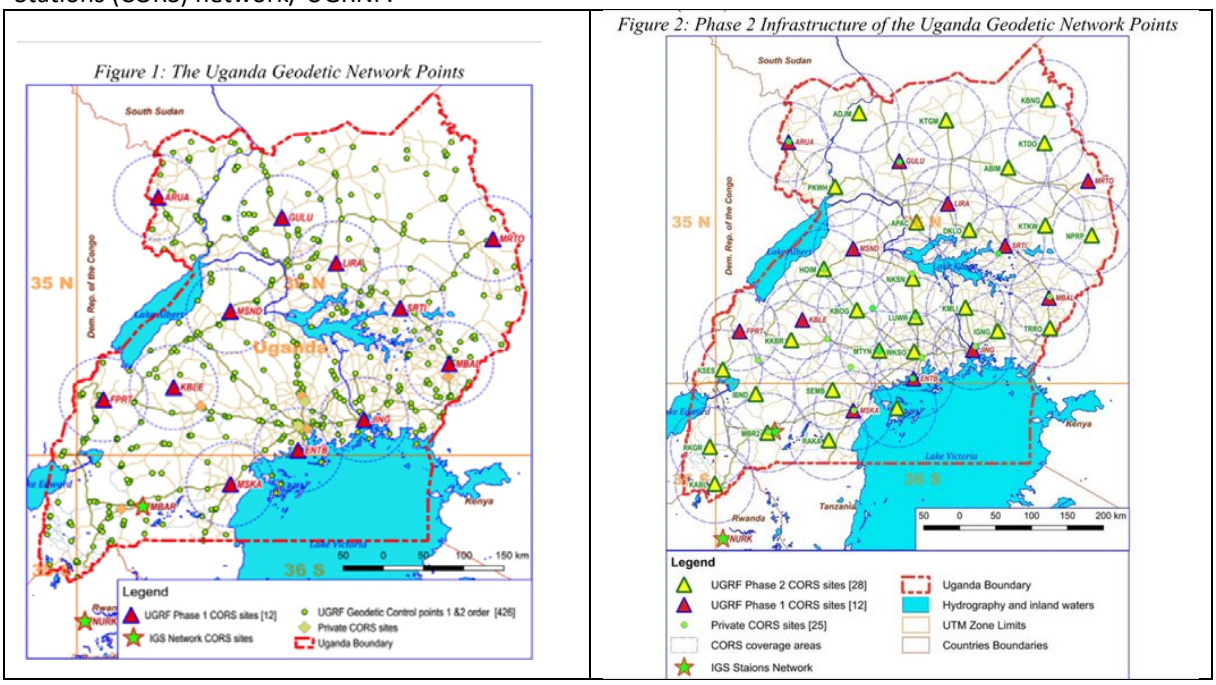


Figure 21: Current Uganda Geodetic Network points (Left) versus the proposed infrastructure of the Current Uganda Geodetic Network points (Right)

i) Surveyed 62 km of Kenya-Uganda Border
ii) Established eight Geodetic Control Points (GCPs), 4 in Arua district and 4 in Soroti district.
iii) 312 passive stations and 4 Continuously Operating Stations (CORS) maintained in Mbale, Lira, Soroti and Moroto stations.
iv) 3 cadastre border maps were produced.
v) Administrative boundaries of Rwamucucu in Rukiga, Terego- Madi Okollo, Nebbi-Terego and Arua-Madi Okollo Districts were surveyed.
vi) Carried out Boundary opening got Bugoma Central Forest in Kikuube and Hoima.

5.3.9 Develop and implement a Land Valuation Management Information System (LAVMIS)

i) The procurement of the consultant to develop the LAVMIS was ongoing.
ii) District Compensation Rates for 7 districts; Masaka, Kyotera, Kyenjojo, Kyegegwa, Yumbe, Kiryandongo and Moyo were reviewed and approved.
iii) A report on property yields was prepared for the Cities of Mbarara, Gulu, Jinja and Entebbe Muncipal Council.
iv) Property indices for taxation and valuation were developed for Kampala Capital City.
v) The contract for the development of Valuation Standards, Guidelines and Manuals was signed with M/S GMT Consultants Ltd. The inception report was submitted, and services were ongoing.

5.3.10 Promote integrated land use planning

Support supervision and capacity needs assessment were carried out in 13 Districts i.e Kyankwanzi, Kanungu, Kibaale, Ntoroko, Bulambuli, Busia, Butaleja, Iganga, Kyegegwa, Kibuku, Bukwo, Kaberamaido and Luuka Districts.

5.3.11 Cross cutting issues

Gender

- Capacity building in Gender and Equity in the Ministry of Lands, Housing and Urban Development Interventions was carried out.
- Training of Trainers Workshop on pretesting the Land Management Handbook for Land Actors was carried out.
- Gender profile for the Lands, Housing and Urban Development Actors was carried out.

HIV/AIDS

- IEC materials on HIV/AIDS prevention were disseminated.
- Conducted Health week and carried out health checks including HIV/AIDs testing for 230 staff conducted
- Condoms were distributed to members of staff.
- Staff members were supported in HIV/AIDS awareness and prevention.

5.4 Emerging issues/Challenges

(1) Low awareness levels of importance of land titling in the country.
(2) Delayed Approval of the CEDP-AF extension to fund the key sub-programme activities.
(3) There is limited staff to implement the sub-programme activities. There is need to recruit more staff to fill the human resource gap.
(4) There is inadequate funding for the sub-programme activities. There is need to increase funding to enable proper implementation of the sub-programme activities.

CHAPTER 6
DISASTER PREPAREDNESS AND RISK MANAGEMENT

6.1 Introduction

The Management of disasters is a multi-sectoral and multidisciplinary process. It involves all government ministries in collaboration with humanitarian and development partners, the private sector, local governments, and the community. The Office of the Prime Minister is the lead agency for management of disasters and refugees.

The Disaster Preparedness and Risk Management Sub-programme is responsible for achieving the programme objectives of reducing human and economic loss from natural hazards and disasters. The Sub-programme outcome is to reduce the number of deaths and missing persons and directly affected persons attributed to disasters per 100,000 population from 150 to 50.

Sub-programme Interventions

(i) Strengthen the policy, legal and institutional framework for effective disaster risk governance, management, and response.
(ii) Institutionalize disaster risk planning in Programmes.
a. Develop a National Disaster Risk Management Plan.
b. Undertake a disaster risk screening of the NDPIII and generate information to inform implementation planning.
c. Finalize and disseminate the National Disaster Risk Atlas.
d. Strengthen the Disaster Risk Information Management Systems.
e. Promote re-enforcement and retrofitting of structures and buildings for resilience to disasters.
(iii) Enhance capacities for storage, management, and distribution of relief commodities.
a. Strengthen the national store and relief food chain management system
b. Ensure timely access of relief food and non-food commodities by disaster victims.
(iv) Enhance the capacity for resettlement of persons at risk of disasters.
(v) Enhance access and uptake of meteorological information.
(vi) Install new and adequately equip and maintain existing automatic weather stations to ensure maximum functionality.

6.2 Disaster Management Outcome Indicators

6.2.1 Human mortality and missing persons directly attributed to water and environment related disasters per 100,000 population

During the FY 2021/22 mortality (death) related to natural disasters was 1,200. This translates to about 3 persons per 100,000 population. This mortality rate was higher than that in the FY 2020/21 where 26 persons died. This translated into mortality rate of 0.06 persons per 100,000 population. The major causes of natural disasters were floods, landslides, and lightening. The disaster-prone areas included Mt. Elgon (Bududa) and Mt. Rwenzori (Kasese) areas.

6.2.2 Economic Loss (USD) incurred per disaster as a % of GDP

Data on economic loss from disasters for the FY 2021/22 was not available at the time of compiling this report. In the FY 2020/21, the economic loss from disasters was estimated at UGX. 563 Billion. This translated into o.4% of GDP lost due to natural disasters.

6.3 Disaster Management Interventions

6.3.1 Strengthen the policy, legal and institutional framework for effective disaster risk governance, management, and response

Reviewed and revised the Principles of the National Disaster Preparedness and Management Bill. During the FY 2020/21 the National Policy for Disaster Preparedness and Management was reviewed. Consultations on the Peace Policy and the draft Policy were finalized.

6.3.2 Institutionalize disaster risk planning in Programmes

(a) Develop a National Disaster Risk Management Plan

Developed the National Disaster Risk Management Plan. If approved by Cabinet, it will inform the preparation of the National Disaster Preparedness and Management Bill.

(b) Undertake a disaster risk screening of the NDPIII and generate information to inform implementation planning

No action was implemented in the FY 2021/22.

(c)Finalize and disseminate the National Disaster Risk Atlas

The National Risk Vulnerability Atlas was finalized in FY 2020/21. During the FY 2021/22 the Atlas was disseminated in 17 districts of Iganga, Kaliro, Namutumba, Namayingo, Mayuge, Kole, Lira, Otuke, Apac, Kwania, Amolator, Bugiri, Bugweri, Jinja, Luuka, Kamuli and Buyende. This created awareness of preparedness for disasters.

(d) Strengthen the Disaster Risk Information Management Systems

- Enhanced the National Early Warning System against Disaster risks through practicing use of chatbot and digitized damage and loss assessment tool which provides real time information to aide decision.
- Conducted one Inter- Agency consultative meeting on rapid needs assessment tool that made a number of recommendations to facilitate disaster preparedness and response.
- Produced and disseminated 12 monthly Uganda National Integrated Early Warning systems (UNIEWS) bulletins on potential disaster occurrences that facilitated disaster preparedness.
- Conducted sensitization on UNIEWS in Rakai, Lwengo, Ibanda, Buhweju, Madi Okollo, Obongi, Pakwach, Luuka, Namayingo, Kayunga, Acholi, Lango, Teso, Bukedi, Bunyoro, Elgon, Karamoja and Sebei sub-regions.
- Conducted Post-Disaster (windstorms, hailstorms, floods, landslides) losses and damage assessments in 32 districts which informed Government responses mechanisms and planning.

(e) Promote re-enforcement and retrofitting of structures and buildings for resilience to disasters

No action was implemented in the FY 2021/22.

6.3.3 Enhance capacities for storage, management, and distribution of relief commodities

(a) Strengthen the national store and relief food chain management system

No action was implemented in the FY 2021/22.

(b) Ensure timely access of relief food and non-food commodities by disaster victims.

Supported 498,180 disaster affected households with relief food (34,438 bags of maize flour (100kgs each), 16,367 bags of beans (100kgs each) and 76,800 kgs of sugar. Non-relief food items included 9,200 tarpaulins, 300 wheelbarrows, 1,800 blankets, 600 pangas, 7,000 spades, 1,100 pairs of shoes, 1,950 basins, 300 bars of soap, 1,950 jerry cans, 400 sleeping mats, 4408 iron sheets and 3,200 mosquito nets. These enhanced the livelihood of the disaster affected persons across the country.

Supported 111,839 disaster affected households (559,196 persons) with relief food (31,055 bags of maize flour (100 kgs each), 13,166 bags of beans (100kgs each) and 106,460 kgs of sugar. Non-relief food items included 10,500 tarpaulins, 1,800 blankets, 1,950 basins, 554 bars of soap, 4,200 jerrycans, 300 sleeping mats, 4,200 iron sheets, 3,500 mosquito nets and 44 cartons of moringa and tea leaves.

Monitored relief food distribution in Karamoja, West Nile, Central, Bugisu, Sebei, Bunyoro, Busoga, southwestern and Teso Subregions.

6.3.4 Enhance the capacity for resettlement of persons at risk of disasters

- Reviewed MoUs for MDAs implementing resettlement activities in Bulambuli.
- Resettled 22 households (170 persons) living in disaster prone districts of Bududa, Namisindwa, Manafwa, Sironko nd Bulambuli to Bunambutye in Bulambuli district.
- Completed the preparation for resettlement of 66 households (330 persons) living in areas with high risk of landslides in Semuliki wildlife reserve in Kanara Town Council.
- Carried out procurement of land and wetland investigations for Kasese and Kayunga displaced persons.
- Drafted a workplan for resettlement of persons at high risk of landslides in Elgon sub region (Bunambutye) and flood victims in Ntoroko district.
- Allocated land for block farms in Bunambutye.
- Verified 11 displaced households during the October 2021 mudslides in Bududa district for resettlement.
- Kisoro district local government procured works for damaged school infrastructure such as pit-latrines.

Other Achievements

Strengthen whole of government capacity to rapidly respond to emergencies and disasters

- Carried out 82 district Disaster Risk Assessments covering fire incident (Bilal Primary school in Kawempe Division, and Kabira Town Council Market in Mitooma district), the effects of floods, heavy rains, and landslides (Gulu, Amuru, Kitgum, Lamwo, Bududa, Manafwa, Sironko, Namisindwa, Bulambuli, Rubanda, Masaka, Buyende, Buliisa, Nakasongola, Ntoroko, Agago, Kampala, Bundibugyo, Kasese and Bunyangabu) and food insecurity (Abim, Kotido and Moroto).
- Enhanced the capacity of National Emergency Coordination and Operations Centre (NECOC) and DECOCs through conducting dissemination and training sessions in 13 districts of Napak, Moroto, Katakwi, Buhweju, Ibanda, Hoima, Bullisa, Kikuube, Ntoroko, Madi-Okollo, Maracha, Koboko, and Yumbe which informed the DECOCs response and preparedness.
- Conducted an assessment of suitability of solar system installation to support DECOC activities for update and capacity enhancement.
- Procured and installed equipment to enhance capacities of staff in eleven DECOCs of Bukedea, Moroto, Kween, Kasese, Kabale, Adjumani, Amuru, Nakasongola, Butaleja, Namayingo and Bududa districts that enhanced DECOCs and staff capacities.
- Coordinated the launch of the National Oil Spill Contingency Plan 2020 which established the national preparedness and response system for oil spill prevention, preparedness, and response.
- Conducted reconnaissance visit to assess oil spill vulnerability in Hoima, Buliisa and Kikuube.

Strengthen capacity of Local Governments in Disaster Risk Management through establishing District Disaster Management Committees (DDMCs)

- Supported the development of 23 district contingency Plans (DCPs) for Kikuube, Kamwenge, Ntoroko, Bundibugyo, Kasese, Obongi, Nakapiripirit, Koboko (and 8 sub counties in Koboko), Karenga, Amuru, Pader, Kisoro, Ngora, Kanungu, Pakwach, Nwoya, Yumbe, Obongi, Koboko, Katakwi, Ngora, Serere and Amolator. This enhanced the capacity across District Local Governments (DLGs) on resilience and awareness against disasters.

- Conducted 48 DDMCs/DRR resilience trainings in Moroto, Amudat, Kaabong, Karenga, Dokolo Amuru, Pader, Kyegegwa, Isingiro, Bundibugyo, Bunyangabu, Nwoya, Pakwach, Katakwi, Amolatar, Ngora, Bukedea, Kumi, Kwania, Kapelebyong, Bududa, Bulambuli, Namisindwa, Sironko,

Manafwa, Paliisa, Butaleja, Kitagwenda, Buliisa, Kibuku, Butebo, Bugweri that enhanced the capacity across DLGs on resilience and awareness against disasters.

Details of the achievements against the planned outputs are presented in Annex 1.

6.3.5 Enhance access and uptake of meteorological information

Issued 3 seasonal rainfall forecasts that is June- August, September-December, and March-May for the period June 2021 to May 2022 and translated the seasonal forecasts into 10 local languages.

Conducted Countywide regional radio talk shows in Bushenyi, Mbarara, Mbale, Gulu, Moroto, Kotido, Kampala and Soroti to disseminate and get feedback on the seasonal forecasts issued. After the presentations, the team interacted with listeners through a call-in session, SMS messages and socio-media channels such as WhatsApp. The following issues were raised by the listeners:

- Inadequate weather monitoring stations in some areas.
- Delayed onset or early withdrawal of rains was reported by almost all districts.
- Lack of access or irregular dissemination of early warning information was reported by most districts.
- Increased occurrence of hydro-meteorological hazards such as floods, landslides, and drought.
- Lack or inadequate understanding of the scientific language of the forecasts such as Above normal and below normal rainfall.
- The forecast is always in English and difficult for some farmers to read and understand.
- Increasing frequency of dry spells and heavy rainfall.

Conducted seasonal rainfall performance evaluations in the districts of Kapelebyong, Amuria, Katakwi, Bukedea, Serere, Luweero, Buikwe, Nakasongola, Isingiro, Mbarara, Ntungamo Lira, Pader, Gulu, Omolo, to generate feedback on the issued forecast. The key findings were:

- Weather and climate information was received in the districts but mainly through the radios and emails only. However, this information does not reach the grass root users in time due to absence of funds at the districts to disseminate the information.
- There has been an improvement in the accuracy of the seasonal weather forecast apart from the daily weather forecasts which are sometimes not accurate.
- The public perception about the use of weather and climate information was low. Few people utilized the information and others prefer using indigenous knowledge.
- The common hazards in the areas visited include floods, prolonged dry spells, and hailstorms.
- UNMA needs to organize a training for the district officials in the interpretation of the weather forecasts to enable them build their capacity to give the right information to the farmers.

Conducted trainings for district extension staff (Production and Marketing, Natural Resources, and Community Development Officers) in Karamoja sub-region on how to interpret and understand the technical words used in Seasonal Climate Outlooks in order to improve dissemination and utilization of climate information.

Profiled 7,057 farmers with 3,417 females and 3,640 males to increase access to climate information in 24 districts of Mbale, Tororo, Butaleja, Kaliro, Namutumba, Kibuku, Budaka, Pallisa, Butebo, Kumi, Bukedea, Ngora, Bushenyi, Mitooma, Rubirizi, Sheema, Buhweju, Ntungamo, Rukungiri, Kanungu, Kisoro, Kabale, Rubanda and Rukiga.

Conducted sensitization and awareness creation on application of weather and climate information among 288 farmers with 103 females and 185 males in Kabale, Sheema, and Ngora districts.

Conducted popularization of the Weather Information Dissemination System (WIDS) in four regions of Uganda where Agricultural Officers and Natural Resources Officers were sensitized.

Daily forecasts were disseminated to 3 media houses of UBC TV, Star TV and Bukedde 1 TV after the newscasts in Luganda, Swahili, and English.

6.3.6 Install new and adequately equip and maintain existing automatic weather stations to ensure maximum functionality

By end of the FY 2019/2020 Uganda National Metrological Authority (UNMA) had established 169 Automatic Weather Stations (AWS) spread over 75 districts out of 146 districts. This represented 51.4% coverage (refer to figure 22). During the FY 2020/2021, UNMA accumulatively established 194 AWS spread in 91 districts across the country. This represented 62% coverage (refer to figure 23). In the FY 2021/2022 UNMA accumulatively established 196 AWS spread over 94 Districts, representing 64% coverage. At the current rate of progress, the NDP III target of 80% coverage of the districts is unlikely to be attained by 2025.

Revived the functionality of 4 DAVIS Automatic Weather Stations in Agoro, Koci-Goma, Kakira Karenga and ADCONs in Entebbe, Bududa, Butaleja, Buginyanya, Budaka, Pallisa, Tororo and Jinja. 128 out 196 weather stations were maintained across the country.

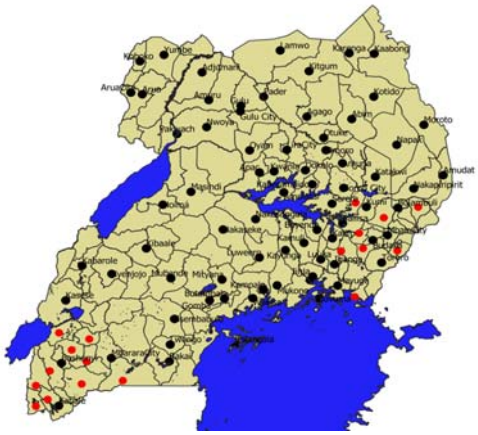
FINANCIAL YEAR 2020-2021				FINANCIAL YEAR 2021-2022		
						
KEY		Station established in year 2020/2021		KEY		stations established in 2021/2022

Figure 22: Coverage of Automated weather stations in FY 2020/21 *Figure 23: Coverage of Automated weather stations in FY 2021/22*

CHAPTER 7
MWE CONTRIBUTION TO OTHER PROGRAMMES

7.1 MWE CONTRIBUTION TO HUMAN CAPITAL DEVELOPMENT

7.1.1 RURAL WATER SUPPLY

7.1.1.1 Introduction

Rural water supply sub-programme contributes to the Human Capital Development (HCD) Programme objective of improving population health, safety, and management. The programme intervention is to increase access to inclusive safe water, sanitation, and hygiene (WASH) with emphasis on increasing coverage of improved toilet facilities and handwashing practices. The outputs are (i) Increased access to inclusive safe water supply in rural areas; (ii) Improved water quality supplied, and (iii) Support to improved WASH services in institutions. The outcome indicators according to the PIAP include (i) Percentage of rural population within access of an improved water source (1km), (ii) Percentage of villages with access to safe water supply, and (iii) Percentage of functionality rates of rural water systems.

7.1.1.2 Rural Water Outcome Indicators

Table 22 presents the summary of outcome indicators and achievements in the past 3 financial years. It shows that access to rural water supply dropped from 68% in the FY 2020/21 to 67% in FY 2021/22. This was attributed to the rate of population growth was higher than the rate of invest in safe water infrastructure in rural areas. In addition, the aging water supply infrastructure is unable to cope with the rapidly growing demand for safe water supply. At this rate of progress, it is unlikely that the NDP III target of increasing access to safe water supply to 85% by 2025 will be achieved. The stagnation of the national functionality rate was attributed to the rate of repair of water facilities could not out match the rate of breakdown of water facilities.

Table 22: Outcome Indicators Achievements in the past 3 years

Indicators	Achievements		
	2019/20	2020/21	2021/22
Percentage of rural population within access of an improved water source (1km)	68%	68%	67%
Percentage of functionality rates of rural water systems.	85%	85%	85%
Percentage of villages with access to safe water supply	67.8%	67.9%	67.4%[10]

Percentage of rural population within access of an improved water source (1 km)

The percentage of population using an improved water source dropped to 67% from 68%.[11] This estimate is based on 77% of the districts which submitted reports. The districts with access to safe water supply of 50% and below included Amudat (45%), Buvuma (31%), Buyende (36%), Isingiro (45%), Kazo (35%), Kisoro (42%), Lyantonde (41%), Kakumiro (32%), Kaliro (49%), Kasanda (39%), Kiruhura (46%), Kyegegwa (27%), Mubende (35%), Sembabule (36%), Rakai (35%), Wakiso (40%) and Yumbe (48%).

Table 23 presents the stock of rural water supply infrastructure by technology option. The total number of rural water facilities increased from **133,954** in FY 2020/21 to **135,774** in FY 2021/22. The number of persons served increased from **28,182,652** persons in FY 2020/21 to **28,609,684 in FY**

[10] *The number of villages increased from 57,150 in FY 2020/21 to 58,022 in FY 2021/22.*

[11] *This excludes the rural water infrastructure investments implemented centrally by Ministry of Water and Environment since 2016 that serve an estimate of over 2,000,000 persons in the rural areas of Uganda*

2021/22. Deep boreholes constitute (45.15%), shallow wells (22.79%), protected springs (20.52%), public tap stands (11.11%) and rainwater tanks (0.043%).

Table 23: Categories of safe water supply technology as of June 2022

Source of water	Number	No. of persons served	%
Deep Borehole	43,058	12,917,400	45.15%
Shallow Well	21,738	6,521,400	22.79%
Protected Spring	29,348	5,869,600	20.52%
Tap Stands	21,191	3,178,650	11.11%
Rainwater Harvest Tank	20,439	122,634	0.43%
	135,774	28,609,684	100.00%

Source: Uganda Water Supply Database, June 2022[12]

Percentage of villages with a source of safe water supply

The Government of Uganda policy directive is providing at least one improved water source per village. During the FY 2021/22, 345[13] villages were provided with improved safe water sources. This increased the cumulative number of villages with improved water sources to 39,130 out of the total number of rural villages in Uganda of **58,022**[14]. This represents 67.4% of the rural villages with improved water sources.

Percentage of water sources functional at time of spot-check

As of June 2022, the functionality for rural water supplies was 85%. It has stagnated at the same level since FY 2017/18. This was attributed to the insufficient budget allocation which was not commensurate with requirements/ needs for rehabilitation of rural water facilities. 56% of the districts had functionality of 85% and above compared to 51% in FY 2020/21. The five districts with lowest functionality include Omoro (44%), Mityana (60%), Bundibugyo (62%), Gomba (63%) and Nabilatuk (65%) . Five districts with highest functionality included Iganga (98%), Kitagwenda (98%), Namisindwa (98%), Rwampara (97%) and Buikwe (95%).

Percentage of water points with actively functioning Water and Sanitation Committees

A functional Water and Sanitation Committee (WSC) is one that ensures that a water point continues functioning at all times. This is achieved through collection of operation and maintenance (O&M) funds regularly with good record keeping, holding regular meetings, undertaking minor repairs, and maintaining adequate sanitation around the water source.

A substantial percentage of water facilities continue to be managed under Community Based Maintenance System (CBMS) management model. The functionality of WSCs 90%. It has stagnated at same level since the FY 2019/20. The stagnation was attributed to COVID-19 and inadequate funding which affected continuous re-activation of Water and Sanitation Committees.

Average cost per beneficiary of new water and sanitation schemes (USD)

The per capita investment cost is calculated as the "*total MWE and District Local Governments expenditure on rural water supply divided by the total of new people served*". It was estimated that 633,968 persons (505,382 by the DWSDCG[15] and 128,586 by centrally managed projects) were served

[12] This analysis includes urban areas under NWSC as it is problematic to delineate, in some areas, urban from rural.
[13] This analysis includes areas covered by NWSC and Rainwater Harvesting Tanks.
[14] The number of villages increased from 57,150 in FY 2020/21 to 58,022 in FY 2021/22. This analysis includes urban areas under NWSC.
[15] This excludes 15 District Local Governments that did not submit their annual reports to Ministry of Water and Environment in FY 2020/21. These are: Adjumani, Amolatar, Kitgum, Kole, Madi-okello, Amuria, Katakwi, Napak, Serere, Bududa, Bugweri, Bukwo, Buyende, Mayuge and Kabalero

with new water sources in the FY 2021/22. The per capita cost for rural water supplies was estimated at USD 73 (UGX 261,846 UGX). This was attributed to:

- Of the UGX 87,280,000,000 released, UGX 78,390,000,000 was expended on ongoing multi-year projects specially GFS and solar powered water systems.
- Of the UGX 89,400,000,000 disbursed, UGX 87,612,000,000 was spent by the District Local Government to provide clean and safe water.

Percentage of Water and Sanitation Committees with at least one woman holding a key position

It is a critical requirement for Local Governments to facilitate communities to form and train gender sensitive WSCs for all the newly constructed water sources. Formation of gender sensitive WSCs requires at least one woman holding a key position including chairperson, vice chairperson, and secretary on the WSC. Data from 135 districts shows a decline in the number of WSCs with at least one woman in a key position from 90% in FY 2020/21 to 87% in FY 2021/22. This was attributed to limited funding to facilitate revitalization of WSCs.

7.1.1.3 Rural Water Interventions

Construction of rural piped water systems

Table 24 presents the progress in construction of rural piped water systems.

Table 24: Construction of rural piped water systems

Output	Target	Achieved	Progress
District Local Government constructed Piped Water Supply Schemes/ GFS	193km	125km	The DLGs have been able to lay a total of 125.32km of pipeline with (750 taps) serving a total of 112,500 persons.
Lukalu-Kabasanda Gravity Flow Scheme in Butambala District	100%	98%	The system is designed to operate for 15 years and targets a population of 11,244 persons. So far, 6.3km of transmission pipeline and 35km of the distribution network were completed. A total of 550 connections (538-yard taps, 9 institutional connections, and 3 kiosks) were made serving a population of 13,272.
Orom Water Supply System in Kitgum-Lamwo District	100%	100%	The scheme is designed for 20 years and targets a population of 1,819 persons. So far, 25.12km of transmission pipeline and 88.14km of the distribution network have been laid. 446 connections have been made (431 yard taps, 15 public stand posts) and 3 toilet facilities serving over 3,408 persons. The system was handed over to the Umbrella Organization- North.
Kabuyanda Water Supply System in Isingiro District	100%	97% from 87%.	Kabuyanda WSS is designed for 20 years. So far, a total of 850 connections out of 1000 constructed are serving 20,400 persons. The water supply system has 4.1 km of Transmission Pipelines and 76km of Distribution/intensification pipelines. The system has 2 pump/generator and attendant's houses, 2 twin sumps (150,000lts), 1 Steel reservoir tank (500,000lts) on 2m high Dwarf walls, 2 Water borne Public Toilets and a water office.

Output	Target	Achieved	Progress
Kahama Water Supply and Sanitation System Phase II in Ntugamo District	90%	75%	The Water Supply and Sanitation System targets a population of 22,009 persons. The system has 50 km of the distribution pipeline with 210 (200-yard tap and 10 public stand posts) promotional connections serving 6,800 persons.
Construction of Mpungu-Nyakizinga Water Supply and Sanitation System (Kasese)	50%	77%	The Water Supply and Sanitation System has 0.61km raw water mains, a water Treatment plant of 720m^3/day capacity, 2.1km of treated water transmission mains, a main reservoir of 165m^3 capacity, 40.3km of distribution mains, 30 break pressure tanks of 1.0m^3 capacity each. The System has 318 service connections serving 7,632 persons.
Kanyabwanga Water Supply System in Mitooma District	70%	100%	The Water Supply and Sanitation System has 603m of transmission pipelines and 8.22km of distribution pipelines. Kanyabwanga has completed intake works (pump, generator and dosing house, attendant house and sanitation facility), 2 break pressure tanks, VIP lined pit latrine in Rwenkureiju primary school, solar pumping system infrastructure and 50m^3 pressed steel tank (Rwenkureiju Hill) on 6m high steel tower. The system has constructed 20 Public Stand posts serving an estimate of 6,000 persons.
Construction of Nyabuhikye-Kikyenkye GFS	100%	86%	The Water Supply and Sanitation System has 3.046km of raw water transmission main, 25km of clear transmission main and 38km of the distribution network. The System has 1000 promotional connections serving approximately 24,000 persons.
Construction of 16 Rural Growth Centres Piped Water Systems in selected districts with sub counties having low water coverage (Buyende-2, Mayuge, Namayingo, Kaliro, Kyankwanzi-2, Rakai-2, Kassanda, Nakasongola, Mukono, Kagadi-2, Kakumiro-2)	40%	20%	The completed activities included surveys and siting in all the 20 RGCs, drilling of 33/40 wells in the 20 RGCs; pump testing of 24/33 drilled wells with 8/33 wells having low yields. The drilling activities commenced in Moyo district.
Construction of Isingiro Water Supply System	30%	0%	Isingiro Water Supply System detailed designs were completed. The final tender documents were received from the design consultants and submitted to the French Development Agency (FDA) for no-objection. ESIA was completed and submitted to NEMA for approval. RAP report was submitted to Chief Government Valuer. Project Administration Manual and Project Steering Committee Guidelines were submitted

Output	Target	Achieved	Progress
			to the AFD for no-objection. Request for Proposals and Terms of Reference for works supervision were submitted to the AFD for no-objection. Most of the condition precedent the first drawdown have been satisfied and works will start by mid-January 2023.
Construction of Bitsya Gravity Flow System in Buhweju District	25%	__%	The contract was forwarded to the Solicitor General for approval.
Construction of Nyamugasani Water Supply System in Kasese District	30%	__%	The contract was forwarded to the Solicitor General for approval.
Construction of Kachum-Agago (Ogili) Bulk Water Supply for Multipurpose Use	__%	__%	Formalizing the funding arrangement is ongoing between the Ministry of Water and Environment and the Export-Import (EXIM) Bank of India for the construction of Kachum-Agago (Ogili) Bulk Water Supply for Multipurpose use.
Construction of Potika Gravity Flow Scheme; **Construction of Ngoma-Wakyato Gravity Flow Scheme;** **Construction of Bukedea Lower GFS Phase I;** **Construction of Rwebisengo Kanara GFS II.** **Construction of Bwera Gravity Flow Scheme.** **Construction of Bugangari – Bwambara Water Supply System.** **Construction of West Nile Dry Corridor Bulk Water Transfer; and,** **Construction of Shuuku Masyoro GFS II**	__%	0%	The construction of these water supply system and schemes will not commence due to the cancellation of USD 94.594 million (349,997,800,00) loan agreement meant for the development of Large Gravity Flow Schemes.
Construction of 60 Solar Powered Water Supply Systems in the districts of Maracha, Moyo, Adjuman, Yumbe, Oyam, Amolator, Apac, Kole, Pader, Amuru, Agago, Nwoya, Alebtong, Dokolo, Kaabong, Amudat, Napak, Nakapiripirit, Kotido, Moroto, Kumi, Serere, Bukedea, Amuria, Ngora, Mayuge, Bugiri, Butaleja,Kamuli, Namayingo, Kibuku, Namutumba, Luuka, Buyende, Pallisa, Iganga, Kaliro, Buvuma, Kyankwanzi, Kiryandongo, Kayunga, Gomba, Luweero, Kiboga, Buikwe,	__%	0%	Siting for the construction of 50 Solar Powered Water Supply Systems is on-going in the districts of Agago, Yumbe, Amudat, Kaabong, Bulambuli, Buvuma, Buyende, Namayingo, Kyankwanzi, Mityana, Nakaseke, Rakai, Sembabule, Buliisa, Kasese, Kibaale, Kyegegwa, Mubende, Lyantonde and Kisoro. Detailed Designs for at least 20 schemes were submitted at the end of July 2022.

Output	Target	Achieved	Progress
Nakasongola,Wakiso, Hoima, Mukono, Mpigi, Mubende, Kibaale, Lyantonde, Sembabule, Kalangala, Masaka, Lwengo, Rakai, Isingiro and Kiruhura.			
Construction of 302 solar powered piped water supply system in rural area of Uganda.	__%	0%	Feasibility studies on the 52 sites were conducted. 40 sites were identified and have completed detailed design reports. Construction commenced in the districts of Abim, Butebo, Iganga, Kalenga, Kamuli, Luuka, Soroti, Zombo, Kwania and Kiryandongo. However, some of the proposed sites that were subjected to the test pumping could not sustain the minimum threshold yield therefore dropped from the list for consideration. These include sites located at Akamurei, Ololim, Ijujo and Gbolokonyo.
Construction of 20 solar powered piped systems (Nexus green)	5%	0%	102 visits were conducted in different sites for preliminary assessment on 26 sites. 52 sites are at feasibility stage, 7 sites are ready for design and 3 sites declared ready for construction. However, due to high failure rate of boreholes in the prior identified sites, new sources had to be identified which slowed down the pace of project implementation.
Construction of 17 medium and large piped water schemes	5%	0%	Detailed Designs for 26 out of the 47 Schemes submitted. 26 systems will be located in Central and Western regions and 21 systems in Northern and Eastern regions. The plan was to commence construction of 17 schemes in FY 2022/23. Due to issues related to Performance Guarantee and Advance Payment Guarantee submission, commencement of works delayed.
Drill 285 hand pumps, 100 production wells, 70 large diameter wells focusing on least served districts of Buvuma, Buyende, Bundibudgyo, Kakumiro, Kamuli, Kassanda, Kisoro, Kyegegwa, Mubende, Rakai, Wakiso, Yumbe, Kirumira, Lyantonde, Sembabule	Drill 285 hand pumps, 100 production wells, 70 large diameter wells	122	Drilled 81 hand pumps and 41 production wells focusing on least served districts of Buvuma, Buyende, Bundibudgyo, Kakumiro, Kamuli, Kassanda, Kisoro, Kyegegwa, Mubende, Rakai, Wakiso, Yumbe, Kirumira, Lyantonde, Sembabule serving approximately 36,600 persons.

Most large, piped water supply systems have the potential of realizing an increment of 500 household connections annually per system during the first 4 years of operation.

Construction of Solar/Wind Powered Water Supply Systems

Under the centrally managed projects, during the FY 2021/22, 40 Solar/ Wind Powered Water Supply Systems located in the districts of Adjumani, Yumbe, Agago, Nwoya, Otuke, Apac, Serere, Kumi, Ngora, Amudat, Moroto, Kaabong, Busia, Kamuli, Kaliro, Kaliro, Bugiri, Mayuge, Namayingo, Butaleja, Jinja, Buvuma, Kiryandongo, Mpigi, Kayunga, Luwero, Kyankwanzi, Luwero, Gomba, Mubende, Isingiro, Kiruhura, Lwengo and Rakai were constructed completed with **187** public stands posts and **183** house connections currently serving **173,058 persons**.

Rehabilitation of existing point water sources

During the FY 2021/22, the District Water and Sanitation Conditional Grant (DWSCG) was used to rehabilitate **1,808** old non-functional point water sources. These are now serving a total of **504,669 persons**. 200 broken down boreholes were planned to be rehabilitated by the MWE. However, this was not possible because the available funds were used to settle outstanding debts for rehabilitation works incurred in the previous financial year.

In response to flood affected communities, **UNICEF** supplemented Ministry of Water and Environment's efforts under the emergency Water, Sanitation and Hygiene intervention by rehabilitating **48** boreholes serving **14,400 persons** in the districts of Obongi, Buliisa, Kasese, Kaabong, Nabilatuk, Moroto and Karenga. In addition, **UNICEF** constructed and upgraded **4** water supply systems located at Kamwenge district (Kamwenge HCIII and Bigodi HCIII) and Kikuube district (Kyehoro HCIII and Muhwiju HCIII) serving **18,200 persons.**

Construction of New Point Water Sources

MWE drilled 122 boreholes (81 hand pumps and 41 production wells) focusing on least served districts of Buvuma, Buyende, Bundibudgyo, Kakumiro, Kamuli, Kassanda, Kisoro, Kyegegwa, Mubende, Rakai, Wakiso, Yumbe, Kirumira, Lyantonde, and Sembabule **serving 36,600 persons.**

Under DWSCG, **864** boreholes or hand pumped wells, **133** protected springs, **72** Rainwater Harvesting Tanks **(**10m^3) were constructed serving a total of **292,882 persons**. In addition, 7 valley tanks were constructed. A total of **1,191**`new point water sources were constructed and/or drilled serving **329,482** persons. Table 25 presents the point water sources constructed using DWSCG.

Table 25:*Point water sources constructed using the DWSDCG*

Technology	Planned	Achievements	%	Population Served
Protected Springs	183	133	72.68%	33,250
Deep borehole	1,005	864	85.97%	259,200
Design of PWS	81	58	71.60%	0
Construction of PWS	193	125 (750 taps)	64.76%	112,500
Rainwater harvesting	78	72	92.31%	432
Valley Tanks	8	7	87.50%	0
Dams	4	4	100.00%	0
Rehabilitation of Water Facilities	1,808	1,682	93.04%	504,669
Total	3360	2,945	87.66%	617,169

Other Achievements

Engineering designs

58 out of 81 designs submitted by the District Local Governments to Ministry of Water and Environment were approved. Specifically, under the UgIFT, 27 designs of piped water systems were developed.

Rural Water and Sanitation Regional Support Centres

There are 6 Rural Water and Sanitation Regional Support Centres (RWSRCs) based in Fort portal, Soroti,

Lira, Mbale, Moroto, Wakiso and Mbarara Cities. These were involved in the planning and developing rural water piped water supplies in their respective areas of operation across the country. RWSRCs supported the implementation of the DWSDCG including monitoring compliance with standards, quality assurance and utilization of resources and capacity building. RWSRCs carried out research on rural water supplies operation and maintenance and supported District Local Governments in planning, budgeting, procurement, and contract management.

RWSRCs were instrumental in assessing the functionality and completeness of LGs Water and Environment programmes by supervising and monitoring the implementation of the a**dditional financing for the Water Component under Uganda Intergovernmental Fiscal Transfers Program for Results (IFTRP).** Its objective is to enhance the adequacy and equity of fiscal transfers to Local Governments and improving fiscal management of resources for service delivery by LGs. The programme provides additional financing to the LGs of up to a tune of UGX 150 billion over a period of three years. The achievements so far as indicated in the **Annex 1**- Table 1 Construction and extension of piped water supply system, Table 2 Provision of Portable Water to Seed Secondary Schools and Table 3 Provision of Portable Water to Newly Upgraded Health Center IIs to Health Center IIIs.

The RWSRCs were involved in updating and disseminating Sector Grant and Budget Guidelines, back stopping LGs in Environment, Social Safeguards and Health risks, and participating in development of technical manuals, tools and guidelines. Participated in the review of the water and environment functions to strengthen guidance for water and environmental management at LG level, popularized the Operation and Maintenance Framework for Rural Water Infrastructure in five regional centres and developed Performance Improvement Plans for poorly performing local governments.

7.1.1.4 A functional Appropriate Technology Centre for Water and Sanitation

Appropriate Technology Centre (ATC) located in Mukono is mandated to address technological and capacity challenges in the water and environment sector through applied research, skilling and promotion of appropriate technologies. With an expanded mandate, the Centre mainly focuses on applied research and innovative technologies in the areas of water development, water resources management, sustainable environment management, sanitation, and climate change resilience. In FY 2021/22, the following were achieved.

innovations / new technologies developed

i. 7 new/emerging technologies were submitted by promoters to ATC for profiling and three of them passed the profile test i.e., Gravity Driven Membrane (GDM) Filter, Jikokoa energy saving stove, and the Eva water purification filter re-engineered model B.
ii. A two day national appropriate technologies exhibition was held at Kololo ceremonial Grounds from 26th to 27th November 2021, bringing together over 30 innovators with locally developed innovations that were showcased to the public.
iii. Hand washing campaigns were carried out in 7 markets in Mukono district. During the campaigns, vendors were taught how to effectively wash their hands, a pool of hand washing promotion agents was created and trained on making liquid soap - 25 persons per market.
iv. Technology mapping was done in 33 districts in preparation for an online technologies data base and identification of capacity gaps at local government level. The cumulative total of districts covered was 135.
v. Started research on using black Soldier Fly Larvae and Earth worms to manage both faecal sludge and solid waste. Two demonstration toilets were set up as part of the study. These are located at ATC offices in Mukono.

sector professionals adapting new technologies and innovations

(i) About 57 boda-boda riders were trained on undertaking sanitation as a business. This project is being implemented jointly with UNICEF.

(ii) In partnership with UNICEF Uganda, the Centre started a pilot project promoting sanitation as a business among the boda boda riders. The concept involves bodaboda riders forming pit emptying groups and offering the service during off-peak hours of their main boda boda work. They use the gulpers to empty and a de-touchable trolly to transport faecal sludge to the national faecal sludge management sites. The pilot project is supposed to operate in Mukono, Kitgum and Kamuli districts. In FY 2021/22 preliminary activities including introduction of the project, identification of boda boda stakeholders and hands-on training were done in Mukono district. This project is anticipated to provide a low-cost solution to unplanned settlement and unlined pit latrines.
(iii) 154 professionals were trained on technologies for ground water recharge and rainwater harvesting and 134 professionals were trained on technologies for improving sanitation both onsite and offsite including faecal sludge management.

The ATC continued with the nation-wide water, sanitation, and environment technologies mapping exercise. The exercise covered 9 districts of Karamoja sub-region, 12 districts in Rwenzori Sub-region and 12 districts in Bunyoro sub-region and parts of Buganda. Cumulatively, 135 districts have been covered. From this exercise an on-line technologies data base is being developed and this will be accessible to all stakeholders. The database will in addition, provide a guide on which technologies are being used where, level of technology success, hard to serve communities, water, sanitation, and environmental challenges as well as different stakeholders actively involved in service delivery in the respective districts.

Research studies conducted to improve water supply and sanitation service provision

Two research papers on Gravity Driven Membrane Filter and production of pavers and construction bricks were presented/published during the Uganda Water Week 2021. Two research papers on research done by ATC were presented during the Uganda Water Week 2022.
A variety of technologies were exhibited UWEEK2022. Circular Economy promotion technologies largely were exhibited and stall visitors were taught with practical demonstrations of the importance of recycling and reuse. The GDM filter was disseminated as an appropriate technology for serving places like lake shores and islands. This technology is embedded in a simple water supply system that promotes abstraction and purification water from surface sources to serve constrained communities.

Two Concept Papers for innovative applied research were written, one in collaboration with Environment for Development Initiative (FfD – MaK) Centre (Makerere University) and the other with Kenya Water Institute and Mubimbili University of Health and Allied Sciences (Tanzania). The Concepts Papers were on solid waste management, circular economy promotion and diffusion of appropriate technologies in user communities respectively.

7.1.1.5 Challenges and Recommendations

Challenges

(i) Ineffective support from both central and local governments in maintenance of rural water supply infrastructure.
(ii) Systemic constraints and limitations in the planning and financing processes for Operation and Maintenance of rural water supply infrastructure.
(iii) Governance and accountability challenges at community level leading to misuse of funds collected.
(iv) Nonfunctional supply chains and quality control for spare parts leading to high costs for spare parts.
(v) Lack of effective framework to facilitate meaning-full engagement of HPMAs and HPMs. As a result, HPMAs and HPMs are not meaningfully engaged to support maintenance of water supplies.

Recommendations

(i) Enhance financing mechanisms of the RWSRCs to ensure continuous Technical Support to the district local governments, to reduce the capacity gaps in planning, budgeting, procurement, implementation and O&M of water facilities.

(ii) Continuous engagement with Ministry of Finance, Planning and Economic Development to increase the water grant to enable recruitment and staffing of District Water Offices to cover the staffing gap.

(iii) Multiple approaches to rural water supply to ensure a water source per village through large gravity flow schemes, solar powered mini-piped water schemes, boreholes, rainwater harvesting and self-supply in water stressed areas.

(iv) The budget for software activities falls under the non-wage recurrent which is basically used for district water office administrative costs. There is need to engage Ministry of Finance, Planning and Economic Development to increase the water grant to enhance software activities for rural water supply.

7.1.2 URBAN WATER SUPPLY

7.1.2.1 Urban Water Outcome Indicators

Urban population within access of an improved water source (200m)

The Department of Urban Water Supply and Sewerage during the financial year 2021/2022 increased performance on Water Access from 71.6% to 72.1%. The Annual target of 78.4% was not achieved because of the interference of the COVID-19 Pandemic that affected completion of the planned interventions. The Budget Cuts due to critical interventions for COVID-19 post era management affected this.

Over 27 towns under construction at various levels of completion in Binyiny (93%), Kagulu (80%), Nyakatonzi (80%), Kayunga-Busana (85%), Nakasongola (75%), Kyenjojo-Katooke (78%), Buikwe (15%), Kapchorwa (42%), Bundibugyo (70%), Butemba / Bukwiri (95%), Nalukonge / Lusozi (95%), Kagadi (96%), Kyankwanzi (95%), Busia (45%), Kiboga –Expansion (40%), Zigoti- Expansion (40%), Busiika-Expansion (40%), Ngoma (5%), Bibia/Elegu (68.6%), Lacekocot (39%), Odramacaku (85%), Atiak (50.4%), Okokoro (5%), Pakele (10%), Agii (10%), Bulangira (10%), Amus (10%) , Alukcok (10%) , Kokumu (10%) , Kyamuhunga (10%) , Miranga Cell (10%) , Buyamba (10%), Lwanda (10%), Yumbe FSM (35%).

The improvement from 71.6% to 72.1% was attributed to the fact that the completed piped Water Supply and Sanitation systems were serving a bigger population compared to last year's served population. The improved Access was after construction and completion of piped water supply and sanitation systems in the Small Towns / RGCs / Large Towns of Namalu, Morulem, Dokolo, Padibe, Kambuga II, Kateete, Lwamata, Bigando, Bihanga, Igorora I, Kassanda, Kangulumira, Nazigo, Nyabyeya, Kyampisi and Namulanda.

The Department targeted 127 New Piped Water Supply systems for Small Towns. The Department constructed 16No. Piped Water Supply and Sanitation systems. Piped Water Supply and Sanitation Systems for the previous year and the 16. Piped Water Supply and Sanitation Systems for the current period under reporting in the small towns. The target of 20 Piped Water Supply and Sanitation Systems was achieved. A target of serving 26.334 million people was planned but the achievement was 18.865 million people served. 16 Piped Water Supply and Sanitation Systems were completed in small towns and 5 in the large towns.

Table 26: Water Access performance for the period 2010/2011–2021/2022

		10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
NWSC	Total Population (millions)	3.24	3.38	3.84	4.42	4.9	6.64	8.0	9.7	16.8	14.3	23.365	23.365
	Population served (Millions)	2.43	2.61	2.99	3.38	3.72	5.44	6.3	8.1	13.7	10.6	18.104	19,627,290
	%coverage	75%	77%	78	77%	76%	82%	79%	84%	81.6%	74%	78%	84%
MWE-Small Towns / RGCs	Total Population	2.38	2.49	2.61	2.23	2.07	1.69	1.50	1.6	1.543	491,197	2.969	629,502
New Schemes	Population served (Millions)	1.28	1.42	1.52	1.46	1.38	0.45	0.44	0.57	0.733	275,678	0.761	379,466
	%coverage	54%	57%	58	65%	67%	27%	29%	36%	55.9.%	69.7%	25.6%	60.2%
	%coverage											94.4%	
Total Urban	Total Population	5.62	5.87	6.45	6.65	6.97	8.34	9.4	11.3	18.304	491,197	26.334	23,995,323

		10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22
	Population served (Millions)	3.71	4.04	4.51	4.84	5.11	5.89	6.6	8.7	14.471	275,678	18.865	20,006,756
	%coverage	66	69	70	73	73	71	71	77	79.1	70.5	71.6	72.1%

Note: The population served includes the population in the large towns, small towns and some rural areas served by both NWSC and Umbrellas of Water and Sanitation.

Upgrade Water Supply Systems in Large Towns

The Corporation currently operates in 262 towns across 97 districts serving approximately 19,627,290 million people with an estimated service coverage of 84%. This represents 94% of the HCDP target of 280 service towns and a 15 % growth in the number of people served from 18.1 million as at June 2021 to 119.6 million as at June 2022. The growth was attributed to increase in demand for NWSC services and increase in the target Population by 4%, which was maintained, compared to the previous reporting period of 23.3 million people as of June 2022.

The current year of reporting had a target of 11,000No. Large Towns for Upgrading. National Water and Sewerage Corporation (NWSC) intervened and upgraded 3No. Large Towns (Kapeeka, Ssembabule, Katosi) and 14No. Projects under Implementation.

Table 27: Trends in safe water coverage in large towns

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
Target Population (No. of People)	14,247,466	15,974,003	20,545,177	22,545,177	23,365,821	23,365,821	100%
Population Served (No. of People)	10,590,910	11,884,129	15,703,934	17,585,238	18,225,340	19,627,290	93%
Water Service Coverage (%)	74%	74%	76%	78%	78%	84%	93%

Rehabilitation / Upgrade of the existing water supply in small towns

The Urban Water Supply and Sewerage Services Department planned for an intervention in 21 Small Towns during the reporting Period. 10 Small Towns were rehabilitated / upgraded in the Small Towns of Namalu, Morulem, Kassanda, Namulanda, Kyampisi, Nazigo, Nyabyeya, Kangulumira, Bihanga, and Kateete Health Centre serving a total population of 184,270 people through 25,228 km, 931 Connections, 237 Villages in 39 Parishes.

The Upgrading of the piped water supply and sanitation systems was not planned during the reporting period. However, some works were done for the Water Supply and Sanitation systems of Namalu, Morulem, Kassanda, Namulanda, Kyampisi, Nazigo, Nyabyeya, Kangulumira, Bihanga, and Kateete by regional WSDFs. A total of 25,228 km, 10,680 additional connections and 756 PSPs were implemented by UWAs.

People with Access to Pro-poor facilities and regulatory water supply campaigns

Pro-poor facilities are the Public Stand Posts and the Institutional connections constructed for people to access water. These facilities are accessed at a cost less or equal to that at the yard tap / house connection.

Construction of Pro-poor public stand posts in Small Towns was targeted at 1,905 PSPs in small Towns. 931 yard tap connections, 75 Public / institutional stand Posts were constructed during the reporting Period.

In small towns 39No. Public Stand Posts and 36No. Institutional Connections were constructed. The total of 75No. Pro-poor facilities were constructed in the small towns serving an additional

population of 15,000No. People of the small towns. The annual target of 1,905 connections and the achievement was 974 connections, representing 51% performance.

The targeted inspections and recommendations on the Water Standards which were planned were 4 Inspection spearheaded by the Water Regulation Department. The mandated department conducted 4No. Regional inspections and recommendations as stated in the Detailed Report by the Water Utility Regulation Department.

In large towns during the Financial Year 2021/22, the NWSC constructed / installed **2,141** new PSPs bringing the total number of PSPs to 27,215 compared to the **24,867 of the previous year. The target for the Period of Reporting was 3,600 PSPs.** This denotes an under performance of 59**%** of the HCDP target for the FY 2021/22. Table 28 provides the trends of household connections.

*Table 28: **Trend of Household Connections for the FY 2017/18 – 2021/22***

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New Household Connections	52,171	56,126	48,681	42,998	42,985	40,000	107%
Total Household Connections	479,429	535,555	535,555	627,234	684,418	667,234	103%
Active Household Connections	91%	89%	87%	88%	88%	89%	99%

The annual target of 40,000 Pro-poor facilities was surpassed 2,985No. Connections indicating a Performance of over 7.5% compared to the previous performance of 26.4% above the target.

Percentage of villages with access to safe water supply

Compared to the previous performance of 613 Villages and the 237 Villages served during the current reporting period. The reduction in the number of villages was as a result of downsizing the scope to reserve resource for cater for the COVID-19 effects by the GOU. The villages under large towns being served during the reporting period indicated an overall 10,425No. Compared to 8,811No. Villages for the previous reporting period. The performance in small towns is shown in Table 29.

*Table 29: **Villages served in small towns (2021–2022)***

Year	No. of Additional Villages Served	Completed Towns
2022	237	16
2021	613	26
2020	534	16
2019	453	12

Functionality rates of urban water systems

The functionality of the Piped Water Supply and Sanitation Systems performance was rated at 83% compared to the 90.2% performance of the previous year. The performance changes were due to the overrun period where the rate at which monitoring and timeline checking on the piped water supply systems was affected by the COVID–19 Pandemic, which realized some budget cuts. The target of 89% of the reporting period was under scored by 6%.

Table 30: comparing functionality for last five years

Year	Functionality (%)
2022	83
2021	90.2
2020	94.0
2019	94.3

In addition, although the targets never indicated any figure for small towns, it is a routine implementation approach of the Umbrellas of Water and Sanitation that have remarkable 10,226No. Kilometres including an additional 631 kilometers for the year 2022. As a contribution to functionality, the 6 Umbrellas of Water and Sanitation have as well contributed 90,094No. compared with 70,140 Metered Connections for the previous reporting period.

The rate at which the functionality has been improving year after year was this year affected by the COVID–19 pandemic. The Umbrella of Water and Sanitation during the pandemic had to cut down the monitoring activities including both the frequency and the number of staff on ground to undertake the functionality monitoring. It is important that we as a sector have learn from this and thus suggest introduction and development of remote monitoring particularly on the functionality parameters.

Rehabilitation / Upgrade of the existing water supply in small towns

The Output was planned with a target of 300No. Piped Water Supply and Sanitation Systems where 258No. Piped water supply and sanitation systems. Out of the targeted / planned interventions, the department has rehabilitated / upgraded 248No. Piped Water Supply and Sanitation Systems indicating a performance of -82.7% including the 10No. Rehabilitated during the reporting period. The rehabilitated / upgraded piped water supply and sanitation systems include Namalu, Morulem, Kassanda, Namulanda, Kyampisi, Nazigo, Nyabyeya, Kangulumira, Bihanga, Kambuga II, Katete Health Centre III.

Rehabilitation / Upgrade of the existing water supply in large towns

The target of 280No. Piped Water Supply and Sanitation systems in the Large Towns Water and sanitation systems. The UWSSD through NWSC constructed 4No. piped Water Supply and Sanitation Large Towns. The entire performance indicates that 14.3% achievement. The performance was because of the impact from the fact that revised budgets and the effects of COVID-19 that saw contractor demobilizing as well as the economic strains of the prices of the construction materials.

The target of 280No. Piped Water supply and Sanitation System were planned for upgrade; however, this was not achieved because of the COVID-19 pandemic and as a result the proposed budget limits were cut to cater for the COVID-19 Effects in Uganda. 4No. Piped Water Supply and Sanitation Systems in the large towns were upgraded.

Expansion of Water Pipe Network in large towns

During the FY 2021/22, the National Water and Sewerage Corporation laid 1,305No. Km of new water mains, 52.2% of the HCDP target of 2,500 Km. The total pipe network as of June 2022 stood at 23,974No. Km. The performance was partly affected by Covid-19 lockdown effects that affected the Corporation's business and available funding to effectively implement the SCAP 100 project. However, with the easing of the restrictions, the Corporation anticipates that its business opportunities will be widened and it will be able to improve performance.

Table 31: Annual Trend of Water Mains (Km) for the FY 2017/18 to 2021/22

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New Water Mains (Km)	2,021	2,727	2,135	444	1,305	2,500	52%
Total Pipe Network (Km)	14,466	17,623	19,974	20,495	21,794	23,974	91%
Growth in Total Pipe Network	19%	22%	13%	3%	6%	17%	37%

Population using safely managed drinking water services located at premises

Target of 25% Safely Managed Water

This parameter is calculated by %age on premises*percentage functionality*copying with water quality. The safely managed safe drinking water was realized at 56.9% (Functionality*Access during the year2021/2022 compared to the previous performance of 67.3% for the year 2020/2021.

Safely managed water scored at 56.9%% (Functionality (83%) * %age Access (72.1%) during the year 2021/2022 compared to 67.3% during 2020/2021. The slight improvement was on the emphasis increased to establish yard tap connections compared to establishment of the Public Stan Posts. The population using safely managed drinking was reduced through number of household connection in Small Towns (931No. compared to the target of 1,500) constructed which were realized at 56.9% In small Towns in the 16No. Completed piped water supply and sanitation systems.

The Population using safely managed drinking water in large towns was achieved with construction of 931No. Yard tap connections compared to 5,351 achieved during the previous financial year. The target of the 3,000 connections was not achieved due to several reasons including COVID-19 which caused budgets to be revised to cater for COVID-19 effects and impacts. The Umbrellas of Water and Sanitation contributed to safely managed drinking water through 10,680 additional connections compared to the 6,850 realized last financial year.

Table 32: performance of Safely Managed Water Supply

Year	Safely Managed (%)
2022	56.9
2021	67.30
2020	57.11
2019	20.00

Increased number of Household Connections in small Towns

During the reporting period, 91,025 Yard tap Connections, 931 Public Stand Posts and 239 Institutional Connections were made in the small towns. Additional 11,611 connections were made in small towns by the 6 Regional UWAs.

Increased number of Household Connections in large Towns:

NWSC constructed 42,985 Connections compared to the 42,988 Connections in FY 2020/21. In addition, NWSC constructed 2,141 PSPs compared to 3,793 PSPs in 2020/2021.

Table 33: Trend of Household Connections for the FY 2017/18 – 2021/22

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New Household Connections	52,171	56,126	48,681	42,998	42,985	40,000	107%
Total Household Connections	479,429	535,555	535,555	627,234	684,418	667,234	103%
Active Household Connections	91%	89%	87%	88%	88%	89%	99%

Table 34: Annual Trend of PSPs/Kiosks for the Period 2017/18 - 2021/22

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New PSPs/Kiosks	3,342	3,550	4,429	3,793	2,141	3,600	59%
Total PSPs/Kiosks	12,305	17,186	21,615	25,393	28,858	27,215	106%
Active PSPs	83%	88%	88%	85%	82%	95%	86%

e) Safe Water Supply Master plan Developed

The safe Water Supply improvement plans inclusive of Enhancement of the Monitoring and Evaluation, Commercial services, Visibility in the 6 Regions, Covid-19 Response plans for Small Towns and Large Towns are part of the Safe Water Supply Master Plans. This output was planned for the reporting period however some preliminary plans have been affected. Plans for establishment of the Robust M&E System to which TOR were developed. Commercial Services interventions has already for which the look out of the status in the 6 Regions has been established. COVID-19 Response plans development is underway. Although the Master Plan has not yet been completed, the Prefeasibility and the feasibility studies to this have been implemented and completed. At the Pre-feasibility levels of the Master Plan, the Inspection, Supervision, Monitoring, and Evaluation were identified as key factors to consider during the development of the Masterplan.

Number of Household Sanitation enforcement and community follow up campaigns conducted including sensitizations for capacity improvement of water and sanitation committees

The performance target on the indicator was planned at 4No. Campaigns during the reporting period. The Water and Sanitation Committees are established to support the implementation of the piped water supply and sanitation systems. The UWSSD through respective projects has implemented and this has been implemented the piped water supply and sanitation systems in the constructed 16No. Systems considered for capacity improvement of the water and sanitation committees.

Social behaviour change communication for construction and use of improved sanitation facilities in urban areas

The communication for construction and uses of improved sanitation facilities in urban areas was conducted across the Country by the WSDFs, Umbrellas of Water and Sanitation and the MWE Mainstream project interventions. These were conducted through trainings, radio and TV talk shows, Sanitation mobilization campaigns, community mobilization and sensitization campaigns. The campaigns were conducted in 129 Rural growth centres indication a performance of 59.2% of the 218 Urban centres targeted. The variance was as a result of the Covid-19 pandemic where few staff would go to the regions for the activities, and this was conducted scientifically. The activity was implemented in both implementation and design areas.

Construction of Feacal Sludge Management process, transport and appropriate sewerage infrastructure in small towns.

The Small Towns Water and Sanitation sub sector has constructed FSM in the small towns of Kamuli, Dzaipi, Nakasongola to completion and designed the FSM facilities in the towns of Wobulenzi, Kiira Municipality, Kigumba TC, Kanungu, Kyazanga, Namutumba, Kapchorwa, Patongo, Moyo and Nebbi to serve the Rural Growth Centres / Small Towns of Nakapirpiirit, Buliisa, Wobulenzi, Luwero, Bombo, Semuto, Zirobwe, Busiika, Bamunanika, Kiwoko, Kira, Kasangatti, Namugongo, Seeta, Kyaliwajala, Nebbi, Paidha, Pakwach, Moyo, Laropi, Lefori, Arra / Dufile, Kalongo, Pader, Patongo. The Feacal Sludge Management Facilities have been designed to completion.

Delays in completion of the designs was caused respective required resources including land, political back up and the flow of cash as well as the COVID-19 pandemic which affected the recruited consultant to move on with the tasks during the lock down period. In addition, the existing potential for reuse is not adequately explored to maximize the related economic benefits. Several initiatives on FS reuse exist but are not coordinated to derive synergies and draw lessons to improve performance. Reuse benefits can contribute to part recovery of operation and maintenance costs, and creation of job opportunities to improve livelihoods, particularly for the urban poor. A systematic and coordinated assessment of FS reuse market potential, together with development of strategies for

promotion, marketing and sales would provide the opportunity to maximize related economic benefits.

To ensure sustainable delivery of infrastructure and services along the entire sanitation value chain (containment, collection, treatment and reuse), it is necessary that each link along the chain be developed based on appropriate business models, supported by relevant and effective regulation and institutions. Given a supportive environment, and based on experience in Kampala, this is likely to attract private sector participation and financing to accelerate delivery along the chain, once the business models are demonstrable and can result in achieving some margin of profit.

At the request of the Government of Uganda, the African Water Facility has provided funding support for consultancy services to undertake stakeholder consultations and prepare feasibility studies, detailed designs and investment plans for faecal sludge management in un-sewered urban centres in Uganda. The results of the studies and designs will inform stakeholders and development partners on the investments required and will help mobilize resources to finance related infrastructure and services. The Towns under design are as Shown in the Table 35.

Table 35:Feasibility studies and detailed designs for faecal Sludge Treatment Plants (FSTPs)

Town/Proposed location of FSTP	Cluster Towns to be served	Region	Status
Wobulenzi	Wobulenzi, Luwero, Bombo, Semuto Zirobwe, Busiika, Bamunanika, Kiwoko	Central	Designs completed
Kiira Municipality	Kira, Kasangatti, Namugongo, Seeta, Kyaliwajala		Designs Completed
Kigumba TC	Kigumba, Bweyale, Kiryandongo, Katulikire		Designs Completed
Kanungu	Kanungu, Kihiihi, Katete, Kambuga, Butogota	South West	Designs Completed
Kyazanga	Kyazanga, Kinoni, Mbirizi Lyantonde		Designs Completed
NamutumbaNamutumba	Namutumba, Kaliro, Bugiri, Idudi, Namungalwe		Designs Completed
Kapchorwa	Kapchorwa, Sipi, Binyiny		Designs Completed
Patongo	Kalongo, Pader, Patongo	North	Designs Completed
Moyo	Moyo, Laropi, Lefori, Arra / Dufile		Designs Completed
Nebbi	Nebbi, Paidha, Pakwach		Designs Completed

Construction, Development, Improvement of Sewerage infrastructure, support to transport equipment and transfer stations in large towns

The entire interventional performance requires a bigger consideration of New FSM treatment plants, upgrading of wastewater treatment plants, provision of emptier and small trucks, development of transfer stations, and construction of public toilets. These were not planned for during the reporting period. Nevertheless, some little work was done to these areas of contribution.

New Faecal Sludge Treatment Plants

The NWSC under the Human Capital Development planned to undertake construction of 2No. Faecal Sludge Management Facilities across the NWSC jurisdiction. During the FY 2021/22, the Corporation completed the construction of the Nakivubo Wastewater Treatment Plant under the Lake Victoria Protection Project (LVP II) which comprises a faecal sludge treatment system and conventional sewage treatment system. The Plant is under defect liability period (testing). In addition, the Corporation as well constructed FSM in the Localities of Dzaipi and Nakasongola.

In large towns under NWSC, the Corporation operates centralized sewage treatment systems in 17 towns out of 262. These include Kampala, Jinja, Entebbe, Masaka, Iganga, Tororo, Mbale, Soroti, Lira, Gulu, Arua, Mbarara, Fort Portal, Hoima, Masindi, Kabale, and Kisoro.

NWSC also operates faecal sludge treatment facilities in 7 towns: Buwama, Bukakata, Ntungamo, Mayuge, Pallisa and Kampala (Lubigi and Bugolobi). During the FY 2021/22, the Corporation completed the construction of two wastewater treatment plants: Fort Portal Package Sewage Treatment Plant and Nakivubo Wastewater Treatment Plant.

Upgrade Wastewater Treatment Plants

The Corporation undertook a number of capital projects aimed at improving sanitation in the various Areas. Key among the Projects undertaken include.

a) Completed Projects as of June 2022

i. **Fort Portal Package Sewage Treatment Plant:** The Project was aimed at addressing wastewater disposal challenges in the town Fort Portal. The key milestone was the design and installation of a Package Sewage Treatment Plant (300m^3/day).
ii. **Kampala Sanitation Project (LVP II):** The Project is aimed at improvement of the sewerage and sanitation situation in Kampala and the surrounding Areas. The key milestones included construction of Nakivubo Wastewater Treatment Plant at Bugolobi (45,000m^3/day), Kinawataka Pre-treatment and Pumping Station, and construction of Pumping Mains from Kinawataka Sewerage System to Nakivubo Sewerage System.

Emptier and Small trucks: The National Water and Sewerage Corporation planned to procure 5No. Emptier trucks and 10No. small Trucks. The Corporation has provided 9No. cesspool emptiers and 2No. small truck, which are mainly used for servicing the Corporation's sewerage wastewater treatment ponds to ensure continuous maintenance of the ponds. The Corporation has 9 emptier trucks, which are mainly used for servicing the Corporation's sewerage wastewater treatment ponds to ensure continuous maintenance of the ponds. During the FY 2021/22, no new trucks were procured.

Construction of public toilets: The UWSSD during the reporting period planned to construct 140No. Sanitation Facilities / toilets to support the sanitation improvement **with a target of 140No. in the large towns.** As part of its Corporate Social Responsibility undertakings, the Corporation has constructed **21 new public toilets** in the FY 2021/22 in the Areas of Mpigi, Pader, Ibuje, Bushenyi and Rukungiri. The total number of Public Toilets constructed by NWSC as of June 2022 stood at **167**.

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Construction of public toilets: The UWSSD during the reporting period planned to construct 140No. Sanitation Facilities / toilets to support the sanitation improvement **with a target of 140No. in the Large towns.** As part of its Corporate Social Responsibility undertakings, the Corporation has constructed **21 new public toilets** in the FY 2021/22 in the Areas of Mpigi, Pader, Ibuje, Bushenyi and Rukungiri. The total number of Public Toilets constructed by NWSC as of June 2022 stood at **167**. (See table 36 for details)

*Table 36: **Status of Public Toilets Constructed as of June 2022***

Region / Area	2017/18	2018/19	2019/20	202/21	2021/22	Target 2021/22	Target Perf.
New Public Toilets Constructed	0	0	0	5	11	140	8%
Total Number of Public Toilets Constructed	141	141	141	146	167	281	59%

Sewerage Pipe Network (Km Laid): The NWSC during the reporting period under the HCD in the Ministry of Water and Environment planned to make 30 kms of sewerage network**.** During the FY 2021/22, -36 **Km** of new water mains were laid, representing 120**%** of the HCDP target of **30 Km.** The total sewer pipe network as of June 2022 stood at **744 kms**. The total sewer pipe network grew by 99%.

Table 37: *Annual Trend of Sewer Mains for the FY 2017/18 TO 2021/22 (Km)*

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New Sewer Mains Extensions	24	59	30	23	36	30	120%
Total Sewer Pipe Network	602	661	693	715	744	753	99%
Growth in Total Pipe Network	4%	10%	5%	3%	4%	5%	75%

Connection of new sewer customers to increase access to Sewerage Services (New sewer connections) The NWSC planned to connect 300 New Sewerage Connections across the Country.

During the FY 2021/22, the Corporation connected 575 contributing at 192% performance. New customers to the sewer network, representing 114% HCDP target of 300 connections.

Table 38: Status of Sewer Connections as of June 2022

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22	Target 2021/22	Target Perf.
New Sewer Connections	272	368	277	214	575	300	192%
Total Sewer Connections	21,616	22,606	23,914	25,180	28,007	24,514	114%
Active Sewer Connections	89%	90%	89%	89%	89%	89%	100%

Percentage of population with hand washing facilities with soap and water at home in Urban Areas

Social behaviour change communication for use of hand washing with soap and water investment in public hand washing facilities in urban areas.

The intervention target of 218 urban centres was achieved by 132.2% where local sensitization campaigns, local radio talk shows, small social distanced meeting at parish levels were conducted. The original plans had been village to village sensitization campaigns which were achieved after lifting the face – face contract which was in place due to COVID-19. This only enabled the implementation to reach 288 Urban Centres.

Access to improved Sanitation Facilities

Construction of public toilets during the FY 2020/21 to improve access to improved sanitation and hygiene in the Towns is summarized as shown in table 39.

Table 39: Construction of toilets in public places

Planned	Achieved	Implementing Agency	Remarks
5 gender segregated institutional lined VIP latrines in Kazo cluster, Karago TC, Lwemiyaga RGC, Bigando RGC, Nyakatonzi RGC	**Kazo cluster at design stage under WSSP III land is identified and in acquisition process.** **Construction in Bigando and Nyakatonzi RGCs is complete WHILE in Lwemiyaga RGC construction is at 98% completion**	**WSDF–Southwest**	**All the institutional toilets are 05 stance each and are gender segregated** **Construction of institutional/public sanitary toilet facilities in Karago TC is planned for in phase 2**
Develop 3 Town Sanitation Plans for Nyakashaka TC, Nabigasa TC and Kabura-Mwizi TC	**Town Sanitation Plans for Nyakashaka, Nabigasa and Kabura-Mwizi towns to be developed**		**Development of the Town Sanitation Plans scheduled for FY 2021/2022**
Eight stance water borne public toilets in the urban councils of Tirinyi, Luuka, Nakapipirit, Suan, Kibuku, Buwuni, Bulambuli and Kachumbala	**1 public toilet in Bulangira completed**	**WSDF-East**	**All the institutional toilets are 8-stance each and are gender segregated.**

Other Initiatives and projects to improve sanitation and hygiene

The Ministry of Water and Environment through WSDF Southwest and Central Umbrella of Water and Sanitation constructed Kasali FSTP to address the sanitation challenge of sewerage and Central Umbrella of Water and Sanitation currently manage it. The FSTP has been in operation since January 2019 to date and the facility serves Kyotera District and the nearby areas of Lyantonde, Rakai and Masaka Districts. Kasali FSTP receives atleast 10 trips per a month. Kyotera town being one of the beneficially district to desludge its feacal waste to Kasali FSTP, the percentage of emptiable toilet facilities is still low (VIP toilets, lined pits, septic tanks) since the town is characterized with traditional pit latrines.

With the intense awareness creation on safely managed for the population served, there is has been a significant change in peoples' behaviour and this has greatly reduced on unsafe disposal of waste in the open drainage channels and the wetlands and communities have been informed that waste can be collected using cesspool emptier trucks since most of the building plans are only approved by the districts only if a structure to be erected has a lined VIP and a water borne toilet facility in place.

Kasali FSTP team have engaged Kyotera district sanitation committee, Health Inspectors and all the different sub counties and town councils, some community-based organizations, development partners among others in the different meetings to ensure that faecal waste is safely managed and ensure that sanitation marketing done at different levels of community engagements. However, key issues tackled include how best they can improve water and sanitation issues in the district.

Different initiatives like marketing, Central umbrella for Water and Sanitation is working together with (USHA) Uganda sanitation for health Activity-Masaka office to market Kasali FSTP facility in areas with in Kyotera district and the surrounding areas so as to improve the sanitation status in Kyotera. The main objective is to create an environment free from feacal matter considering the health and safety of feacal sludge entrepreneurs (FSMEs) and this is done through use of vouchers and stickers that are distributed throughout the communities.

Sales agents initiative under this, sales agents were selected from the existing VHTs and trained by USHA to do marketing and they are paid on commission basis. For every job they get they are entitled to 5% of the total pay for that particular job and they are motivated to market further and get clients. In addition to sales agents Kasali FSTP operator works with blockers most especially people that do plumbing work and they provide leads at times and they are paid accordingly depending on the number of trips got from that particular client brought on board.

Liaising with health inspectors from sub counties and town councils that do regular inspection in people's homes, businesses, and hotels there by identifying those in need of emptying sewage and compelling them to do so while giving those particular people our contacts so as to get the sewage emptying service. Radio programmes and announcements. This was funded by USHA and through it people got to know about the facility some called for the service whereas others promised to call when their toilets are due for emptying.

Government initiative of construction of lined ventilated improved pit latrines in schools and health facilities has also helped in widening our customer base. Most of it all Kasali FSTP has a Marketing Officer employed by Cuws that is also responsible for marketing and sensitizing the community about Kasali FSTP facility and benefits of emptying their toilets and also guides communities in constructing emptiable toilets.

The Kyotera Town Council Authorities has also ensured that they only approve plan having emptiable toilet facilities like septic tanks and this has greatly helped in increasing the number of emptiable

toilet facilities since this was passed by Government of Uganda in 2020 Kasali FSTP expects to even perform better in the coming years.

Industrial Parks with safe water supply and sewerage services

Water Supply systems Developed / Expansion targeting industrial parks **Large Towns**

Table 40: New Water Mains Extension (kms) laid in the Industrial and Business Parks

Industrial and Business Park	2019/2020	2020/2021	2021/2022	Total
Kampala Industrial and Business Park	0	21	0	21.0
Kapeeka Industrial Park	0	0	6	6.0
Kasese Industrial Park	0	4.2	2	
Jinja Industrial Park	1.4	4.9	3.4	14.8
Nshaara (Lyantonde) Industrial Park	3.0	3.0	4	10.0
Soroti Industrial Park	0	4.0	6	2.4
Tororo Industrial Park	0	4.0	7	11.0
Kabale	0	0	4.8	4.8
TOTAL			33.2	

Small Towns Water Supply

UIA has extended 33.2km line of water to the investors who were ready to commence such as Roofing, Steel and Tube, Coca Cola and others. The coverage is approximately 10% of the park. However, UIA is closely working with NW&SC and a project is underway to connect and upgrade the existing network to 30km (67%) to boost water efficiency at the park. Kabale, Mbale Industrial park and Kasese industrial parks were connected with Safe and clean water through NWSC interventions in the industrial parks.

Projected Trends

Currently a consultant was procured to undertake the feasibility studies for the Kapeeka, Kabale industrial Park. The Feasibility studies was completed and the Consultant embarked on the Engineering Detailed Design for the Sewerage infrastructure including the Wastewater management strategy.

Specific Objectives

i) To develop the detailed Engineering Designs and the Engineer's estimates ii) Undertake the ESIA

iii) Prepare technical Documentation

iv) Undertake Construction Supervision for the Proposed Sewerage System

v) Plan for the enhancement and hybrid of the Water Supply System including both the industrial Park and the Communities within and around the industrial park.

There are 23 industrial parks in Uganda where piped Water Supply and Sewerage networks have been planned for institution and construction. 17.4% piped Water Supply and Sanitation Systems have been constructed and are operational. 82.6% are under plan for construction. Immediate industrial park water and sanitation systems ready for construction is Kabale Industrial Park which should commence by June 2022. The national Industrial park locations include Kapeeka, Namanve, Luzira, Bweyogere, Kasese, Nakasongola, Buliisa, Gulu, Lira, Arua, Soroti, Moroto, Mbale, Tororo, Iganga, Jinja, Masaka, Luwero, Mbarara, Bushenyi, Kabale, Kabalore/Fortportal, Rakai, Mubende, Hoima, Nakaseke, Kyankwanzi, Rubirizi, Pakwatch, Kamuli. Mbale, Kasese, Kabale, Nakaseke have been supplied with Water Supply although the Piped Water Supply systems are temporary to bridge the water service need.

Sewerage / wastewater treatment systems developed / expansions targeting industrial parks Sewerage Services for the Industrial Parks in Large Towns

Uganda Investment Authority has established four (4) Regional Science and Technology Industrial Parks, and Fourteen (14) Industrial parks/ Business parks out of the 23 Industrial/ Business Parks it was tasked to establish across the country by 2022. The established Industrial Parks are at different stages of development and NWSC works closely with the Uganda Investment Authority (UIA), to ensure reliable water supply in the fourteen (14) established Industrial and Business Parks. These include Kampala, Bweyogerere, Luzira, MMP – Buikwe, Kapeeka, Jinja, Kasese, Kabarole, Nshaara (Lyantonde), Mbarara, Soroti, Tororo, Mbale and Karamonja.

NWSC has established water supply systems for nine (9) of the well-developed industrial parks and various businesses have been connected to the Water System. Nshaara, Karamoja, KabaroleMMP - Buikwe and Mbale Industrial and Business Parks are still under development and NWSC will continue working closely with UIA to ensure these parks are supplied with water. Some of the key initiatives undertaken in the FY2021/22 include:

- Expansion of the Water Pipe Network by 12.6 Km (refer to table 41).
- Implementation of Capital Projects and Water Supply Stabilization Plans (WSSPs) in various Areas to boost water supply. Key among the Projects include Katosi Water Treatment Plant, Kapeeka Water Supply Project, FortPortal Water Production Improvement Project and SCAP 100 among others. Other Projects that are underway include the Integrated Water Management and Development Project – Mbale, Lyantonde Water supply Project, Soroti water Supply project, Tororo Water Supply Project and Moroto Water Supply Project.

Not all the UIA Industrial Parks except Mbale Industrial Park fall outside the NWSC sewerage coverage area and as such are being served by NWSC. The wastewater treatment facilities of NWSC are designed to receive municipal waste and therefore connection of industrial waste cannot be done. The respective industries are required to carry out wastewater pre-treatment.

Sewerage System Development

An area of 20.68square kilometers of catchment area will naturally drain to the industrial park sewerage system. A sewer alignment of CBR of 2% to 14%, 5% to 90% and wastewater treatment plant area of CBR2% to 9% is part of the project.

Table 41: New Water Mains Extensions (Km) laid in the Industrial and Business Parks

#	Industrial and Business Park	Water Mains Extensions Implemented				Projects Connected to NWSC
		2019/20	2020/21	2021/22	Total	
1	Kampala	21.00	0.00	0.00	21.00	233
2	Bweyogerere	0.00	0.00	0.00	0.00	6
3	Luzira	0.00	0.00	0.00	0.00	11
4	MMP - Buikwe	0.00	0.00	0.00	0.00	0
5	Kapeeka	7.80	0.70	1.30	9.80	15
6	Jinja	4.00	6.00	0.00	10.00	1
7	Kasese	3.00	4.50	0.00	7.50	2
8	Kabarole	0.00	0.00	0.00	0.00	0
9	Nshaara (Lyantonde)	3.00	7.00	8.40	18.40	0
10	Mbarara	0.00	0.00	0.00	0.00	38
11	Soroti	2.40	0.00	2.40	4.80	11

#	Industrial and Business Park	Water Mains Extensions Implemented				Projects Connected to NWSC
		2019/20	2020/21	2021/22	Total	
12	Tororo	6.00	5.00	0.50	11.50	2
13	Mbale	0.00	0.00	0.00	0.00	0
14	Karamonja	0.00	0.00	0.00	0.00	0
Total		**47.20**	**23.20**	**12.60**	**83.00**	**319**

Sewerage Services for the Industrial Parks

All the UIA Industrial Parks except Mbale Industrial Park fall outside the NWSC sewerage coverage area, and as such are not being served by NWSC. The wastewater treatment facilities of NWSC are designed to receive municipal waste and therefore connection of industrial waste cannot be done. The respective industries are required to carry out wastewater pre-treatment.

Water Quality Monitoring samples taken that comply with national standards and catchment and water source protection sites constructed

Drinking Water Quality

The Water Drinking water quality was being monitored at a quarterly basis by the 6 Umbrellas of Water and Sanitation across the Country. This is monitored through a sampling technique and the selection and collection of the samples makes sure that all piped Water Supply and Sanitation Systems managed by the 6 Umbrellas are visited and samples picked / collected. Samples are collected from respective water supply systems at the source, at the tank, at collection points and then tested. During the Reporting period 95.1% of the Samples tested passed the National Standards compared to the 94% during the previous financial year 2020/2021. The performance for the reporting period was dependent on the facts that; respective Umbrellas of Water and Sanitation were conducting decentralized Water Quality Monitoring, testing and increased feedback of the results.

Table 42: Performance of the Water Quality Monitoring in small Towns

Year	%age of samples complying with National Standards (%)
2022	95.1
2021	94
2020	96
2019	89

Water quality monitoring samples in Large towns

The Corporation continuously monitors water samples collected from the Areas to ensure compliance to the required standards. During the FY 2021/22, the Corporation collected 130,829No. samples, which was over and above the HCDP target of **5000 samples**. 99.9**%**of the water samples collected complied with the National Standards for the Bacteriological quality of potable water of 100%, exceeding the WHO standard of 99.9% compliance compared to **97%** compliance of the previous reporting period. On Average, the overall compliance of both the physio-chemical (color, turbidity, chlorine residual, pH, Alkalinity, Hardness, Electrical conductivity) and bacteriological parameters was 100**%** and Large towns and overall, 98% compliance for both small towns and large towns.

Table 43:Annual Trend of Water Quality Performance for the FY 2017/18 to 2021/22

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22		
					Actual	Target	% Achieved
Samples Tested Annually	81464	94484	117,627	108,438	130,829	60,000	218%
Monthly Average of Samples Tested	6,789	7,874	9,802	9,037	10,902	5,000	218%
NDP III target	Nil	Nil	Nil	5,000	5,000	5,000	100%
Target Achievement	-	-	-	181%	218%	100%	218%
% of water samples taken that comply with national standards	99.3%	98%	99.8%	99.8%	99.8%	99.9%	100%
Average Performance to physio-chemical and bacteriological parameters	98%	96.7%	98%	98%	98%	98%	100%

Table 44: Average Performance to Physio-chemical and Bacteriological parameters

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22
Bacteriological Quality (%)	99	100	100	100	100
Colour (%)	87	84	88	87	86
Turbidity (%)	97	96	97	98	97
Chlorine residual (%)	97	95	98	99	99
pH (%)	100	100	100	100	99
Electrical Conductivity (%)	100	100	100	100	100
Alkalinity Total (%)	100	100	100	100	100
Hardness Total (%)	100	100	100	100	100
Average (%)	**98**	**97**	**98**	**98**	**98**

Catchment and water source protection measures in rural and urban areas

A target of 127No. Catchment and water source protection measure were targeted for the reporting period. The reporting period performance was achieved at 8No. catchment and water source protection measures. The performance was dependent on the fact that deeper mobilization was in support of the intervention.

Water supply systems installed with Solar Energy–target 22 Systems

The Constructed Piped Water Supply and Sanitation Systems that are ongoing in Nyakatonzi in Kasese are some of the on-going systems that have been connected to Solar Packages. The Piped Water Supply and Sanitation system in the settlements of Morulem, Namalu, Kyampisi, Namulanda, Kangulumira, Nazigo, Bigando.

Catchment and water source protection measures in urban areas in large towns

There is a strong connection between our business and the environment. The water we supply comes from the environment and the sewage we treat is discharged into the environment. The impact of climate change has presented enormous challenges to the Corporation. Some of the water sources are drying up due to prolonged droughts and encroachment on the catchment areas. The Corporation is therefore making every effort to ensure that it runs its business in a way that takes environmental concerns seriously. Key Among the undertakings implemented during the FY 2021/22 to protect the Environment include:

Environmental Protection Programmes such as One Million Tree Campaign and Tree volution under which 1,100,000 and 795,300 were planted respectively in partnership with National Forestry Authority (NFA), Uganda People's Defense Force (UPDF), School Water and Sanitation Clubs (SWAS), Young Water Professionals (YWPs) Uganda Chapter and the Ministry of Water and Environment (MWE). The Corporation's target is to plant 10,000,000 trees upon successful completion of the Programme.

Sensitization Programmes such as the School Water and Sanitation Clubs under which School going children were sensitized about the value of the environment and hygiene, and its impact on water for the current and future generations. This is implemented through drama, skits, poems and quizzes among others.

As a futuristic aspect, the Corporation is incorporating catchment protection as a component under its Projects. This was implemented under some of the implemented projects including the WMDP Projects of Arua and Bushenyi.

Institutions with an improved water source

Construction / extension of water supply infrastructure targeting institutions (Schools, Prisons, Barracks, Religious institutions, health facilities, roadside sanitation.

The UWSSD under the Human Capital Development planned to make interventions towards improved Water Sources in institutions. The Planned target of the output was 60No. Institutions including schools, barracks, health centres, religious institutions, roadside sanitation facilities. The reporting performance was achieved at 36No. institution indication a percentage performance of 60%. Intervention, 36No. Institutional facilities were constructed within the 16 Small Towns.

Table 45: WASH facilities provided to institutions

Institution	No. of facilities	%age achievements	No. of facilities	%age achievements
	2020/2021		2021/2022	
Schools	12	52.2	24	**66.6**
Health Centres	4	17.4	6	**16.7**
Prisons	1	4.3	0	**0**
Religious	**6**	**26.1**	**6**	**16.7**

Pupils enrolled in schools provided with basic Sanitation and Hand washing facilities

Social behavior change communication for use of sanitation facilities and hand washing with water in schools

The implementation of the piped water supply and sanitation system was trying to increase on the school Children enrolment and retaining. This was being affected through sensitization and communication about use of sanitation facilities and hand washing facilities in schools. During the implementation of the piped water supply and sanitation systems in the reporting period, more than 288 Sensitization campaigns were conducted in the 16 RGCs for purposes of sanitation and hand washing facilities usage. These campaigns were being operationalized through small / few membership meetings at church schools. These meetings were being organized through churches and mosques.

Regulation Campaigns conducted for Sanitation standards Inspection and recommendations on the sanitation standards

This is a mandate for the regulation department of the Ministry of Water and Environment. The Water Utility Regulation Department (WURD) during the reporting period conducted 10 Regulation

campaigns across the country. These campaigns targeted both NWSC and Umbrellas of Water and Sanitation in the 6 Regions. Key amongst other outcomes included.

Sanitation master plans developed

This intervention is a major plan for the programme however it was not part of the interventions for the period under reporting. Nevertheless, some preparation for the next year intervention was made. The pre-feasibility for the Wakiso Sanitation Master Plans was done through a recruited consultant.

Increased households' use of safe water

Sensitization, monitoring and evaluation for water usage and hand washing practices at household level

The department through the Ministry of Water and Environmental Planning Department planned to develop a software tool / system through which sanitation monitoring and evaluation for water usage and hand washing practices would be implemented. An M&E System to foster this is under procurement and thus development. The system will be used for the Sensitization, Monitoring and Evaluation starting next financial year. On estimate, a total population served under small towns was 379,466No. People with an average of 6People per household indicates that 63,245No. Households were served approximately

Per capita Investment Cost in Small Towns

The Department having invested a total of 34.707 Billion Uganda Shillings, the Average Per Capita investment of the 16 Completed Towns was realized at 41USD compared to the previous year of 46.99USD. The highest per capita invest cost was for Dokollo Water Supply and Sanitation System because of the System being a surface Source System. The Lowest Per Capita investment cost was realized with Nazigo, Kassanda and Kangulumira Piped Water Supply and Sanitation Systems.

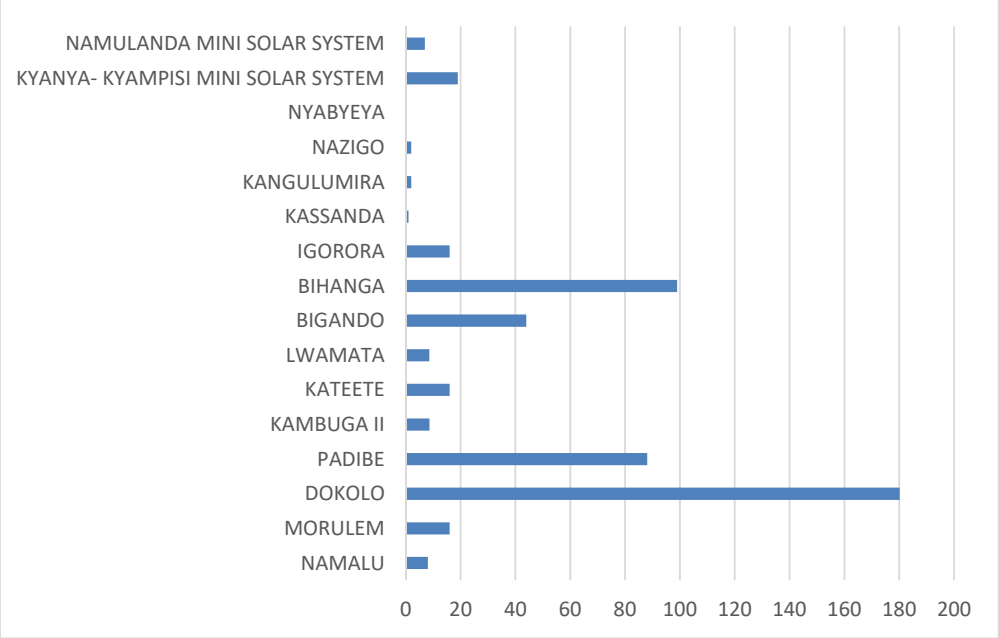


Figure 24: Per capita investment cost per town

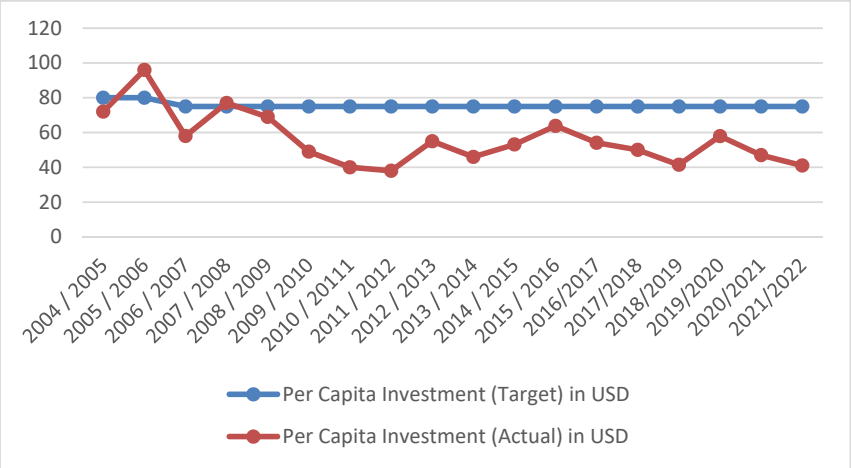


Figure 25: Trend of Per Capita Investment Cost from 2005 2022

NWSC Tariff Structure

The NWSC implements a uniform tariff policy with a cross subsidy across all towns and consumer categories. The tariff structure comprises of five categories with variable tariff rates. Public stand posts are charged the lowest tariff of Ushs.25 per 20-liter Jerry can. The PSP tariff is subsidized to ensure affordability for the urban poor. The sewer tariff is based on water consumption. Domestic consumers are charged 75% of their water consumption. Other category of consumers (Institutions and Commercial) are charged 100% of their water consumption. The same tariff structure applies to all service areas under NWSC jurisdiction for purposes of ensuring equity in pricing and accessibility to water and sewerage services.

Table 46: NWSC Tariff Structure as of June 2022 (VAT Exclusive)

Customer Category	Water tariff (Ushs./m^3)	Tariff per 20Liter Jerry can (Ushs./m^3)	Sewerage Tariff (Ushs./m^3)
Public Standpipe	1,060	25	n/a**
Domestic	3,516	83	2.637
Institutions / Government	3,558	84	3,558
Commercial < 500m^3/m	4,220	99	4,220
Commercial > 1500m^3/m	3,373	79	3,373
Industrial < 1000m^3	4,220	99	4,220
Industrial > 1000m^{3Z}	2,500	59	2,500
Average Commercial	3,938	92	3,938
****** n/a: The Corporation does not charge sewer tariff on the Public Stand Posts, save for institutionalized PSPs and are connected to the Sewer.***			

Non-Revenue Water in Small Towns

The performance of the NRW under small towns was realized at 30% compared to the 31% of the previous year and the 30.7% standard. The performance was improved compared to the previous year performance due to the sophisticated tools and approached for NRW monitoring in the piped water supply and sanitation systems of the 6 Regional Umbrellas of Water and Sanitation.

Table 47: NRW Performance compared with Functionality 2019-2022

Year	NRW (%)
2022	30.0
2021	31.0
2020	30.7
2019	33.4

Customer Satisfaction in Large Towns

Customer Satisfaction Index (CSI) is an average of all the various attributes of NWSC services that are believed to contribute to customer satisfaction. These include water supply reliability, water quality, timely and accurate water bills, responsiveness in resolving complaints, responsiveness in effecting new connections, customer care, convenience of bill payment process, and office ambience.

The Government of Uganda (GoU) adopted the Uganda Vision 2040; and has committed to improve the socio-economic status of Ugandans through key interventions like improved delivery of water and sanitation services. Recent Government efforts to promote delivery of household and public sanitation facilities, coupled with behaviour change campaigns has resulted in increased access to sanitation in urban areas. Over 90 percent of the existing sanitation facilities are on-site and lack safe means of faecal sludge chain management (emptying, transportation, and disposal or re-use). The situation is exacerbated by the steady population growth due to increasing rate of urbanization.

Performance of the Small Towns / Umbrella of Water and Sanitation (2020-2021)

The 6 Umbrella for Water and Sanitation Authorities (UWA) had a total of 498 gazetted Water and Sanitation Systems. 299 schemes had been taken over by UWA for management and 298 were technically supported by UWA. Excluding Piped Water and Sewerage / Sanitation Systems managed / operated by NWSC, there are 1,085 Piped Water Supply and Sanitation Systems in Small Towns and Rural Growth Centres in the country. Umbrellas of Water and Sanitation were offering 64 Employment opportunities at the 6 Umbrellas secretariats with MWE Contracts. There were 2,342 Employees in the respective Piped Water Supply and Sanitation Schemes. The 6 Umbrellas of Water and Sanitation are currently operating in 133 Districts serving a total population of 4,427,105. Between the year 2006 and 2022 the Umbrella for Water and Sanitation Authorities were operating in 430 Villages.

Table 48: Umbrella Tariff

	Pumping/Grid		Solar		GFS		Poor communities	
Umbrella	Domestic/m^3	Cost/ Jerrycan	Domestic/m^3	PSP/ Jerrycan	Domestic/m^3	Cost / Jerrycan	Domestic/m^3	Cost / Jerrycan
Tariff	2,950	59	2,500	50	2,118	42.4	848	17

Table 49: Performance Scheme under Umbrellas

Indicator	swUws	mwUws	cUws	nUws	eUws	kUws	Total
% of all registered schemes that are fully functional (adequate water quantity and quality)	92%	84%	90%	82%	83%	65%	83%
% of schemes breaking-even (having an operational cost coverage ration>1)	81%	59%	89%	62%	75%	57%	71%

Table 50: Pipeline Network Intensification and metering–Umbrellas

Indicator	swUws	mwUws	cUws	nUws	eUws	kUws	Total
Total Length of pipe network (kms)	1,428	1,514	2,989	1,435	2,134	726	10,226
Total Length of pipe network extensions added (kms)–FY 2021-22	128	115	129	86	87	86	631

Total Number of metered connections- all schemes schemes	9,024	18,544	27,941	13,486	17,149	3,950	90,094
Total number of added metered connections (all schemes) added FY 2021-22	2,391	1,367	1,622	2,706	1,820	778	10,684

Table 51:Water Supply by Umbrellas

Indicator	swUws	mwUws	cUws	nUws	eUws	kUws	Total
Total Amount of Water Produced (Monthly)	89,962	168,643	287,763	125,145	128,711	27,627	827,850
Number of days with water supply at full capacity in a month	26	28	25	28	28	21	26
Average hours of water supply per day	22hrs	18hrs	16hrs	20hrs	22hrs	12hrs	18hrs
% of NRW in FY	29%	31%	28%	26%	28%	29%	30%

Table 52: Commercial performance of Umbrellas

Indicator	swUws	mwUws	cUws	nUws	eUws	kUws	Total
Total Number of Active Connections	9,014	14,605	26,803	11,756	15,910	2,983	81,071
Total Volume of Water Billed–Monthly (m3)	63,589	114,570	205,749	87,427	89,072	18,905	579,312
Billing Efficiency (%)	100	96	99	100	100	100	99
Collection Efficiency (%)	89	92	99	93	91	73	90

Table 53: Additional Performance Parameters for Annual Performance Progress

	swUws	mwUws	cUws	nUws	eUws	kUws	Total
Rehabilitations / Extensions in small Towns							
No. of Towns Rehabilitated/Extended/Repaired	37	36	58	61	34	22	248
No. of additional Yard Tap Connections constructed	2,391	1,367	1,622	2,702	1,820	778	10,680
No. of Additional PSPs constructed	182	41	33	497	0	3	756
No. of additional Kilometers installed	128	115	129	86	87	86	631
Population of People Served							
Total Population served	534,557	680,000	1,259,660	987,640	685,248	280,000	4,427,105
No. of additional population served	53,890	47,588	48,623	121,140	8184	11,642	291,067
Additional Villages Served	39	144	38	146	24	39	430
No. of additional Institutions with improved Water Source in FY	33	11	77	37	47	34	239
Water Quality Monitoring							
Total No. of Samples Collected	318	2,326	659	282	315	227	4,127
% Samples that conform to the National standards (%)	94.4	93.5	97.1	96.4	94.7	94.4	95.1
No. of FSM Managed by the UWA							
No. of FSM Managed	1	0	4	3	0	0	8
Capacity of Fecal Emptied/ collected (m^3)	0.6	0	4.6	1.2	0	0	6.4
Non-Revenue Water							
NRW (%)	29	31	28	31	29	30	30
Functionality of Piped Water Supply systems							
Functionality (%)	92	84	90	82	83	65	83
Employment Opportunities Created							
No. of Employment Opportunities offered	294	233	808	546	392	70	2,342

Other Outcomes:

- 21 Business enterprises were started in Dokolo because of construction and installation of the Piped Water Supply and Sanitation system in the Town council. These are soap making, environmental saving approaches / enterprises, and skills development for both Youths and Women.

Challenges

(i) Over escalating prices of all construction materials, compensation costs for land where facilities are constructed, and the absentee landlords cause delay of works.

(ii) Insufficient counterpart financing and delayed release of funds by Government is a major constraint to timely payment of contractors'/service providers. In addition, the available financial resources are not adequate for expansion of the water and sewerage systems to match the growing population needs.

(iii) Delayed approvals by the DPs in form of "No Objection" is one of the major challenges that has affected timely delivery of project outputs.

(iv) Climate change and variability affecting the reliability of water sources in meeting the ever-growing demand especially during long dry seasons.

(v) Vandalism and adulteration of NWSC Infrastructure Assets, leading into financial loss.

Way Forward

(i) Mobilization of funding for downstream sewerage collection infrastructure for Greater Kampala, and design and implementation of low-cost appropriate sewage treatment technologies in other towns.

(ii) Financial mobilization and implementation of climate change resilient infrastructure for NWSC Towns, through mixed technology options and decentralized WSS systems.

(iii) Mobilization of financial resources for the implementation of the SCAP 100 Project (Phase II) over the next five years (2021–2026) to enable the Corporation to achieve 100% service coverage in all villages under its area.

(iv) Water Supply and Sanitation Services to the Industrial Parks; NWSC with support from UIA and other partners will continue developing the required infrastructure to ensure adequate water supply and sanitation services to foster industrial growth.

(v) Conduct an overall baseline survey for establishment of details on served and unserved Small Towns and Rural Centres including growing trading Centres.

7.1.3 WATER UTILITY REGULATION

7.1.3.1 Introduction

Regulation of water supply and sanitation services are needed to balance the commercial objective of efficient & sustainable service provision with the social aim of accessible & affordable water supply and sanitation services. The regulatory framework is by Performance Contract (PC) between the Minister, Ministry of Water and Environment (MWE) and the respective appointed Water and Sewerage Authorities. The Water Utility Regulation Department is responsible for regulating water supply and sanitation service provision in the sector. The major tasks among others include contracting/licensing, tariff approval, technical quality assurance, consumer protection and arbitration. Currently, the scope of Water Utility Regulation Department includes Urban and Rural piped water supply systems including regulation of sanitation services as well as Water for Production.

The Water Utility Regulation Department contributes to the Human Capital Development Program through.

a) Increase access to inclusive safe water, sanitation, and hygiene (WASH) with emphasis on increasing coverage of improved toilet facilities and hand washing practices and
b) (b) Invest in effective management of the entire WASH value chain segments such as containment, emptying, transportation, treatment, safe reuse, or disposal.

The key outputs during the FY 2021/22 include increased access to inclusive safe water supply in urban areas and Support to improved WASH services in institutions. This annual performance report is based on the following indicators.

(i) No. of people having access to pro-poor facilities (where people pay less or equal to the house connection Tariff).
(ii) No. of Regulation Water Supply Campaigns conducted for Regulatory purposes.
(iii) No. of Regulation Campaigns Conducted for Sanitation Standards.

To contribute to the above indicators, the performance assessment water authorities, Tariff approval and development of regulatory tools and instruments were undertaken. In addition, infrastructure development projects are being undertaken to address reduction in Non-Revenue Water and Sanitation regulation. The Department with support from African Development Bank is 1) Reviewing and updating the tariff policy and 2) Reviewing, updating and development regulatory tools and instruments. The detailed performance discussion is as follows.

7.1.3.2 Access to pro-poor facilities

Pro-poor water facilities are those where people pay less or equal to the household connection. To ensure access to pro-poor facilities, contracting, approval of water tariff as well as developing regulatory tools and instruments is critical. These aid in ensuring that mostly low-income areas receive affordable and quality water and sanitation services.

7.1.3.2.1 Contracting/Licensing

There are nine running Performance Contracts (PCs) with Water Authorities including PC7 for National Water and Sewerage Corporation (NWSC), PC1 for Umbrella Authority of Water and Sanitation (6 No.), PC1 for Buikwe District Local Government and a Public Private Partnership Agreement (PPP) with Kalangala Infrastructural Services limited (KIS) which includes development, operation, and maintenance of water supply in Kalangala Islands.

At the end of the reporting period, the total number of gazetted towns with operational water supply systems stood at 864. These schemes are under the various Utility management models (NWSC)-262, Umbrella Management Model-571 and Private Operator Model-31 (Buikwe-24, KIS-7) refer to table 54. Because of the need to strengthen the regulatory function, the gazetting criteria was streamlined and ready for implementation. The criteria go a long way in addressing conflicts accruing

from poorly.

Table 54 shows that overall, there has been an increase in the number of gazetted towns, number of connections, volumetric supply, annual revenue collection and population served however, non-revenue water performance declined from 33.8% in FY 2020/21 to 35%.

Table 54: Contracted Water Authorities Operating Water Supply and Sanitation Services

Water Authority	Date of expiry of PC	No. of gazetted towns (No.)	Total Connections (No.)	Water Supplied (million m^3)	NRW %	Annual Revenue collection (UGX BN)	Population served (No.)
NWSC	June 2024	262	850,000	157.86	35.4	468.84	18,225,340
Umbrella Water Authorities (6) extended for 6 additional months from June 2022	December 2022	Managing on 303 of the 571	90,094	9.72	28.5 improved from 31	13.44 declined from 14.12	4,427,105 increase from 3,427,105
KIS	June 2029	7	1,430	0.09	16.9 improved from 17.4	1.80	35,000
Buikwe district local government	December 2022	24	583	0.10	23.02 declined from 22	0.073	35,500 decline from 42,798
Overall		**864**	**942,107**	**167.75**	**35.00 declined from 33.8**	**484.3 increase from 440**	**22,722,945 increase from 14,747,448**

7.1.3.2.2 Tariff approval (pro-poor and other water tariff)

In Tariff approval process, key considerations were made to ensure financial sustainability, equity, affordability, and willingness to pay by consumers. Tariffs should accurately reflect the cost of supply to achieve efficient water production and allocation of resources and reduce the economic and financial burden of subsidies on Government. During the reporting period, applications for tariff approval from 9 gazatted Water Authorities were received, reviewed and the Minister approved, in accordance with Section 94 (4) of the Water Act, Cap 152 and the tariff policy. The approved tariffs will be valid for one year from 1st July 2022 to 30th June 2023. To balance issues of equity in service access, pro-poor tariff was approved at less or equal to the domestic connection.

The National Water and Sewerage Corporation tariff structure is governed by the ***NWSC Act, Cap 317.*** This tariff structure is uniform across all towns and service areas under its jurisdiction (large urban centers, small towns, rural growth centers and gravity flow schemes) but differentiated by customer groups. The tariffs are currently being charged in 262 urban centers managed by NWSC across the Country.

The tariff structure in other Water Authorities is governed by the ***Tariff Policy for Small Towns, Rural Growth Centres and Large Gravity Flow Schemes 2009***, and the ***Water Act, Cap 152***. Umbrella Water Authorities are currently managing water supply services in 571 gazetted areas. Buikwe District Water and Sanitation Authority is managing water supplies in 24 service areas while Kalangala Infrastructure Services is managing 7 water supply schemes on Bugala Island.

Table 55: Schedules of Approved Tariffs for Gazetted Water Authorities

WATER TARIFFS FOR GAZETTED AUTHORITIES (Exclusive of 18% VAT)

National Water and Sewerage Corporation Tariff Structure: 1st July 2022 – 30th June 2023

Category	Public Standpipes		Domestic Customer	Institution/ Gov't	Commercial <1500m³/ Month	Commercial >1500m³/Month	Industrial <1000m³/Month	Industrial >1000m³/Month
	UGX per 20ltr Jerrycan	Tariff UGX per m³						
Tariff (VAT Inclusive)	21	1,060	3,727	3,771	4,473	3,575	4,473	2,500

Tariff Structure for Umbrellas of Water and Sanitation: 1st July 2022 – 30th June 2023

Category	Public Standpipes		Pumping (Grid) Tariff UGX per m³	Pumping (Solar) Tariff UGX per m³	Gravity Flow Schemes Tariff UGX per m³
	UGX per 20ltr Jerrycan	Tariff UGX per m³			
Central	50	2,500	2,990	2,545	1,950
South-Western	17	848	2,990	2,500	2,118
Mid-Western	21	1,060	2,050 - 2,990*	2,000 - 2,990*	1,500 - 2,990*
Karamoja	42	2,119	2,996	2,119	N/A
Northern	41	2,050	1700 - 2,950*	850 - 2500*	2,200
Eastern	20-40	1,000 - 2,000*	2,419 - 2,870*	830 - 2,542*	1,000 - 2,050*

Tariff Structure for Kalangala Infrastructure Services: 1st July 2022 – 30th June 2023

Category	Public Standpipes		Domestic Consumer Tariff UGX per m³	Commercial consumer Tariff UGX per m³
	UGX per 20 liters Jerrycan	Tariff UGX per m³		
Tariff	42	2,100	3,418	3,500

Tariff Structure for Buikwe District Local Government: 1st July 2022 – 30th June 2023

Category	AQ-Taps/ Public Standpipes UGX per 20 liters Jerrycan	Domestic Consumer UGX/m³	Gravity Flow Schemes UGX/m³
Tariff	50	2,500	1,500

1. **Tariff range for varied sizes of schemes*
2. *All tariffs are exclusive of 18% VAT*

7.1.3.2.3 Compliance to pro-poor tariff (UGX 50 per 20 litre Jerry can)

The major Pro-Poor approaches include subsidized tariffs, reduce connection fees, introduce, and promote various types of public water points (PWPs) and densification & expansion of piped networks to low-income settlements. The Water Authorities bill the Public Standpoint a pro-poor tariff of UGX 25 for NWSC, UGX 25 – 50 for Umbrella Water Authorities, KIS and Buikwe District Local Government. Standpipes (PSPs) and Kiosks are operated by vendors without formal obligations (management contracts/licences). The Vendors impose exploitive fees to customers, thereby charging 2-3 times as much as the official tariff. The poor continue to pay more per unit volume of water across all the water authorities. In addition, vendors often do not comply with payment of the water bills consequently, making PSPs prone to being disconnected.

Therefore, there is urgent need to increase on the target number PSPs constructed in order to increase on access to water by the poor population. All PSP vendors MUST charge a tariff of 50 shillings per 20-liter jerry can of water by introducing price tags on the PSPs. Formalizing the working relation between the PSP attendant and the Water Authority through formal PSP operation contract is critical. The pro-poor strategy should be reviewed and redesigned to cater for emerging issues.

7.1.3.3 Regulatory Campaigns Undertaken

The regulatory campaigns conducted were intended to enhance technical quality assurance. The campaigns involved performance assessment of Water Authorities, strengthening sanitation regulation, and developing regulatory tools and instruments.

7.1.3.3.1 Performance assessment of Water Authorities

A performances assessment of water authorities was done for a period of 12 months - FY2021/22. The major objective was to examine operational processes, explore performance achievements, and highlight lessons & experiences as well as offer recommendations for improvement of water supply services in the country. For Umbrella Authorities of Water and Sanitation, the assessment involved analysis of performance data from utility performance management and information system (UPMiS) - a web based system and progress reports. Actual performance for indicators (KPIs) was compared to baseline & annual targets set out in the Performance Contracts. Further, performance benchmarking was don drawing on a trajectory for the past three year of PC1 with Umbrella water authorities.

On the other hand, National Water and Sewerage Corporation (NWSC) quarterly and annual progress reports based on the Key Performance Indicators (KPIs) were reviewed as of 31st March of FY 2021/22. The different findings are discussed below base of water authorities.

(i) Performance of Umbrella Authorities of Water and Sanitation

The Umbrella organizations were declared as Water Authorities in 2017 to run the operation and maintenance of water supply schemes gazetted to them in addition to providing technical backstopping support to member schemes. A total of about 571 water supply areas have been gazetted to 6 Umbrella authority of water and sanitation. The first performance contract (PC 1) was signed for a period of three years effective 1st July 2019. The performance contracts set out roles, scope, rights & obligation as well as performance targets and measurements. The contract also provides for periodic performance assessments. A performance assessment was therefore conducted and performance for the 6 Umbrellas Benchmarked.

Benchmarking is based on the different performance scores and weights attached to the respective indicators. The scores are customized to a traffic light colour system. A score of 4 corresponds to outstanding performance (OTP), 3 corresponds to achievement of performance Contract targets (PCT), 2 corresponds to achievement of base year targets (BT) while Zero (0) corresponds to failure to achieve base performance targets (BBT). Each Umbrella Water Authority was rated based on their respective annual target for 2 financial years FY2020/21 and FY2021/22. Traffic light colours were introduced for quick visual impression as below.

Table 56: Criteria for performance assessment

Rating	Score	Colour
Outstanding (8% above PC target)	4	
Achieved PC targets	3	
Achieved Base (2018) Targets	2	
Below Base Targets	0	

The benchmarking further involves weights that are based on the level of importance on the indicator in managing the water supply system. The performance benchmarking results are in table 57.

Table 57 indicates that there was improvement in performance in FY 2021/22 compared to FY 2020/21 for Midwestern Umbrella Water Authority. Generally, all Umbrella Water Authorities' performance corresponded to achievement of base year targets save for Karamoja Umbrella Water Authority whose performance is below the base year targets. Compared to FY 2020/21, Northern and Southwestern Umbrella performance declined. The reward and sanction catalogue need to be strengthened so that good performers are rewarded.

Table 57: Performance Rating of 6 Umbrella Water Authorities for 2 Years (FY 2019/20- FY202/21)

KPIs	Units	Weights	Total Score FY 2020/21						Total Score FY 2021/22					
			nUws	mwUws	swUws	eUws	kUws	cUws	nUws	mwUws	swUws	eUws	kUws	cUws
Technical														
New water connections	No.	5%	0.2	0.1	0.1	-	-	0.2	0.2	0.1	0.1	0.2	-	0.2
Non-revenue water	%	20%	-	-	0.8	0.7	-	-	-	-	0.7	0.4	0.8	0.5
Metering ratio	%	5%	0.2	0.2	0.2	-	0.2	0.2	0.2	0.2	0.2	-	0.2	0.2
Continuity of supply (functionality)	Hrs/Day	5%	0.2	-	0.2	-	-	0.2	0.2	0.2	0.1	0.2	0.1	0.2
Compliance to drinking water standards	%	5%	0.2	0.1	0.2	-	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2
Commercial														
Active connections	No.	6%	0.2	0.1	0.1	0.2	0.1	-	0.2	0.1	0.2	0.2	0.1	0.2
Water sales	m3/yr	6%	0.2	0.2	0.2	0.2	-	0.2	0.2	0.1	0.2	0.2	-	0.2
Collection efficiency	%	8%	0.3	-	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Financial viability														
Operating cost coverage ratio	%	8%	0.3	0.2	-	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Budget for investment	%	7%	0.3	0.1	0.3	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.3
Pro-poor orientation														
Pro-poor connections growth	No.	10%	0.4	-	0.2	0.3	-	0.3	0.4	0.4	0.2	-	-	0.2
Overall			2.6	1.1	2.6	2.3	1.1	2.1	2.6	2.6	2.3	2.1	1.8	3.0

It should be noted that whereas, performance benchmarking was undertaken, Umbrella water authorities are faced with issues of compliance to reporting and data integrity for some indicators. The benchmarking exercise was only based on selected indicators with complete data. Through the different regulatory visits, the following critical issues have been elaborated.

(a) Metering (bulk and Micro-meters)

All Umbrella Water Authorities save for Eastern Umbrella had an outstanding achievement on metering ratio. However, through regulatory visits, high prevalence of malfunctioning meters was noted. Bulk meters that are paramount in water balance are missing at strategic points. The Umbrella Authorities of water and sanitation are encouraged to fast track the process of installation and replacement of both micro and bulk meters. The sector through the Water Utility Regulation Department should equally fast track the establishment of regional meter testing and calibration centers in Entebbe and Mbale. This will improve on the quality of meters on the market and curb water losses.

(b) Continuity of water supply

This is based on standards as set out in design manual and in the performance contract. The number of hours in a day when water is available to the consumers. It is premised on supply of a minimum of 12 hours a day for a particular water supply system. Karamoja, Eastern and Mid-western Umbrellas registered a performance improvement while Southwestern Umbrella Authority declined to achievement of base year targets compared to FY2020/21. Eastern Umbrella Authority performance was below the base target. Intermittent water supply in several water supply areas was noted during the reporting period. This was attributed to the constant power fluctuations caused by unreliable energy sources (Solar and HEP grid), system breakdowns which normally takes long to get fixed. In other areas it was attributed to reduction in water yield for example, in Isingiro production capacity dropped from 4m^3/hour (hr) to only 2.5m^3/hr as well as in Kabembe, Kalagi, Nagalama. In Karamoja, water supply reliability was affected by long dry spells due to drought which leads to drying of some wells hence affecting the hours of supply. The most affected production wells are in; Abim, Nakapiripiriti, Morulemu, Amudat and Kacheri.

The unreliable water supply has prompted consumers to resort to unsafe water sources which are prone to water borne diseases. Additionally, the alternative sources are usually far forcing children & women to move for long distances to fetch water. The sector is encouraged to invest in bulk water transfer to increase the resource availability. There is need to fast track the development of guidelines for pipes and fittings which will guide utilities on the quality of pipes and fittings to be procured. This will reduce on the frequent bursts and leaks along distribution lines and consequently improve on supply reliability.

(ii) Performance of National Water and Sewerage Corporation (NWSC)

Table 58 shows that NWSC performance for FY 2020/21 and FY 2021/22 was below the annual PC7 targets. These include NRW specifically for Northern and Western and South-western regions, average day's receivable, pro-poor connections, new connections and return on capital investment. The performance based on table 58 is expended as follows.

System Input Metering Coverage: The performance target for this indicator was revised downwards to 75% from 80% after the Corporation consistently performed below the target. The set performance target during the financial year was achieved. NWSC was encouraged to ensure 100% metering to enhance accuracy of water balance values.

Table 58: Performance of NWSC against PC6 targets (FY 2019/20 and FY 2020/21)

Key Performance Indicator	Min	Financial Year 2020/21						Min	Financial Year 2021/22					
Technical														
Non - Revenue Water (%)		**Q1**	**Q2**	**Q3**	**Q4**	**Achieved**	**Target**		**Q1**	**Q2**	**Q3**	**Q4**	**Achieved**	**Target**
Kampala Water	38	42.4	42.2	41	39	41	35	42.2	43	42	39.2	41.1	41.3	42
Central Region	23	25.9	26.4	26	25	26	21	26	25	24.6	23.1	24.2	24.3	25
Eastern Split from Northern in F2021/22								26	30	25.1	24.9	17.1	24.4	25
Northern split from Eastern in FY 2021/22	20	26.6	26.1	25	25	25	18	25	27	23.9	22.6	31.6	26.4	24.5
Western & Southwestern Region	23	23	23.6	23	22	23	21	24	28	28.6	27.3	27.9	28.0	23
System Input Metering Coverage (%)	70	72	72	72	81	81	80	72	-	-	-	78	78	75
New Water Connections (No.) '000	40	15.0	15.7	10.8	10.5	52.0	50.0	50.0	14.8	10.3	14.5	15.1	54.7	55.0
New Sewerage Connection (No.)	200	32	32	78	106	216	260	200	77	300	66	132	575	200
Capex Budget Implemented (%)	80	43	43	43	43	43	85	60	-	-	-	112	112	65
Commercial														
Water Sales Volume Growth (m^3 million)	82	22	22	23	23	90	90	85	24	24	26.6	27.3	102	90
Collection/Billing Ratio (%)	95	105	106	101	101	104.7	95	90	92.2	92	103	-	96	95
Average Days Receivables (days)	83	102	96	100	100	100	74	96	119	110	106	101	101	94
Financial														
Return on Capital Employment	1	1	1	1	0.6	0.6	1.0	0.5	-	-	-	0.44	0.44	1
Operating Cost/Revenue (Work Ratio) (%)	85	75	73	75	77	77	80	85	79	77	77	77	77	80
Quality of Service and Environment														
Compliance to Drinking Water Standards (%)	98	98	98	98	98	98	98	98	98	98	98	98	98	98
Compliance to Sewerage Standards (%)	35	61	62	58	58	61.7	50	40	56	68	70	-	75	43
Compliance to Abstraction Permits (%)								50	93			50	50	60
Pro-Poor Orientation														
Pro-Poor Connections Growth	980	635	1489	1205	464	3793	1400	1500	678	327	431	705.0	2141	1600
Transparency and Governance														
Audit Recommendations implemented (%)	70	72	81	89	90	90	84	70	85	87	87	87	87	82
Customer focus and care														
Customer Satisfaction Index (%)	70	77	77	77	87	87	70.0	70	88	88	-	-	75	75

New Water Connections: A total of 54,700 new connections was made during FY 2021/22 against the annual target of 55,000. This performance falls below the set target. On the other hand, there is increasing number of dry zones in some of the areas visited which include Kampala, Iganga, Lira and Mbarara. The water demand in some of the areas exceed the production capacity of the water supply systems. It is therefore necessary to undertake interventions that boost production to satisfy the current demand.

New Sewerage Connections: The total number of new sewer connections made by end of the financial year were 575 against the annual target of 200 connections. This good performance is noted and the need for resource mobilization to increase on sewer lines and connections is critical.

Water Sales Volume Growth: At the end of the financial year a total of 102m^3 million was sold against the annual target of 90m^3 million. This good performance is commendable however, erratic water supply in Mbarara, Iganga, Lira, Kyenjojo, and Kampala needs to be addressed irrespective of considerable intervention to the supply constraints by drilling additional boreholes, procurement of high-capacity pumps, installation of water pump booster and construction of new reservoirs. The Corporation was encouraged to fast track the different interventions aimed at addressing water supply constraints and reduction of NRW as well.

Collection/Billing Ratio: The reported collection efficiency during the financial year was 96% against the annual target of 95%. The PRT acknowledges this good performance amidst the COVID-19 pandemic effects on water supply services. However, there are challenges of non-payment by Institutions/Government customers across the area visited. There are also complaints of overbilling/erroneous billing noted in Kampala.

Receivables/Arrears: The Average Days Receivables was 101 days against the target of 94 days indicating a performance decline compared to FY 2020/21. This poor performance is mainly attributed to delayed payment by Institution/Government customers. The average day's receivable indicator exhibits a declining trend. The Corporation was urged to take interventions aimed at reducing the day's receivable or engage government in discussion on timely payment of water bills.

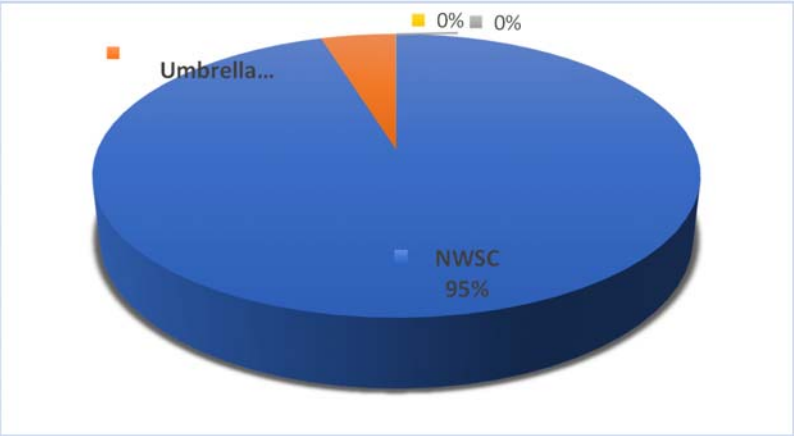
Compliance to Drinking Water Standards: 98% compliance to drinking water standard has been achieved for both financial years. The PRT commends the Corporation for this good performance however, high water treatment costs are noticeable in areas that abstract water from river streams due to high water turbidity especially during rain seasons. The areas include Mbale- Manafwa River, Fort portal-River Mpanga and Lira-Kachung River.

Compliance to Sewerage Standards: The compliance of wastewater quality stands at 75% against the annual target of 43% during the financial year. There was an improvement compared to the previous FY 2020/21 performance. This performance is commendable though the Corporation needs to ensure that the sewerage effluent quality conforms to international standards.

7.1.3.4 Regulatory Campaigns and non-revenue water performance

The Water Authorities' overall non-revenue water for all utilities stands at 35% (58.7m^3 million of the 167.8m^3 millions of water supplied during the FY 2021/22). Of the total volumetric lose, NWSC accounts for 95% while other Water Authorities (Umbrellas, Buikwe & KIS) account for only 5%. In comparison to FY 2020/21, the non-revenue water levels have declined from 35m^3 million to 58.7m^3 million. Non-revenue water might not matter during seasons of plenty water. However, given the rapid population growth in Uganda's urban areas, water demand increases day by day.

Reducing water losses is critical to efficient resource utilization, efficient utility management, enhanced consumer satisfaction, and reduces postponement of capital-intensive additions to capacity.



During the financial, reducing NRW by 5 percentage would have translated into revenue gains of about UGX. 44.7 billion (12m^3 million using NWSC domestic tariff rate) something that should not be ignored. Therefore, interventions aimed at combatting NRW need to be supported in order increase resource availability through proper management of the available resource.

Non-Revenue Water (NRW) for National Water and Sewerage Corporation

The overall NRW performance continues to follow a declining trend through performance contract 6 (PC6) and PC7. NRW declined from 29% in 2018/19 to 33.5% in FY 2019/20 to 35% in FY 2020/21 and currently at 35.4%. Performance based on NWSC regionalization indicate that Kampala Area losses over 41.3% of the water supplied. Whereas the other regions performed achieved the annual targets, Northern and Western & Southwestern regions performed below the annual target. Kampala Water contributes about 60% of the water supplied by the Corporation implying any slight percentage lose in NRW translates into huge revenue loses. The high NRW in Kampala water was attributed to old pipe network which is prone to many leaks as well as bursts due to road construction works as noted during the regulatory field work activities. Faulty meters also contribute to commercial losses however there are plans to refurbish the old networks and replacement of faulty meters.

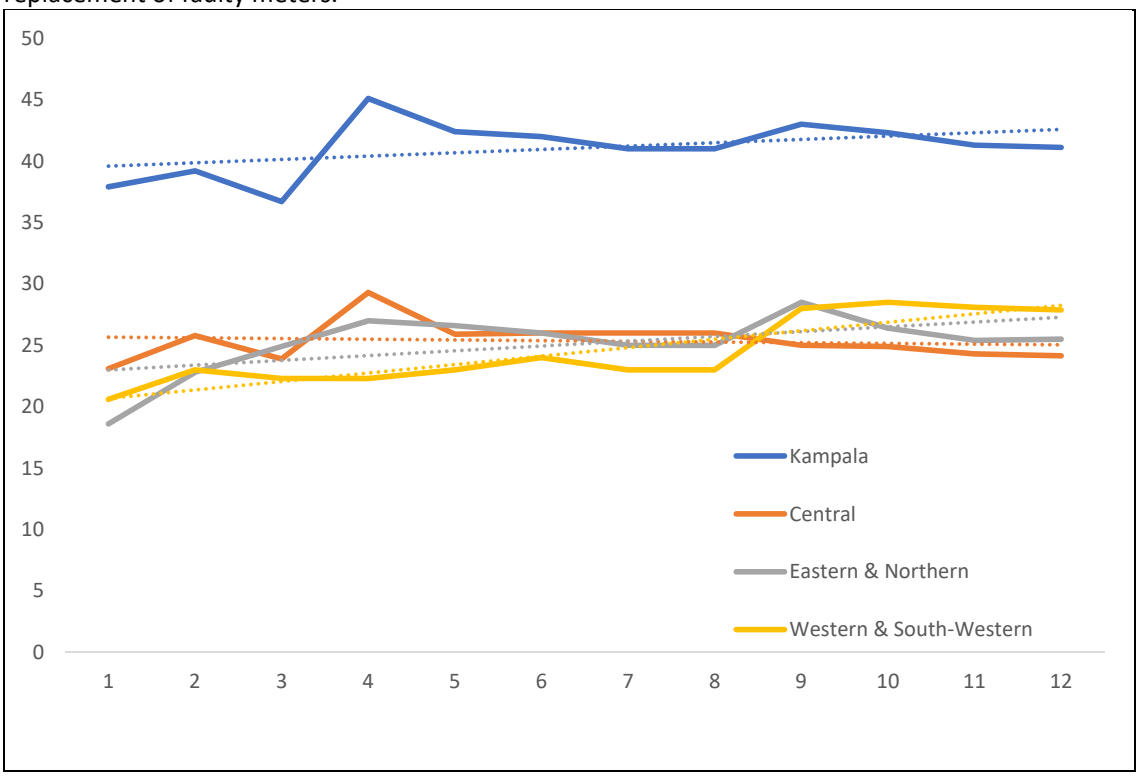


Figure 26: NRW Trend FY 2019/20 to FY 2020/21

Non-Revenue Water for Other Towns outside NWSC

Figure 27 below shows the NRW performance of towns gazetted to Umbrellas, Buikwe district water authority and Kalangala Infrastructural Services Limited. The performance has improved over the assessment period compared to the base year targets

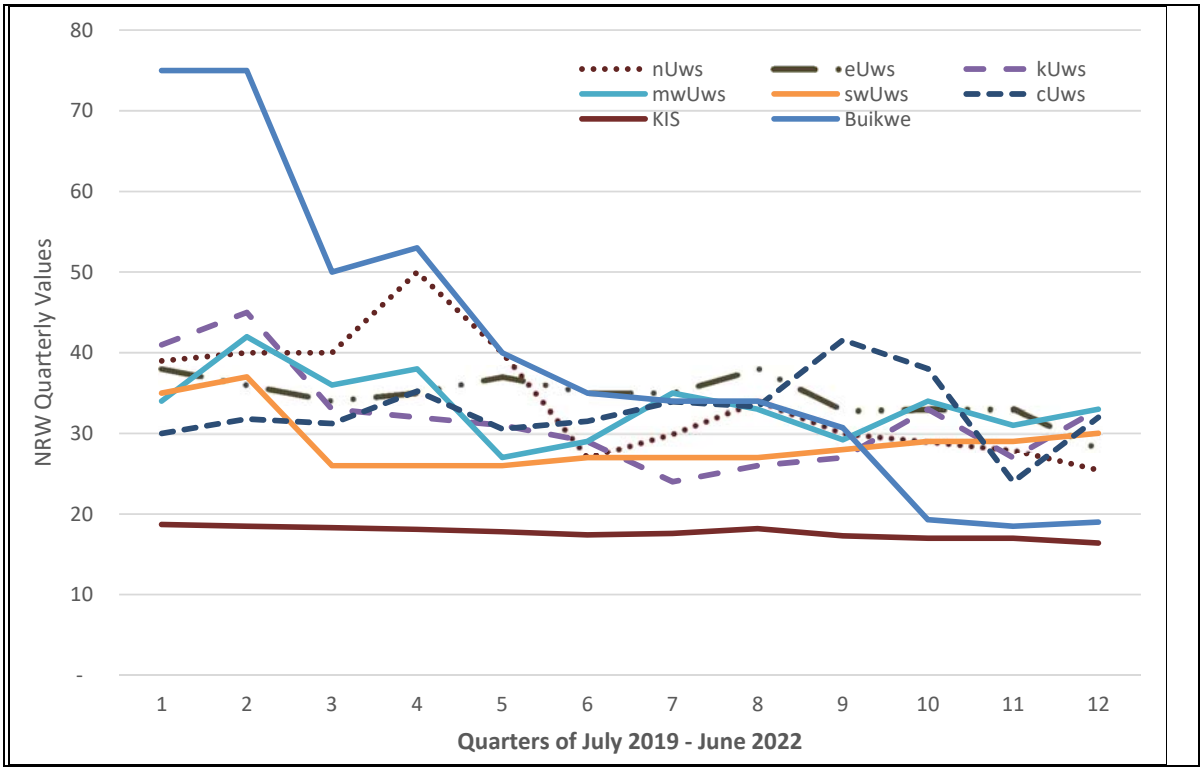


Figure 27: NRW for 6 Quarters (July 2019 - June 2022)

The other water authorities account for on 4% of the entire non-revenue water in urban piped water supply. The NRW performance for Umbrella Authorities of Water and Sanitation and Kalangala Infrastructure Services Limited (KIS) has improved compared to the base targets. KIS and Buikwe district Water Authorities were commended for ensuring low NRW below 20%.

The overall the current NRW performance for Umbrella Authorities of water and sanitation is at 28.5% compared to 30% in FY2020/21. This shows a performance improvement by 1.5 percentage points. Among the Umbrella water authorities, at the end of the 4th quarter of the FY 2021/22, the lowest NRW levels was recorded in Northern (25.5%), Eastern (28%) and Southwestern (30%). The Umbrellas were encouraged to share good practices from KIS and Buikwe district water authority to further reduce NRW to optimal level. The sparks in NRW as noted from the regulatory visits during certain periods is attributed to aged pipes, lack bulk water meters, faulty bulk, and micrometers as well as data integrity issues. These greatly contributed to the continuous water losses reported.

7.1.3.5 Regulation Campaigns Conducted for Sanitation Standards (Regulatory tools and instruments)

Preparation of Roadmap for regulating CWIS

The Department is actively involved in the regulation of water supply services but with little emphasis on sanitation regulation. The need for regulation of both water supply and sanitation in the sub-sector draws from the Uganda National Development Plan III (NDP III), which aim at increasing access to inclusive safe water, sanitation, and hygiene (WASH). The Plan gives emphasis on increasing coverage of improved toilet facilities and hand washing practices as well as investing in effective management of the entire WASH value chain segments such as containment, emptying, transportation, treatment, safe reuse, or disposal. To

effectively regulate sanitation, a road for regulation of citywide inclusive sanitation is being conducted. This will involve review of policy, legal, strategies and institutional documents to facilitate a Gap Analysis including a synthesis of key gaps and overlaps. The gaps analysis report will facilitate development of a roadmap with the required resources to enhance sanitation regulation in the country. This activity is still on going.

Roll out of Sanitation Service Assessment and Planning Tool for CWIS

The Ministry of Water and Environment through the Water Utility Regulation Department (WURD) is an associate member of Eastern and Southern Africa Water and Sanitation Regulators' Association (ESAWAS). The Association developed a Citywide Inclusive Sanitation Services Assessment and Planning (CWIS SAP) Tool in collaboration with Athena Infonomics (AIL) and Aguaconsult. The CWIS SAP tool helps decision makers to analyze the outcomes of different sanitation interventions/investments along the dimensions of equity, financial sustainability, and safety. This aids in evaluating a variety of options and prioritizing those that cost effectively expand access to safely managed sanitation along the entire sanitation value chain.

The SAP tool was first piloted Kampala Capital City Authority (KCCA) in collaboration with National Water and Sewerage Corporation (NWSC) covering both Sewered and un sewered sanitation. The pilot was successfully completed drawing many lessons for the city in terms of investment planning, resource allocation and targeting as well as reporting based on reliable baselines.

Following the successful pilot of the SAP tool, WURD adopted the tool as one of the regulatory tools that will aid in target setting and reporting for sanitation service provision. In this regard, the tool was being institutionalized for sector wide application alongside other tools like town sanitation planning tool (TSP). Currently, the rollout targets two newly created cities of Fort Portal and Mbarara.

Construction of meter testing and calibration stations

Water meters constitute a significant input in the normal operations of water utilities. The meter bridges the gap between the demand for water (consumers) and the supply of the service (water utility). It is the sole determinant of the volume supplied to the consumer. To the utilities, it is the sole determinant of the bill that should be levied against the consumed volume. The challenge of Non-Revenue Water (commonly referred to as Unaccounted for Water) emanates in part from inaccurate meters that do not register the actual volumes supplied to an area (to establish a water balance), to the consumer (for proper billing) and subsequently leading to the efficient/effective management of available (often scarce) water resources.

The meter testing and calibration stations will ameliorate the existing meter management procedures for the Uganda market. The stations will help to ensure high quality water meters through calibration and servicing within the context of a wider asset management agenda. The meter testing and calibration station will serve as a quality assurance to the consumers and the general public as to the specific intent to improve the reliability of mechanical water meters. Currently construction works in Entebbe Commenced and will be followed by Mbale in the following financial year. Water Utility Regulation Department is committed to consumer protection on quality and will continue providing support towards these and other noble initiatives aimed at increasing the effectiveness and efficiency of water supply and sanitation service delivery in Uganda.

7.1.4 RURAL AND URBAN SANITATION

7.1.4.1 Introduction

Sanitation and hygiene are key drivers for socio-economic transformation, individual prosperity and sustainable development. The Sustainable Development Goal 6.2 aims at achieving universal access to safely managed sanitation and hygiene services by 2030. Investment in sanitation and hygiene services by households, communities and governments is necessary to change community behaviour so as to end open defecation and ensure construction and maintenance of safe sanitation facilities for use at all times by all people. Failure to achieve SDG 6.2 targets continues to undermine the attainment of other SDGs and this calls for increased investment in household, community, institutional and public sanitation at all levels in order to reverse this undesirable trend.

For many years, Government of Uganda together with Development Partners have invested in sanitation and hygiene improvement through infrastructure development projects and promotional interventions. In spite of such investment, the resources are still grossly insufficient to spur the requisite sanitation and hygiene improvements and the country is still offtrack in achieving the highest level of service (safely managed sanitation) in both rural and urban areas.

The advent of Covid - 19 compounded the problem of underfunding for the sanitation and hygiene subsector as it led to budget cuts making it difficult to execute the planned projects and activities, consequently affecting the sanitation and hygiene outlook across the country.

Programming for sanitation and hygiene in Uganda is guided by the Integrated Sanitation and Hygiene (ISH) financing strategy (2018-2030) which is hinged on the three pillars of Demand creation; Supply chain management; and Enabling Environment.

In the bid to operationalize the ISH strategy, government avails funds through the District Transitional Development Grant - Sanitation (Water and Environment) for promotion of sanitation and hygiene in rural communities; and the District Water and Sanitation Conditional Development Grant for WASH infrastructural development including construction of public sanitation facilities. The subsector also leverages funding from WASH projects implemented by the Ministry of Water and Environment through centrally managed projects at national level; through the Water and Sanitation Development Facilities (WSDF) at regional level; as well as through Civil Society Organizations at district level to carry out infrastructural and promotional activities in urban and rural areas. Districts also use part of the Primary Health Care (PHC) Grant from the Ministry of Health for hygiene and sanitation promotion and health education.

7.1.4.2 Sanitation and Hygiene Indicators

Access to Basic Sanitation

Basic sanitation is defined as the "percentage of the population using an improved sanitation facility not shared with other households"**.** It is computed as (F/G) *100, *F denoting total number of households with improved sanitation facilities not shared, and G-total number of households in the locality.*

Access to basic sanitation in rural areas during the reporting period increased to **24%** from 19.5% reported in the FY 2020/21. This increase was attributed to the increased uptake and implementation of market-based sanitation which focuses on upgrading and construction of improved sanitation facilities. Access to basic sanitation in urban areas increased to **47.9%** from 46.2% reported in the FY 2021/22. This was attributed to the increased marketing and demand creation of faecal sludge management services along the service chain, with emphasis on improved sanitation at the containment stage through Towns Sanitation Planning.

Sanitation coverage defined as proportion of the population accessing any form of sanitation facility regardless of its quality increased to 77% from 76.4% in FY 2020/21. This represents an increment of 0.6%. In urban areas, sanitation coverage increased to 90.6% from 89.7% in the FY 2020/21.

This implies that an additional 2.2 million Ugandans gained access to sanitation services in the rural areas and approximately one million in the urban areas. The increment in coverage was attributed to the increased investment in household sanitation and hygiene as a result of intensive campaigns by the different actors across the country.

Safely Managed Sanitation

Safely managed sanitation is defined as the "percentage of the population using improved sanitation facilities not shared where excreta is safely disposed insitu or transported and treated off site". It is computed as {*(A+B+C)/D}*100 A denoting total household population disposing safely insitu, B- total household population reported to have emptied and transported excreta by gulpers/cesspool emptier, C- total household population using sanitation facilities connected to a sewer system, and D- total household population of District i.e., RGCs and Sub-counties.*

The percentage of the national population having access to safely managed sanitation in rural areas increased to 9% up from 8.2 % reported in the FY 2020/21. This could still be attributed to sanitation promotion approaches/concepts that focus on offering a high level of services. The relative increase in access to faecal sludge management services as a result of construction of Faecal Sludge Treatment Plants (FSTPs) based on the cluster system has also contributed to safe disposal and treatment of faecal sludge from both rural and urban areas.

Percentage of population using safely managed sanitation in urban areas increased to 40.7% from 39.6% in FY 2020/21. This was attributed to increased marketing and awareness creation of fecal sludge management services across the service chain (containment, emptying and transportation, disposal, re-use) and improved sanitation planning within the towns.

Open Defecation

Open defecation is defined as "percentage of the population practicing open defecation". It is *calculated as (H/I) *100 H denoting total number of people in households practicing open defecation, and I total household population in a District i.e., RGCs and Sub-counties.*

During the period under review, the proportion of rural population practising open defecation slightly reduced to 23% from 23.6% in FY 2020/21. In urban areas 9.4% did not have access to any form of sanitation facility and were practicing open defecation. This was a slight reduction from 10.2% reported in FY 2020/21.

Hand washing at house hold level

Hand washing is measured as "percentage of people with access to hand washing facilities" *and it is computed as (M/N)*100, M denoting total number of households with hand washing facilities, and N total number of households in the locality.*

In rural areas handing washing with soap declined by 8.9% from 44.7% in FY 2020/21 to 35.8% in FY 2021/22. This was attributed to perceived reduction in the threat of COVID-19 transmission due to the dwindling number of cases. This calls for systematic, innovative, and sustained hand washing with soap campaigns that will culminate into actual behavioural change as opposed to the short-lived campaigns based on disease outbreaks and epidemics. The same situation was experienced in urban areas where access to hand washing with soap slightly dropped from 54.7% in FY 2020/21 to 53.4% in FY 2021/22.

Trends of access to sanitation and hygiene facilities

Figure 28 presents the trends of sanitation and hygiene coverage over a five-year period. It shows that access to sanitation and handwashing facilities has largely stagnated of the past 5 years . This calls for increased financing and deployment of innovative approaches of sanitation and hygiene promotion involving multiple stakeholders to bolster existing efforts and spur the sub sector towards achieving universal access in line with national priorities and SGD 6.2 targets by 2030.

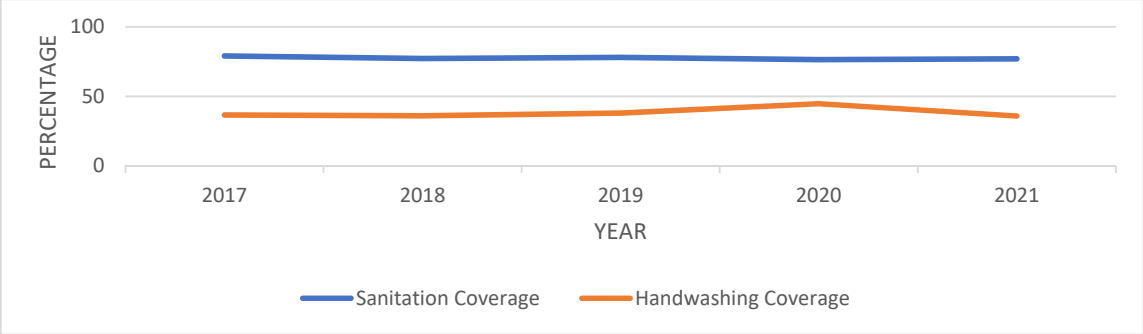


Figure 28: ***trends of sanitation coverage and handwashing coverage over the past five years (2017-2021)***

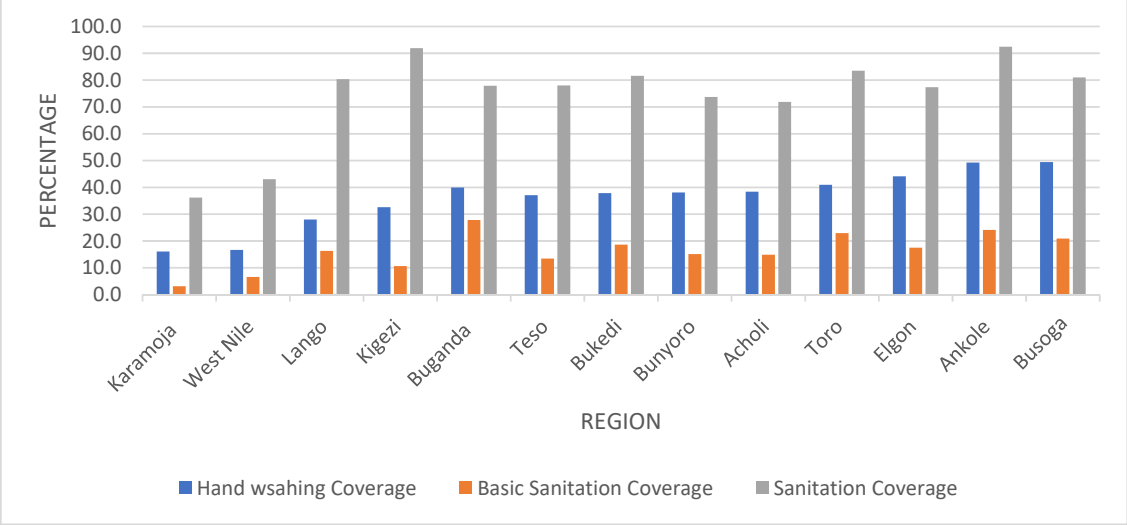


Figure 29: Regional performance in Sanitation coverage, Basic Sanitation and Hand hygiene for the FY 2021/22

Sanitation coverage across the regions was fairly good with majority of the regions (Lango, Kigezi, Buganda, Teso, Bukedi, Toro, Elgon, Ankole, and Busoga) having sanitation coverage above the national coverage of 77%. Special attenttion should be given to the regions of Karamoja, WestNile and Acholi where the coverage are below the national coverage.

Regarding basic sinatation the situation is not any different as the regions that have sanitation coverage above the national average were close to the national coverage of basic sanitation compared to those with low sanitation coverage. Kigezi had sanitation coverage of over 90% but less than 10% access to basic sanitation. Special efforts targetting promotion of higher level of service and investment in improved sanitation facilities should be directed to Kigezi region since the population already appreciates the need for sanitation services.

Access to hand washing facilities remains way lower than sanitation coverage which requires bevioral change messages that link hygiene and sanitation so as to maximize the health benefit of constructing and using toilets. Hand washing coverage wass less than half the sanitation coverage meaning over half of the toilets in use across the country lack hand washing facilities. Lango and Kigezi which had very high access to sanitation facilities hand washing coverage the national coverage of 35.8%. Failure to wash hands at critical moments like after toilet use undermines the benefits of improved sanitation and exposes the population to increased incidence of diarrhoeal and respiratory tract infection.

7.1.4.2 Sanitation and Hygiene Interventions

Rural Programs /Projects and Initiatives

Sanitation and Hygiene promotional and infrastructure development interventions in rural areas were funded through conditional grants disbursed to the Districts Local Governments, centrally managed projects and Civil Society Organizations (CSOs) interventions.

District Water and Sanitation Conditional Development Grant-DWSCDG

District Local Governments on a quarterly basis receive the DWSCDG for implementation of water and sanitation activities. This grant is expended as per the guidelines issued by the MWE on an annual basis.
In the FY 2021/22, an estimated UGX 1.5Bn was spent on construction of sanitation and hygiene facilities in the District Local Governments. A total of 109 Public toilets were constructed in public places such as markets and trading centres. This translated into approximately 545 stances serving a total population of approximately 21,800 people.

District Transitional Development Grant -Sanitation (Water and Environment)

The grant has been in existence for the last 11 years with government disbursing UGX 2Bn annually to a total of 101 out of 135 districts in the FY 2021/22. At the inception of this fund, districts were receiving between UGX 21-23 million but with creation of new districts, this figure dwindled to UGX. 19.8 million per district each financial year. Albeit the dwindling funding, remarkable achievements have been realised since the introduction of the grant.

With this grant, an estimated 2020 villages were reached in FY 2021/22 using the Community Led Total Sanitation-CLTS and Home Improvement Campaigns (HIC) approaches. Out of the 2020 villages reached 21 % (424 villages) became Open Defecation Free (ODF); an increment of 2.2% from the FY 2020/21. Approximately, a total of 13,332 people gained access to household sanitation.

National Hand Washing Initiative (NHWI)

The National Hand Washing Initiative (NHWI) is a government led initiative that was established by the National Sanitation Working Group in 2006 with the aim of championing the hand washing with soap agenda in Uganda. The NHWI is currently hosted by the MWE, and achievements recorded during the reporting period included:

a) Advocacy and Awareness Creation Campaigns

This entailed designing and implementation of a nationwide multi media campaign using conventional media channels like Television, Radio and Print media, interpersonal engagements as well as modern channels like social media. Individuals of influence such as cultural and religious leaders were also engaged to strengthen the campaign and reach out to their respective audiences in communities. School children were reached mainly through Music Dance and Drama, working together with School WASH clubs.

The campaign was in line with the recently developed National Handwashing Communication Strategy. The overall objective of the campaign was to promote proper, regular, and sustainable handwashing with soap at all critical times, making it a habit among school children, caregivers, health care workers and the community. The campaign was translated into 10 languages, Acholi, Langi, Pokot, Madi, Luganda, English, Ateso, Lugbara, Japadhola and Runyakitara reaching out to over 3 million people.

Other advocacy efforts included the celebration of the Global Handwashing Day under the theme **"Our Future is at hand, Let's move together".** This was a hybrid event that had both physical and online participants. Through multimedia channels, over 1.2 million people were reached and 100 people participated physically.

b) Capacity Building

The NHWI also undertook capacity building activities including training of hand washing ambassadors and dissemination of the recently developed hand washing with soap communication strategy. Over 200 Hand Washing Ambassadors (HWA) from the districts of Ngora, Busia, Amuria and Bugiri were equipped with

knowledge and skills on hand washing with soap including communication skills, construction of simple tippy taps and the process of soap making. The HWAs were also equipped with Information Education Communication (IEC) materials for reference and use during grassroot engagements of promotion of hand washing with soap.

Photo 7.1.4-1 Training of handwash ambassadors ongoing in Bugiri on the left and Amuria on the right

UNICEF interventions

UNICEF supported several DLGs in their efforts to eliminate Open Defecation and adopt basic sanitation. These included Kamuli, Iganga, Kiryandongo, Adjumani, Koboko, Lamwo, Terego, Isingiro, Kamwenge, Kikuube, Moroto, Karenga, Amudat, and Kaabong.

Through this support, a total of 1084 villages were reached using the CLTS approach out of which 759 villages attained ODF status. These activities translated into an estimated 758,800 people gaining access to hygiene and sanitation services.

Urban Sanitation initiatives during FY2021/22

Urban sanitation interventions were mainly implemented through project-based approach funded by either Government of Uganda or Development partners through, centrally managed projects, deconcentrated MWE structures and sector partners.

Construction of Fecal Sludge Treatment Facilities in small towns

A nationwide sector assessment supported by World Bank Water and Sanitation Program (WSP) in 2014, identified 50 potential clusters of small towns to be provided with shared faecal sludge treatment/disposal infrastructure to help improve faecal sludge (FS) management service chain across Uganda. To date, 50% of the potential clusters have been provided with the treatment facilities. The Ministry of Water and Environment continued directing its efforts towards improving sanitation by providing additional faecal sludge treatment facilities and improving collection capacity to ensure universal access to all small towns' dwellers by 2030. This is in line with Government development aspirations and the Sustainable Development Goals (SDGs).

During the financial year 2021/2022, MWE completed the designs of 15 Fecal Sludge Treatment Plants (FSTPs) for Wobulenzi, Kiira Municipality, Kigumba Town Council (TC), Kanungu, Kyazanga, Namutumba, Kapchorwa, Patongo, Moyo, Nebbi, Nakapirpiirit, Kyenjojo, Buikwe funded by Africa Water Facility through African Development Bank; Buliisa, and Dokolo designs have also been completed with funding by Government of Uganda. Construction of one FSTP has commenced in Busia municipality with funding from World Bank.

Business model development for Fecal Sludge Management (FSM) under WSDF N: a case of Dzaipi cluster towns and refugee settlements in Adjumani District

With support from European Union and Austrian development agency, Water and Sanitation Development Facility North (WSDF-N) implemented a WASH component under Support Programme for Refugee Settlements and Host Communities in Northern Uganda (SPRS-NU) project. Construction of a faecal sludge

treatment plant in Dzaipi to serve the surrounding towns and the refugees and host communities was done under this project. Together with Umbrella for Water and Sanitation – North (UWS-N), WSDF-North developed a business model for faecal sludge management in Dzaipi cluster.

An analysis of faecal waste flows in Adjumani refugee settlement showed that only 1% of the total fecal waste produced actually passes through the treatment plant, whilst more than 50% contaminates backyards, the drainage system and water streams. The biggest challenge was faecal waste being unsafely disposed of by burying, open unoccupied grounds and some of the faecal sludge was dumped into the environment or inadequately treated. WSDF-N together with Umbrella for Water and Sanitation developed sustainable private sector capacity to provide FSM services adapted to the physical and economic conditions in the target areas. In this model, UWS-N is operating the treatment plant and has leased out vacuum track to private company and delegated management of the O&M of fecal sludge holding tanks & Tri cycles (privatization) to the private sector.

Photo 7.1.4-2 One of the Tri cycles leased out to private sector

Photo 7.1.4.-3 Emptying of the toilet by gulpers (left) and loading of sludge on Tri cycle (right)

Photo 7.1.4-4 The vacuum truck that has been leased out to the private sector for operation

Photo 7.1.4-5 Disposal of fecal sludge at Dzaipi FSTP, by gulpers

Demand Creation of Faecal Sludge Management Services under WSDF – E; a case of Kamuli

Water and Sanitation Development Facilities (WSDFs) constructed a FSTP in Kamuli district to serve Kamuli and the neighbouring districts of Kaliro and Buyende. The plant is in operation under the stewardship of Umbrella for Water and Sanitation-East (UWS-E). To create demand for FSM services within Kamuli cluster, a series of activities were conducted in 186 parishes. These included fecal sludge market study, community awareness (using radio talk shows, public address system), study tours and Private sector engagements among others. There have since been a spike of calls from the community requesting for emptying services because of the demand created by the campaign.

Photo 7.1.4-6 Marketing of FSM services using public address system

Photo 7.1.4-7 Marketing of FSM services using radio talk show

System strengthening for improved urban sanitation service delivery; a case of Mukono Municipality - In partnership with UNICEF

Sanitation services delivery has undergone phenomenal transformation bringing to light many salient issues that hinder achieving safely managed sanitation services. A number of new approaches have been adopted to achieve a holistic urban service delivery along the sanitation services chain including the vulnerable populations. The approaches include City Wide Inclusive Sanitation (CWIS), Market Based Sanitation Initiative Approach (MBSIA) among others.

In collaboration with UNICEF, Sewerage Services Division of Urban Water Supply and Sewerage Department engaged in system strengthening with Mukono Municipality using City Wide Inclusive Sanitation approaches through Town Sanitation Planning under the Self- Sustaining Safe Sanitation Services (S5) project. The project sought to increase demand and strengthen the supply chain for desirable toilet technologies, costing them and build capacity of masons on the construction of these toilet technologies and hence improve access to safely managed sanitation by women and children.

This project conducted a comprehensive sanitation services market assessment including human resource capacity. A municipal Sanitation task force was formed, trained and handheld in the development of the Municipality Sanitation plan. The outputs of this process to date include: - improved capacity of the municipal technical officers in strategic positioning of services, a sanitation technology catalogue, re-tooling of the Municipal public health offices, development of a Call Centre for service coordination and a detailed municipality sanitation improvement road map.

7.1.4.3 Emerging Issues

(i) Market based sanitation approaches that target construction of basic sanitation facilities should be embraced in sanitation and hygiene programming.
(ii) Demystifying of the sanitation and hygiene measurement framework to establish a common understanding among all stakeholders will enhance programming, and reporting.
(iii) Strengthening of the feacal sludge management service chain with focus on sustainable transportation, disposal/emptying and reuse for both the rural and urban settings.

7.1.5 USAID Contribution to Uganda Sanitation for Health Activity

Background

The Uganda Sanitation for Health Activity (USHA) is a USD 32 million project financed by the United States Agency for International Development (USAID) in Uganda with the goal of increasing access to improved and sustainable water, sanitation, and hygiene (WASH) services, ultimately leading to improved health and nutrition status in focus areas and population groups.

USAID/USHA focuses on achieving increased household access to sanitation and water services, promoting key hygiene behaviours at home, school, and health facilities adopted and expanded; and, Strengthened district water and sanitation governance for sustainable services.

The USAID/USHA contract was effective on January 29,2018 and will close on July 28, 2023. Tetra Tech ARD implements the activity in collaboration with SNV USA, BRAC Uganda, FSG and Sanitation Solutions Group.

In addition, USAID/USHA collaborates with Rotary International to increase water services at schools, health care facilities and in communities as part of the USAID-Rotary International Global Development Alliance.

Geographic Footprint

Table 59 presents the USAID/USHA districts by regional cluster. In addition, USAID/USHA provides support to Faecal Sludge Management (FSM) services in the Municipal Councils of Jinja, Njeru, Masaka and Gulu.[16]

Table 59: USAID/USHA Target Districts

No.	Central-West Cluster	Central-East Cluster	Northern Cluster
1	Bukomansimbi	Buikwe	Agago
2	Gomba	Buyende	Gulu
3	Kyotera	Jinja	Kitgum
4	Lwengo	Kaliro	Lamwo
5	Mpigi	Kayunga	Omoro
6	Sembabule	Luuka	Nwoya
7	Masaka[17]	Namutumba	Pader

Accelerating Access to basic Sanitation and Hygiene

- USAID/USHA improved household and community sanitation using the Market Based Sanitation Implementation Approach (MBSIA) and Community Led Total Sanitation (CLTS) with quality in 2,306 communities across 20 districts. The MBSIA delivery model enabled 64,413 households to invest in basic sanitation. Since 2020, households have invested approximately UGX 21.80 billion in basic sanitation.
- 1,393 villages were verified Open Defecation Free (ODF).
- Improved handwashing with water and soap at household level for 57,404 households across the 20 USAID/USHA districts of operation.
- USAID/USHA has cooperated and built the capacity of five financial institutions; Opportunity Bank, RDF MFI, Nazigo SACCO, Mateete MicroFinance Cooperative Trust and Namutumba House of Hope SACCO to collaborate with District Local Governments, sanitation entrepreneurs and households to provide sanitation loans within and outside of MBSIA areas. 1,267 loans worth over one billion UGX were issued, resulting in the construction of 1,328 basic sanitation facilities.
- Sold 22,875 SATO products in 20 districts through BRAC Uganda's network of Community Health Promoters and local hardware stores.
- Improved WASH behaviours and practices in 100 schools including construction of 150 latrine stances for both boys and girls.
- Constructed sanitation facilities for patients and staff at four health care facilities.

Increasing access to safe water

- Piloted two "pro-poor" strategies with the Central and Eastern Umbrellas, including the introduction of an increasing block tariff and using the *EquityTool* to improve targeting of connection subsidies to the customers in the lowest two quintiles.
- Invested US$800,000 in the Central and Eastern Umbrella Authorities to expand five water supply schemes resulting in 1,300 new water connections with 50% of the connections allocated to households in the bottom two wealth quintiles.
- Through collaboration with Rotary International, constructed 31 boreholes in 21 schools and installed 40 (10,000-liter capacity) water tanks in 20 schools. Four healthcare facilities benefited from extension of piped water to points of care. Developed an O&M training manual for WASH in HCF based on the recently approved O&M guidelines.
- Supported three private Faecal Sludge Management Entrepreneurs (FSMEs) operating in Jinja, Masaka and Gulu to expand their businesses and improve their long-term financial viability. The FSME in Gulu acquired an 8,000-liter cesspool truck which has greatly expanded their revenue.

16 Jinja and Masaka were designated City status as of July 2021.

17 In Masaka, USAID/USHA only supports Output 1 activities related to SATO sales and FSM.

Strengthening district WASH governance

- All 20 districts were supported to self-assess through the Institutional Strengthening Index (ISI) focused on sanitation and hygiene services. All districts demonstrated improvements over baseline.
- Provided In-kind Grants to 20 districts to facilitate improved management of sanitation and hygiene. These included computers/laptops, motorcycles for health inspectorate staff, office furniture and equipment.
- Strengthened 20 DWSCCs to be both vibrant and more professionally managed. Strengthened capacity of officials from 20 DLGs on sanitation and hygiene data management and analysis.

Contributions to the WASH Sector

- Approval of the National Sanitation Marketing Guidelines (NSMG) in March 2022. USAID/USHA continues to support the Ministry of Health (MoH), members of the MBS sub-committee of the National Sanitation Working Group (NSWG) and other implementing partners to use the NSMG to design and implement MBS initiatives.
- In February 2022, in partnership with UNICEF, USAID/USHA oriented and trained 41 participants in the national MBS training in Jinja. These included senior staff from MoH, MWE, UNICEF, five districts and WASH Implementing Partners (Ips) such as Water for People (WFP), GIZ and HEWASA.
- Provided technical assistance and financial support to the GoU's application to the Sanitation and Hygiene Fund (SHF).
- The overarching WASH SBC brand "**Living Freshi**" targeting households and healthcare facilities and the "**SOAPY**" brand, messages and materials targeting primary schools were approved by MoH. These open-source materials and messages will continue to be disseminated by USAID/USHA for the wider use of WASH IPs in Uganda.
- USAID/USHA continues to work through national coordination platforms such as the NWSG, National Handwashing Initiative (NHWI) and UWASNET and in close collaboration with the MoH and MWE to share USAID/USHA's experiences and learning.

7.2 MWE CONTRIBUTION TO AGRO-INDUSTRIALISATION

7.2.1 WATER FOR PRODUCTION

7.2.1.1 Introduction

Water for Production (WfP) refers to development and utilization of water resources for productive use in crop irrigation, livestock, aquaculture, industries, energy, and other commercial uses. Globally, Water for Production accounts to over 80% of water withdrawn for use. However, in Uganda, less than 2% of water is used in production. However, the demand is increasing primarily due to climate change and degradation of natural resources.

The mandate for WfP is shared between MWE and other Ministries. For water for Agricultural development, MWE is responsible for "off-farm" activities, and Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) is responsible for "on-farm" activities. "Off-farm" refers to development of water sources and transmission (bulk transfer to farm gates) and "on-farm" refers to irrigation infrastructure, water use and management. Water for energy, MWE works with Ministry of Energy and Mineral Development, Water for Industry, MWE produces water to the industries premises while Ministry of Trade, Industry and Cooperatives is responsible for water use and management in the industries.

Water for Production Department is one of the Implementing Agencies of the Agro-Industrialization Development Programme. This Programme contributes to the NDP III objective of enhancing value addition in key growth opportunities**.**

The goal of the Agro-Industrialization Programme is to Increase commercialization and competitiveness of agricultural production and agro-processing. Its objectives are:

1) Increase agricultural production and productivity.
2) Improve post-harvest handling and storage.
3) Improve agro-processing and value addition.

4) Increase market access and competitiveness of agricultural products in domestic and international markets.
5) Increase the mobilization and equitable access and utilization of agricultural finance.
6) Strengthen the institutional coordination for improved service delivery.

The outcome indicators related to water for production are:

- Increase the cumulative water for production storage capacity (Mcm) from 39.3 cm^3 to 76.82 cm^3 by 2025.
- Increase area under formal irrigation (ha) from 5,147 Ha to 27,424 Ha by 2025.
- Increase the percentage of functional water for production facilities from 86.7% to 89.7%.

The interventions related to increased access and use of water for agricultural production are:

a) Complete the irrigation schemes under construction/rehabilitation including Doho Phase II, Mubuku Phase II, Wadelai, Tochi, and Olweny.
b) Construct new irrigation schemes; Ngenge, Acomai, Atari, Amagoro, Nabigaga, Rwimi, Nyimur, Musambya, Kibimba, Kabuyanda, Matanda, Igogero, Angololo, Namatala, Namulu, Sipi, Unyama, Lumbuye, Palyec, Porongo, Lopei and Imyepi.
c) Develop solar-powered small-scale irrigation systems for small holder farmers outside conventional irrigation schemes.
d) Develop infrastructure and services for bulk water storage and transfer including water abstraction systems, transmission mains, water pumping systems, storage tanks, water distribution networks.
e) Promote water use efficiency in agricultural production.
f) Complete the preparation of the National Irrigation Master Plan for Uganda

7.2.1.2 Water for Production Outcome Indicators

Cumulative Water for production storage capacity (Million cubic meters)

During the FY 2021/22, the cumulative Water for Production storage capacity increased from 52.165 Million cubic meters in FY 2020/2021 to 52.48 Million cubic meters in the FY 2021/22. This increase was below the NDP III target for the FY 2021/22 of 55.72 Million cubic meters. The underperformance was due to inadequate funding. At the current rate progress, it is unlikely that the NDP3 target of 76.82 Million cubic meters will be achieved by 2025. There is need to increase funding to accelerate the rate of progress. Figure 30 presents the trend of cumulative increase in water for production storage capacity from FY 2018/19 to FY 2021/22.

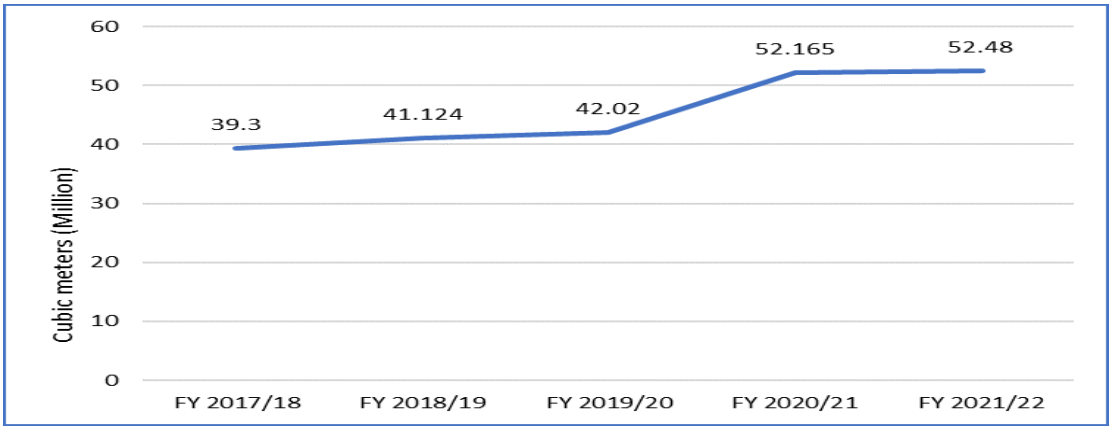


Figure 30: Trends of increase of cumulative water for production storage capacity for 5 years

Area under formal irrigation (Ha)

In order to address the challenges of climate change and food insecurity across the country, the Ministry of Water and Environment constructed to completion medium and large-scale irrigation schemes across the country thereby increasing the land area under formal irrigation from 22,504 Ha in FY 2020/21 to 22,797 Ha in FY 2021/22. This increase was higher than the NDP III target for the FY 2021/22 of 19,938 Ha. However, at the current rate of implementation, it is likely that the NDPIII target of 27,424 Ha will be achieved by 2025.

Figure 31 present the trend of cumulative increase in land area under irrigation.

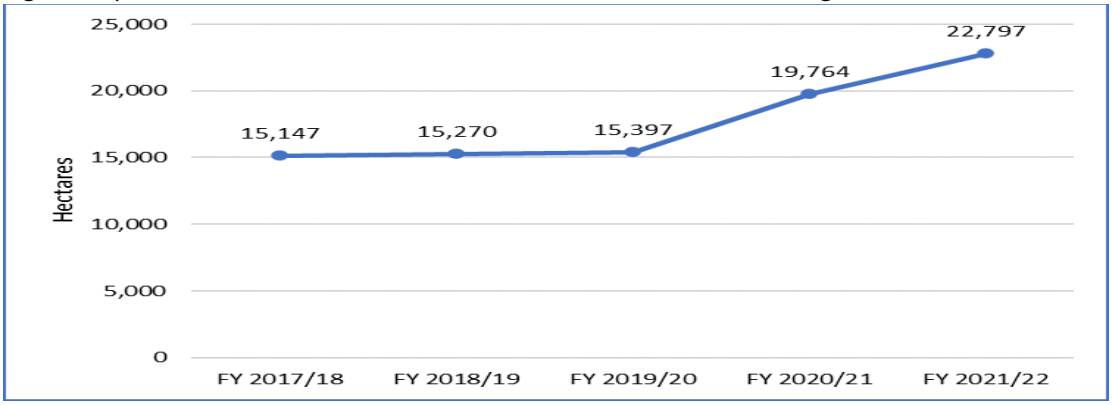


Figure 31: Trends of cumulative increase in land area under irrigation over the past 5 years

Some of the water for production infrastructure completed in the FY 2021/22 included:

- 7 schemes of Doho Phase II, Mubuku Phase II, Wadelai, Tochi, Ngenge, Rwengaaju and Olweny were completed.
- 35 Solar Powered Irrigation Schemes completed.
- 16 Parish level valley tanks.
- 58 farmer level valley tanks.

Details of the WfP production facilities constructed are presented in Table 61.

Photo 7-2-1 Current status of Kagango dam in Isingiro District.

Photo 7-2-2 Demonstration of irrigated agriculture in Owameri, Alebtong District.

Percentage of functional water for production facilities

The functionality of Water for production facilities improved from **87.9%** in FY 2020/21 to **88%** in F/Y 2021/22. This was slightly lower than the NDP III target of 88.2% for the FY 2021/22. At this rate of progress, the NDPIII target of 89.7% is likely to be achieved by 2025. Table 60 presents the trend of functionality of WfP facilities over the past 5 years.

Table 60: Trend of Functionality of WfP Facilities in the past 5 years

Financial Year (FY)	2017/18	2018/19	2019/20	2020/21	2021/22
Functionality of Facilities	86.7%	87.2%	87.8%	87.9%	88%

At the time of spot check, **88.3%** of the Water for Production facilities had functional Management Systems in place.

7.2.1.3 Water for Production Related Interventions

Table 61 presents the interventions, actions taken, target and achievements. It also provides the remarks on the performance.

*Table 61: **Progress of implementation of WfP related interventions as per NDPIII/PIAP***

Output/ Intervention	Action	Target	Achieved	Comment/Explanation
Completion of the irrigation schemes under construction/rehabilitation				
Doho Phase II, Mubuku Phase II, Wadelai, Tochi, Ngenge, Rwengaaju and Olweny completed	Complete defect liability period	6	6	Completed defects liability period for Six schemes of Doho Phase II, Mubuku Phase II, Rwengaaju Olweny, Tochi and Ngenge as planned.
	Complete construction of Doho Phase II, Mubuku Phase II, Wadelai, Tochi, Ngenge, Rwengaaju, Olweny and Agoro irrigation schemes	7	6	The Six schemes of Doho Phase II, Mubuku Phase II, Tochi, Ngenge, Rwengaaju and Olweny were completed. However, construction of Wadelai irrigation scheme in Pakwach District was at 83% cumulative progress. Land compensation issues delayed its completion.
Construction of new medium to large scale irrigation schemes.				
Acomai, Atari, Amagoro, Nabigaga, Rwimi, Nyimur, Musambya, Kibimba, Kabuyanda, Matanda/Enengo, Igogero, Angololo, Kagera, Namatala, Namalu, Sipi, Unyama, Lumbuye, Nyabanja, Palyec, Purongo, Lopei and Imvepi irrigation schemes constructed.	Construct 23 new irrigation schemes	-	-	Procurement for construction of Kabuyanda Irrigation scheme in Isingiro District was in the final stages.
	Complete feasibility studies/ Preliminary designs for new irrigation schemes	11	0	Detailed designs are in the final stages for the following mega and large Irrigation schemes; Lopei (5,000 ha) in Napak, Namalu (2,200 Ha) in Nakapiripirit, Unyama (2,000 Ha) in Amuru and Gulu, Rwimi (2,000 Ha) in Bunyangabu and Kasese, Amagoro (5,000 Ha) in Tororo, Enengo (2,500 Ha) in Rukungiri and Kanungu, Imvipe (2,500 Ha) in Arua, Mpanga (1,500 hectares) in Kamwenge and Kyenjojo Districts, Nyamugasani (1,750 Ha) in Kasese and Palyec (2,000 Ha) in Nwoya. Inadequate release of funds and COVID 19 restrictions affected planned progress.
	Complete detailed designs for new irrigation schemes	2	0	Detailed designs for Matanda (3,000 Ha) and Nsonge Irrigation schemes (1,800 Ha) in the Districts of Kanungu and Bunyangabu respectively are in advanced stages.
	Establish O&M and institutional management structures	-	2	Revitalized two Irrigation Water User Associations (IWUA) for Agoro and Doho I Irrigation schemes in Lamwo and Butaleja Districts respectively.
Rehabilitate and /or expand existing irrigation schemes				

Output/ Intervention	Action	Target	Achieved	Comment/Explanation
Establish and support sustainable management institutions for effective utilization of the Irrigation schemes	Establish O&M and institutional management structures	6	6	Conducted trainings and capacity building to the established O&M Institutional Management Structures for Six) Irrigation Schemes of Wadelai, Ngenge, Tochi, Mubuku II, Doho II and Olweny in the Districts of Pakwach, Kween, Oyam, Kasese and Butaleja respectively.
Development of micro and small-scale irrigation systems for small holder farmers outside conventional irrigation schemes.				
Solar powered water supply and small-scale irrigation systems developed.	Construct small scale solar powered water supply irrigation systems	76	35	35 out Of the targeted 76 Solar Powered Irrigation Demonstration sites were constructed in the Districts of Zombo, Oyam, Dokolo, Nwoya, Omoro, Agago, Nakasongola, Kiryandongo, Buhweju, Buvuma, Hoima, Ibanda, Isingiro, Kalangala, Kanungu, Kasanda, Kibaale, Kyankwanzi, Kyenjojo, Mbarara, Mpigi, Ntungamo, Rakai, Rukungiri, Soroti, Tororo, Namayingo, Sironko, Kapchorwa, Mayuge and Kayunga. This was due to a short fall in the release of funds. Works are still ongoing for construction of more Solar Powered Irrigation Demonstration sites in the Districts of Karenga, Amudat, Kotido, Soroti, Tororo, Namayingo, Sironko, Kapchorwa, Mayuge, Serere, Nwoya, Oyam, Adjumani, Agago, Kole, Apac, Omoro, Gulu, Zombo, Kanungu, Rukungiri, Lwengo, Buhweju, Isingiro, Rwampara and Kiruhura.
Establish sustainable management institutions for effective utilization of the Irrigation schemes	Establish O&M and institutional management structures for solar powered small scale irrigation systems	40	35	Irrigation and Water Management Associations were established for the completed 35 Solar Powered Irrigation Demonstration sites.
Develop infrastructure and services for bulk water storage and transfer including water abstraction systems, transmission mains, water pumping systems, storage tanks, water distribution networks				
Construction of new multi-purpose water development schemes of; Kyenshama Geregere, Ojama Makokwa, Kyahi, Kakingole, Kokonyuko, Korisae Lothar, Girik,	Develop feasibility studies/ Preliminary designs	14	8	Completed feasibility studies at preliminary designs for eight strategic multipurpose dams in the Districts of Amudat, Moroto, Nakapiripirit and Napak. Feasibility studies and preliminary designs for another Six multi-purpose earth dams in the Districts of Abim, Kaabong, Karenga and Kotido was ongoing.

Output/ Intervention	Action	Target	Achieved	Comment/Explanation
Komothing, Achorichori, Katabok, Kulodwongo, Katabok, Kaputh, Longore, Naoyamuwe, and Kokyeyo. Lemsui, Nakonyen and Nangololapolon	Prepare detailed design of dams	4	1	Completed detailed design of Ojama earth dam in the District of Serere.
	Construct 23 dams	-	-	Construction of Kyenshama earth dam in Mbarara District was at 32% physical progress. Procurement for construction of Geregere earth dam in Agago District was ongoing.
Dams and Valley tanks for livestock watering constructed	Equipment for construction of Valley tanks for livestock watering procured	1	0	Contract signed and paid advance to the supplier to supply One Set of Earth moving equipment unit.
	Community valley tanks for livestock watering constructed	54	16	16 out of the targeted 54 Communal valley tanks were constructed in the Districts of Mbale, Tororo, Mbarara, Kiryandongo, Nwoya, Kibaale, Kiruhura, Isingiro and Sembabule. This was due to a short fall in the release of funds. Works were in advanced stages for construction of 13 valley tanks in the Districts of Katakwi, Pader, Omoro, Adjumani, Kyotera, Kibaale, Gomba, Kazo, Moroto and Kotido Amudat, Mubende and Abim.
	Individual valley tanks for livestock watering constructed	100	58	58 out of the targeted 100 Individual valley tanks, were constructed in the Districts of Isingiro, Ntungamo, Sembabule, Nakasongola, Nakaseke, Gomba, Bukomansimbi, Ibanda, Kiruhura, Lyantonde and Mbarara. Construction of more Individual valley tanks awaits procurement of more equipment.
Establishment of management structures for multi-purpose bulk water schemes	Establish management of structures for multi-purpose bulk water schemes	2	1	Established O&M management structures for multi-purpose bulk water scheme of Rwengaaju in Kabarole District.

Output/ Intervention	Action	Target	Achieved	Comment/Explanation
Water facilities for industrial, tourism and other commercial uses developed	Construct water facilities for industrial, tourism and other commercial uses	5	1	Constructed One Valley tank in Karenga District for wildlife consumption. Funds released were not enough to develop more water facilities for industrial, tourism and other commercial uses.
Complete the preparation of the National Irrigation Master Plan for Uganda				
National Irrigation Master Plan finalized	Finalize the preparation of National Irrigation Master Plan	1	0	Formulation of a National Irrigation Masterplan for Uganda is at 20% progress (Final Inception report submitted and approved).
Water for Production Design manual completed	Finalize the preparation of Water for Production Design Manual	1	0	Preparation of design manual for Water for Production infrastructure is at 75% progress (5 Volumes out of 6 were being reviewed).

Photo 7-2-3 Inspection of tomato garden at Rushayumbe Solar Powered Irrigation Demonstration Site in Kyegegwa District

Photo 7-2-4: Mubuku II Irrigation scheme in Kasese District

Increase capacity to provide water for livestock among farming communities

MWE has 15 functional sets of construction equipment distributed in the regions of North, West, East, Central and Karamoja. 58 valley tanks were constructed on individual farmers land in the FY 2021/22 bringing the cumulative total to 1,301 valley tanks constructed through Public Private Partnership Arrangement.

Promote the efficient use of water for agricultural production

To ensure sustainability, boost the management and effective use of WfP facilities, the department continues to employ the Farmer Field Schools (FFS) Approach that includes; (i) Strengthening knowledge and capacities for climate change adaptation, (ii) Strengthening skills in operation, maintenance and management of water for production facilities at communal and individual level, (iii) Better access of livestock and crops to water through training in water management, (iv) Resilience of Livestock and crop production systems in the cattle corridor improved, (v) Established, trained and integrated FFS with community based water management system on sustainability, operation and maintenance of water for

production facilities, (vi) Saving and marketing, (vii) Integrated and modern agricultural practices (vi) Strengthen collaboration, monitoring, supervision, and networks among the farmers within FFS.

Photo 7-2-5: Katongole Communal valley tank in Mubende District

Photo 7-2-6: Cattle watering at Opiyai Valley Tank in Soroti District

CHAPTER 8:
CONTRIBUTION OF CSO TO NRECCLWM PROGRAMME

8.1 Environment and Natural Resources Civil Society Organizations

8.1.1 Introduction

Thirty two members of the Environment and Natural Resources Civil Society Network contributed to this report. This was double the number that contributed to the report of the FY 2020/21. The members that contributed were from Karamoja, Northern Uganda, West Nile, Albertine Region, South-Western Uganda, Central and Eastern Uganda. Figure 32 presents the trends of the members contributing to the Environment and Natural Resources Civil Society Organizations (ENRCSOs) reports. Figure 33 depicts the percentage of ENRCSOs that reported from each region.

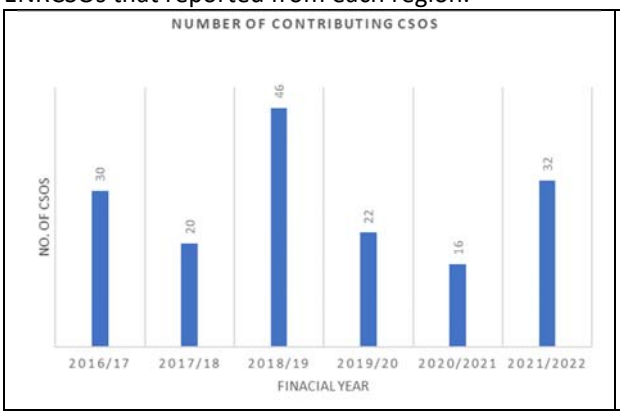


Figure 32:Trends of reporting by ENR CSOs

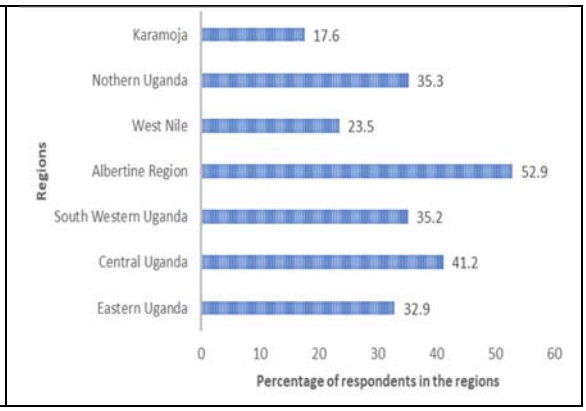


Figure 33: ENR CSOs responding in the region (n=32)

8.1.2 Financial contribution of ENR CSOs to NRECCLWM Program

The COVID-19 pandemic, its aftermath and the war between Russia and Ukraine were a major limitation to the financial flow to ENR CSOs. During the FY 2021/22, ENR CSOs contributed **USD 2,860,836** to the NRECCLWM program. This represents 134% increase in contribution when compared to the amount contributed in the FY 2020/21 (USD 1,223,325). Figure 34 presents the trends in the financial contribution by ENR CSOs.

There was increased funding to climate change and restoration of the forest cover as shown in Table 62. Out of the USD 2,860,836 contributed, 45.4% was spent on climate change and 32.2% on forestry related activities. This is because of the new funding regime targeting International Transfer Mitigation Outcomes (ITMO) to comply with the Nationally Determined Contributions (NDCs) of the countries participating in the agreement to trade in carbon credit.

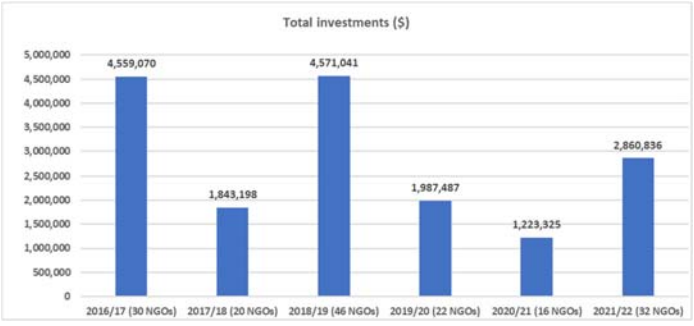


Figure 34: Investment made in the Financial Year.

Table 62: ENR Sub sector investment

Thematic area	Amount (USD)	Percentage (%)
Forestry	923,340	32.28
Environment	192,078	6.71
Wetlands	16,700	0.58
Climate	1,300,300	45.45
Governance	100,014	3.50
Water mgt	94,458	3.30
Energy	95,946	3.35
Land Management	138,000	4.82
	2,860,836	**100**

8.1.3 Contribution of ENR CSOs to NRECCLWM Program

8.1.3.1 Ensure the availability of adequate and reliable quality freshwater resources for all uses

ENR CSOs supported the government to implement water resources projects as presented below.

(i) IUCN supported catchment management planning and Implementation of the Greater Kampala Commercial Flower Farm Integrated Catchment Management Partnership (CFF-ICMP) and Gulu Integrated Catchment Management Partnership (GICMP) Under the GIZ NaTuReS Programme.

(ii) WWF Uganda supported the protection of catchments of River Nyamwamba, Awoja Source, Enyau Source, and River Rwizi.

(iii) Environment Alert supported 4 School WASH advocacy and learning clinics in schools in partnership with National Water and Sewerage Corporation (NWSC), Kampala Capital City Authority (KCCA) and Ministry of Education and Sports (MoES) where 2 women groups were in sanitation and hygiene enterprise development. It facilitated the campaign on the promotion of sanitation and hygiene among landlords and tenants.

(iv) IUCN supported communities in Aswa II Sub Catchment to implement priority Catchment management measures including the restoration of degraded riverbanks. It included demarcation and restoration of degraded wetlands.

8.1.3.2 Increase forest, tree, and wetland coverage and restore and protect hilly and mountainous areas and rangelands

In the greater Virunga landscape and the Semliki-Albertine landscapes, ENR CSOs led by the WWF-Uganda implemented 4 projects (i) Resilience for People and Biodiversity, (ii) African FLR Leadership Initiative, (iii) The Natural Forest Regeneration for Enhanced Carbon Stocks (FRECAR) project, and (iv) Restoration of the buffer zones of the Rwenzori Mountains National Park. These were a result of a study undertaken in 2020 on forest stocks, product technologies, and market value chains in the greater Virunga and Semliki-Albertine landscapes. The projects focused on economic and social priorities that can result in the degradation of the natural ecosystem and undermine the long-term resilience of people and their livelihoods.

The projects aimed at restoring **795,121 Hectares (Ha)** of the western mid-altitude highland and the Afro-montane high altitude found in the SAL and GVL as identified by the ROAM assessment and classification. Of these, **103,959 hectares** classified as western mid-altitude highlands, are heavily degraded and deforested and have the potential for afforestation (establishing woodlots, plantations, and agro forestry). The **691,161 Ha** classified as Afromontane high altitude are suitable for restoration through managed natural regeneration and enrichment planting using indigenous tree species.

The Restore Africa Program, led by led by Catholic Relief Services, together with World Vision, World Agroforestry Center (ICRAF), Caritas - Moroto, Caritas – Tororo, Uganda Land Care Network, and CARE International in Uganda, is supporting over 349, 920 small-scale farmers to restore 559,000 hectares of degraded land, over the next 5 years. This means approximately 111,800 Ha are restored each year. It is the biggest small-scale farmer-driven grassroots restoration program in the country, targeting to overcome the climate crisis while alleviating poverty and hunger, and caring for the land.

Caritas is responsible for the Coffee-Banana (Agro-silvopastoral) system covering the Karamoja drylands and Eastern region, reaching 3.2 million people and 184,000 Ha. Uganda Landcare Network is covering the pastoralism (silvopastoral) ranges with a population of 1,597,800 covering 89,000 Ha. World Vision is covering the pastoral/annual cropping region around the Albertine Graben with a population of 2,789,100 and 134,000 Ha. Care International in Uganda is covering the coffee vanilla part of western Uganda with a population of 2,537,900 and 117 Ha.

The ENR CSOs organized under the ***FMNR Network led by Tree Talk Plus, funded by Vi-agroforestry*** are implementing a project called Strengthening the FMNR Network to increase adoption of the FMNR Model in Uganda. The achievements were as follows:

i. The MNR Network organized a capacity-building meeting for its members bringing together 23 members from the East, 43 members from the central, and 22 members from West Nile.

ii. Organized 4 exchange visits for FMNR members, staff, and members of the Steering Committee from the districts of Wakiso, Gomba, Mpigi, Arua, Nakasongola, Mt.Elgon, and Ssembabule districts.
iii. Established 3 FMNR Plots for farmers to learn about income generation activities like bee-keeping.
iv. Organized a resource mobilization meeting that brought together the ENR CSO network steering committee, civil society organizations implementing activities in the sectors of forestry, agriculture, and climate change, the ministry of water and environment, and Agroforestry.
v. Registered 3 member organizations that included PELUM-Uganda, Wan-Agri-tech, and The Uganda National Apiculture Development Organization (TUNADO).
vi. Developed and distributed 3 thematic newsletters on FMNR practice based on local examples to stimulate the uptake of the model in Uganda.
vii. The members undertook FMNR-based regeneration in the Karamoja sub-region (50 acres by Ecological Christian Organisation), West Nile and Albertine region (517 acres by Ecological Christian Organization), 7,000 trees generated by Kaliro Environment Conservation Project, 5,000 trees regenerated by Matiri Natural Resource Users and Income Enhancement Association (MANRUIA).

Photo1: FMNR supported with barbed wire in Bugiri by Tree Talk Plus

Photo 2: FMNR plot supported with income-generating activities by World Vision in Arua

ENR CSOs together with District Farmers Associations, with funding support from Vi-agroforestry, planted trees on farms to increase tree population on the farm and in communities including *Miltia exelsa, Maesopsis eminii, Terminalia spurba, Albizia chinensis, Melia volukensii, Syzygium cordatum, Grevillea robusta, fruit trees* and *Eucalyptus grandis* among others. A total of 1,551,432 tree seedlings were planted. This is equivalent to 1,396 Ha planted with trees. Table 63 presents the tree seedlings by each organization.

Table 63: Tree seedlings planted per organization

Organization	Tree seedlings planted	Approximated area in Ha.
Gomba District Farmers Association	201,660	181.5
Wakiso District Farmers Association	116,000	104.4
Meaningful Empowerment for Change and Poverty Alleviation	106,000	95.4
Kaliro Environment Conservation Project planted	102,500	92.2
Matiri Natural Resource Users and Income Enhancement Association	50,000	45
Amuria Youth Alliance Development Organization	5,000	4.5
Tree Talk Plus	220,180	198
Sembabulue District Farmers Association	150,092	135
Environment Alert	30,000	27
Sheema District Famers Association	30,000	27
Youth Environments Services, Namayingo District	420,000	378
Tree Adoption Uganda	120,000	108
Total	**1,551,432**	**1,396**

In Sembabule District, 40,036 short-term shrubs and woody species (*Calliandra calothyrsus*) were planted on soil conservation structures in farmers' gardens. In Gomba District, the tree seedlings covered 5 Sub-Counties including 108,200 trees planted in the local forest reserves of

Kaswera Central Forest Reserve (CFR), Wabilago Local Forest Reserve (LFR), Kaalo LFR, and Budugadde LFR. Tree Talk Plus, Tree Adoption Uganda, and Youth Empowerment Services planted a total of 684 hectares of trees for the fulfillment of the Bonn Challenge, the African Forest Landscape Restoration Initiative, and the ROOTs Tree Planting Campaign. In all the cases, community tree nurseries were developed to sustain the supply of seedlings A survival rate of 80% is estimated for the trees currently planted.

The Uganda Forestry Group, the Climate Action Network Uganda, and the Ecological Christian Organization organized meetings to provide input into the forestry review process. They sought to include in the review process youth-forestry apprenticeship, mindset change, forest products diversification and value addition, the inclusion of refugee response mechanisms, use of digital mechanisms in tracing forestry crime, green belts in urban areas, and diversification of livelihood options for the rural poor. In addition, they sought to add resource mobilization mechanisms for the sector, improve the management of charcoal and biomass energy, improvement of the bundle of rights for forest users, the inclusion of oil and gas and its impacts on the sector, registration of forests and forests lands, forest valuation, conflict management and addressing concerns relating to professionalism in the sector.

Umoja Wildlife Conservancies of Uganda has promoted the effective conservation of wildlife and natural resources outside protected areas. The capacity of local communities to protect critical ecosystems (Rubuguri, Kyankwanzi, Nakaseke, Rurambira, Lipani, Murchison and Aswa Falls, Lolim, Kitgum, Abim, Karenga, Lapono, Kasambya-Kakumiro, Kalongo-Parabongo Mountain Range Conservancy, and Kayirabwa Chimapanze Conservancy) outside protected areas was strengthened. This involved establishing leadership structures, operationalizing them, and formation of communal land associations to enable them register as conservancies. It was important to build their capacity to understand wildlife use rights to improve household incomes and reduce poverty. It was hoped that this would reduce human-wildlife conflicts and improved tree cover through farmer-managed natural regeneration.

Mpigi District Farmers' Association rehabilitated degraded local and central forest reserves. The association planted 22 Ha of degraded Nawandigi Central Forest Reserve in Buwama Subcounty together with the Umoja Veterans Savings and Credit Cooperative Organization. The CFR is being restored through enrichment planting and using the Farmer Managed Natural Regeneration approach. A total of 152,200 seedlings of *Terminalia superba, Maesopsis eminii, Melia volkensii, Grevillea robusta,* and others have been planted in the forest reserves by 72 farmers groups (1,800 farmers in Kamengo, Gombe, Kituntu, Nkozi, and Buwama Sub-Counties). On top of restoring the forests, they had 482 Rocket Lorena energy-saving cooking stoves constructed and 12 biogas stoves constructed for households with animals.

Photo 3: Training in community engagement in conservation outside protected areas

Photo 4: Mpigi District Famers Association Forest reserves restoration and participation in International Day of Forests

The ENR CSOs led by Ecological Christian Organization were able through a Multi-Actor Platform for 100% renewable energy to organize 5 online meetings and 6 physical meetings on energy awareness. 130 participants were sensitized on 100% multi-actor partnerships for renewable energy transition and

undertook a capacity building training session on resource mobilization. A study on the participatory multi-actor platform was commissioned to generated ideas for 100% renewal energy strategies. The roadmaps, including technical scenarios on 100% renewable energy as a driver for development was developed.

The Renewable Energy Civil Society Organization (RECSO) facilitated by Environmental Alert, conducted an analysis of renewable energy needs in the health centers in the hard-to-reach areas of the Albertine region and trained 45 Village Health Team (VHTs) to pass the information to the communities. It provided input in the review of the national energy policy of 2019 through a renewable energy position paper presented to the Ministry of Energy and Mineral Development in August 2022.

Over the years, there has been an outcry against illegal charcoal production and trade in the Karamoja region. ENR CSOs in Karamoja have observed with fear that the rate at which charcoal production and trade have engulfed the entire Karamoja region, with firearms protecting those involved in the production and trade. Tracing the trade revealed that charcoal from the region is traded as far as Saudi Arabia, Qatar, United Arab Emirates, Kenya, and Ugandan cities. ENR CSOs are concerned that whereas charcoal production and use is inevitable, there is need for a comprehensive review of the regulatory frameworks of the charcoal value chain to promote sustainable charcoal production and trade. There need to provide alternative sources of income for those involved in charcoal production.

Photo5: Charcoal production in Karamoja

Gomba District Farmers' Association constructed 30 rocket Lorena energy-saving stoves for households in 3 sub-counties of Kyegonza, Maddu, and Kabulasoke to support communities with clean cooking local technology and save wood fuel. The Sembabule District Farmers' Association trained members of Kikoma Kwagalana Farmer Field School (FFS), Misenyi FFS, Eyeterekera FFS, Kyabi Coffee FFS, Twekembe FFS, Biyinzika FFS, and Kawanda Kwekulakulanya FFS on the process of construction of energy saving stoves to reduce on amount of firewood used for cooking. Forty members were trained and 3 demonstration sites constructing rocket Lorena stoves were setup. Before the training, members had constructed 20 wood fuel-saving stoves in the year.

Ecological Trends Alliance was involved in forestry research awareness and sensitization, in areas of forest governance and gender participation, free prior and informed consent, forest-based enterprises, the effect of migrations on forest resources, economies of scale in the forest sector, and land use changes and their impacts on forest cover. It reviewed following research studies:

(i) An assessment of land cover changes (1990 – 2020) concerning Central Forest Reserves and Community Forests (Beatrice Kyasimiire and Grace Nangendo – Wildlife Conservation Society).
(ii) The opportunities and threats brought by the oil and gas investments concerning gender and inclusiveness. (Joselyn Bigirwa – Independent Consultant).
(iii) An assessment of illegalities as a result of multinational investments (oil and gas, sugar cane, and tea) and compliance with national laws and international best practices (FPIC). Impacts and implications (Prof. Ronald Mayambala-Kakungulu – Makerere University).

(iv) Economies of scale; benefits versus losses to IPLCs in the oil and gas and agro-commodities sectors concerning the Bugoma landscape (Moses Masiga – ENR Africa Centre).
(v) The impacts of the oil and gas sector on the demography, immigration, movement of labor, and pressure created on other investments that affect natural resource bases in the Bugoma landscape (Ecological Trends Alliance).
(vi) The best and most feasible and sustainable Forest-based Enterprises (FBEs) that can support and sustain women, youth, and community livelihoods (Gaster Kiyingi – Tree Talk Plus).

8.1.3.3 Strengthen land use and management

Sembabule District Farmers Association trained 145 groups in agroforestry and sustainable land use management practices in Mijwala, Mateete, Rwebitakuri, and Rugushuulu sub-counties. It aimed at mitigating and combating climate change through tree planting and management, nutrient management, soil erosion and water conservation structures. Farmers were trained on de-silting routines for the trenches and management of the ditches in the dry season in preparation for the rainy season. A total of 3,795 (1,445 males and 2,350 females) benefited from the training. Gomba District Farmers Association trained 81 Farmers groups and 24 farmers field schools in environmental conservation practices (2,145 people trained, 58.5% females and 41.5 males) in the 5 sub-counties of Maddu, Kabulasoke, Kyegonza, Mpenja, and Gomba Trading Centre.

Photo 6: Sustainable Land Management Practice in Maddu, Gomba district

Civil Society Land Actors, led by PELUM Uganda, in collaboration with the Ministry of Lands, Housing and Urban Development (MLHUD) conducted the 5th Land Awareness Week (LAW) 2021 in the districts of Mityana, Mubende, Kasanda and Kyankwanzi. Thirty-five CSOs participated in the LAW events and built informal land management structures to engage in land governance for effectiveness and accountability. Conducted a 3-days top-up training for 5 female and 4 male Community-Based Paralegals. The training covered 13 districts with 128 male and 27 female participants.

In addition, PELUM Uganda conducted the district-level land sector performance review meetings in the Northern, Eastern, Western Uganda, and West Nile regions. 155 participants from the district, Sub County, and community level stakeholders attended.

8.1.3.4 Maintain and/or restore a clean, healthy, and productive environment

ENR CSOs together with the Parliamentary Symposium on Oil and Gas, held the **Parliamentary Symposium on Oil and Gas Development and Good Governance** of the Industry. This was to explore the equitable sharing of treasures of oil and gas in a transparent and environmentally sustainable manner. Other actors included Advocates' Coalition for Development and Environment (ACODE), Water Governance Institute (WGI), and Africa Institute for Energy Governance (AFIEGO).

Provided input into Uganda's first Extractive Industries Transparency Initiative (EITI) Report and Workplan and participated in the Regional and National Dissemination of EITI Report, Dialogue on Extractives Revenue Management, radio and television talk show on environment and livelihoods in the oil and gas sector with funding from Natural Resource Governance Institute, Global Rights Alerts, DGF, and WWF.

In Bidibidi Refugee Settlement, IUCN implemented a project targeting sustainable natural resource management in refugees and host communities in Bijo and Kululu Sub-Counties in Yumbe District. It involved building the capacity of local communities in refugee settlements and host communities on sustainable natural resources management. It used participatory planning to develop Community Environment Action

Plans (CEAPs) and restored degraded natural habitats and lands in refugee settlements and host communities using CEAPs.

8.1.3.5 Promote inclusive climate resilient and low emissions development at all levels

Environment Management for Livelihood Improvement – Bwaise Facility, supported by Climate Action Network-Uganda, with funding from WWF-UCO, OSIEA and Care Denmark were engaged in climate change discourse in international, regional, and national discussions and actions that help citizens to understand climate change. The activities included:

(i) Conducted a CSO Preparatory workshop on COP 26.
(ii) Conducted meetings to explore the inclusion of forestry-related targets and measures in the updated Nationally Determined Contributions to reduce greenhouse emissions.
(iii) Contributed to the NAP Symposium.
(iv) Convened a planning meeting and developed a thematic brief on Adaptation in preparation for COP 27.
(v) Convened a workshop on sharing the outcome of the Bonn Session.
(vi) Developed a customized guide on communication and formulation of the adaption communication.
(vii) Developed a paper on climate change risks, hazards, and indigenous knowledge in the greater Virunga landscape.
(viii) Established a Climate Change Multi-Stakeholder Platform in the great Virunga land scape in Uganda.
(ix) Facilitated consultations on the updated Nationally Determined Contributions.
(x) Conducted media engagements on COP 26 Outcomes.
(xi) Printed and disseminated 100 copies of the National Climate Change Act.
(xii) Carried out a popularization meeting of the National Climate Change Act and the Adaptation Communication for Uganda.
(xiii) Conducted a television talk show and a radio talk show on the National Climate Change Act at Top Television.

Participatory Ecological Land Use Management (PELUM) promoted climate resilience for smallholder farmers focusing on promoting the Climate Resilient Agro-Ecosystems Model (CREAM) among member organizations and partners. This was through capacity building, advocacy, and establishment of demonstration sites.

Conducted a refresher training for 13 Member Organization staff and reviewed the CRAEM guide. 23 participants from 10 Member Organizations[18] attended. Facilitated 10 model communities affiliated with 10-member organizations to undertake multi-stakeholder engagements for participatory climate risk assessment. Facilitated the Participatory Assessment of Climate and Disaster Risk tools. 340 participants (140 men and 200 women) attended the sessions. 483 participants (268 female and 215 male) from the Trocaire partners[19] acquired skills and knowledge on the use of the GALS tools specifically the Vision Road Journey and Gender Balance Tree through GALS training and technical backstopping visits.

PELUM organized a regional Training of Trainers (ToT) on Participatory, Gender Responsive Climate Risk Assessment, and Holistic Adaptation Planning using agroecological principles in Gulu, Soroti, Kabarole, and Masaka. The training strengthened the technical capacity of 17 member organizations[20] and 3 Trocaire partners[21] (63 participants - 40 Men and 23 Women) which helped to facilitate rural communities to undertake participatory, gender-responsive climate risk assessment and adaptation planning at the farm and community levels.

ENR CSOs and the Green Economy Coalition (GEC), facilitated by Action Coalition for Environment and Development undertook to steer the country towards a green economy approach by moving away from the brown economy characterized by the effects of climate change. This involved (i) Climate Change Integration Compliance Assessment which brought together 50 participants, (ii) Regional and National Dialogues on

[18] EADEN, Caritas Kabale, AFIRD, A2N, SHA, FINASP, AFCE, JESE, KCU and CIDI

[19] A2N, KCU, JESE, SHA, CIDI, FINSAP, AFCE, EADEN and Caritas Kabale

[20] A2N, UNACOH, ECO, AFIRD, KULIKA, Food for the Hungary, Caritas MADDO, Homeland organics, EADEN, Caritas Lira, SARD-NET, IIRR, FINASP, AFARD, JESE, Caritas Kabale, IDP

[21] SOCADIDO, TEDO, ARLP

Local Green Enterprises involving 2 sessions of 30 participants, (iii) GEC Regional and National Dialogues on Green Recovery which involved 100 participants, and (iv) GEC Basic Action Research Framework for Resonance Test Inquiry of Local Green Enterprises in Mbarara City leading to a study on challenges faced by Micro and Small to Medium Enterprises.

Environment Alert conducted a training involving all stakeholders working on Sustainable Development Goals (SDGs), particularly SDG13 on climate action. The training aimed at gender mainstreaming and inclusive governance in climate change adaptation and mitigation. 90 participants from national and local government levels attended the training.

Environment Alert reviewed Farmer Field Schools Plans of 150 Famer Field Groups and integrated context specific gender actions. This covered 7 districts in the cattle corridor.

8.1.3.6 Reduce human and economic loss from natural hazards and disasters

ENR CSOs supported communities affected by floods and landslides in Bududa, Bulambuli, Bundibugyo, and Kasese districts. They were involved in awareness creation, disaster preparedness, and providing humanitarian aid to the affected persons.

Photo 7: A vehicle submerged in a river in Mable

8.1.3.7 Challenges and Recommendations

(i) Continued illegal land titling of protected areas for large investments in agro commodities.
(ii) Court rulings in favor of illegal actions against the provisions of the policy and legal provisions.
(iii) Delayed development of the overall National Adaptation Plan to guide climate change interventions within the different sectors.
(iv) Increasing number of refugees is negatively impacting on the environment and natural resources in the host communities.
(v) Land tenure system has contributed to investments in some of the protected areas.
(vi) Rapid urbanization has increased encroachment on natural resources, and environmental degradation through increased pollution.

Recommended Actions

(1) The MWE should fast-tracks the finalization of the Forestry Policy to guide sustainable management of the forest sector.
(2) MDAs within the NRECCLWM Programme should fast-track operationalization of the new program approach within the NDP III that seeks to improve institutional coordination and collaboration
(3) MDAs within the Programme should step up efforts in resource mobilization through proposal developments, especially for GEF and GEF funds. This however requires strengthening the fundraising capacity of both MDAs and CSOs in mobilizing resources for the sector.
(4) The Ministry of Finance, Planning, and Economic Development should, through the National Planning Authority ensure that environmental and climate change issues are integrated into national and district development plans.

8.2 Uganda Water and Sanitation Network (UWASNET)

8.2.1 Reporting profile

Through the Uganda Water and Sanitation Network (UWASNET), 69 CSOs, representing 45% of the 154 registered members of UWASNET submitted reports for FY 2021/22. This is a slight decrease from the 92 CSOs that reported for FY 2020/21. However, the declining trends of reporting by CSOs can be attributed to closure of some CSOs that were operating in the WASH sector, Figure 35.

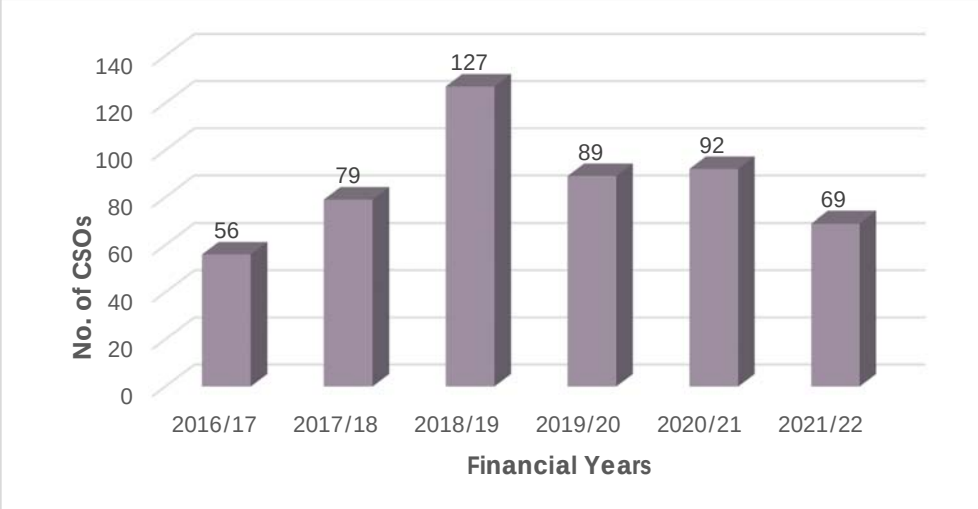


Figure 35: CSO reporting trend

Local/national NGO's lead the reporting, accounting for 47.1% followed by international NGOs with 36.8% and others 21%.

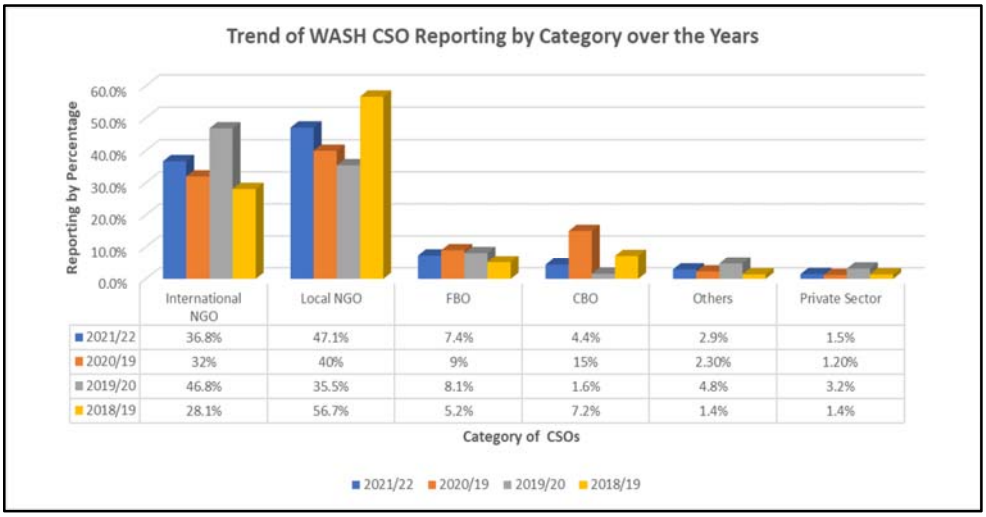


Figure 36: WASH CSO reporting by category

8.2.2 Areas of intervention

FY 2021/22 is the second year of reporting under the Third National Development Plan (NDP III). NDP III uses a program-based approach to development. Interventions in WASH are covered under the three programs for Agro Industrialisation (AI), Human Capital Development (HCD), and Natural Resources Environment Climate Change Land and Water Management (NRECCLWM).

Figure *37*37 shows the number of CSOs reporting in the different areas of intervention, mapped to the NDP program areas. The HCD program attracted the most interventions led by Sanitation and Hygiene (57) followed by capacity building (45) and water supply (41). Water for Production (WfP) attracts the fewest CSOs (03).

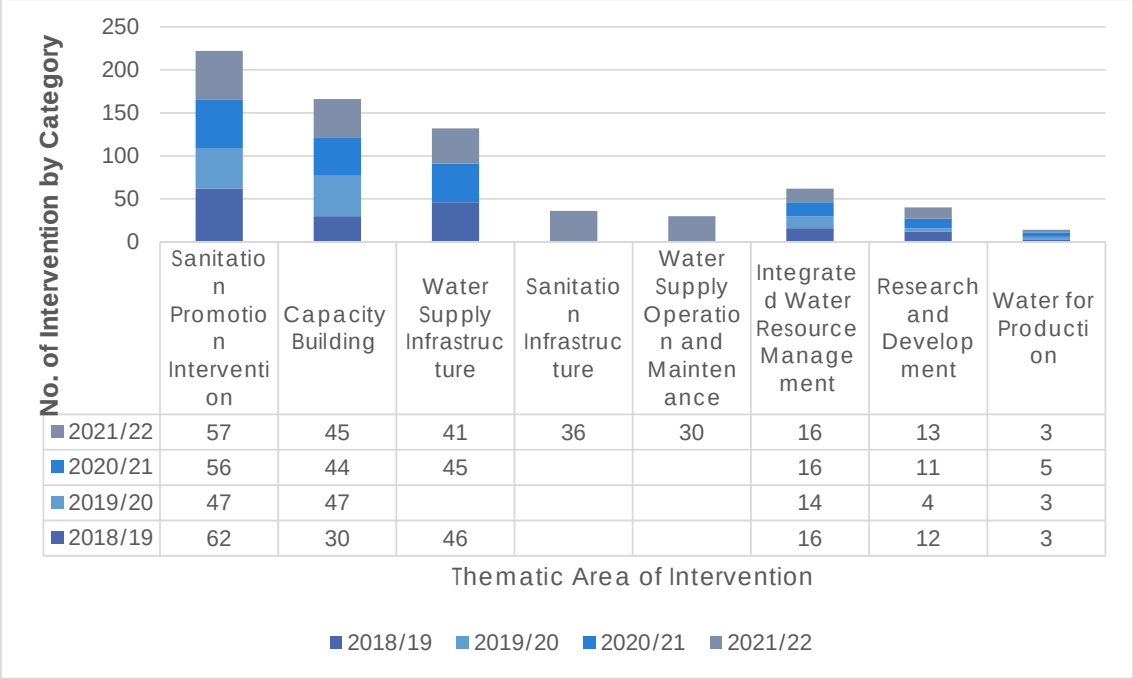


Figure 37: Number of CSOs reporting by NDP III program area

8.2.3 CSO presence/activities by region

UWASNET members' activity is mapped regionally according to the 10 UWASNET regions. Central region has the most CSOs (28), followed by Western (24), Lango-Acholi (22) with the least being Karamoja and Teso at 11 and 12 respectively. 20 (15%) out of 136 districts did not have a WASH CSO presence an indication of inequity in service provision. A total of UGX 78.61 billion was invested in the water and sanitation subsector, an increase of UGX 20 billion, representing 18% growth in investment compared to the previous year.

8.2.4 CSO investment trends

CSO investment has largely been in the HCD program followed by NRECCLWM with Agro-Industrialization (Water for Production) having the lowest investment. International CSOs still account for the highest source of funding towards interventions implemented. Most investment went to Water Supply Infrastructure (UGX 47.7bn) while Research and Development received the least financial resources estimated at UGX 0.3 billion. This represents a remarkable decline from the last FY 2020/21 partly due to reduction in CSO that reported from 92 members to 69.

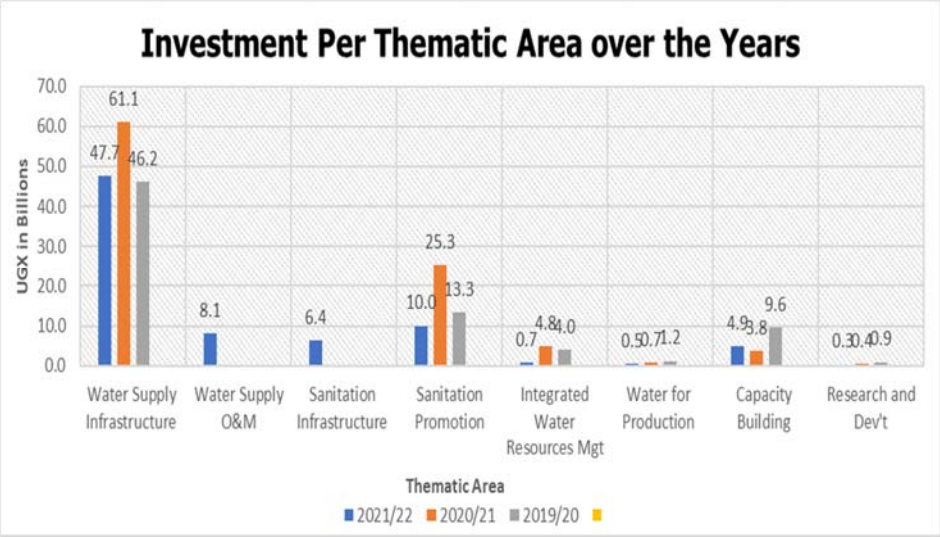


Figure 38: Investment trends per thematic area

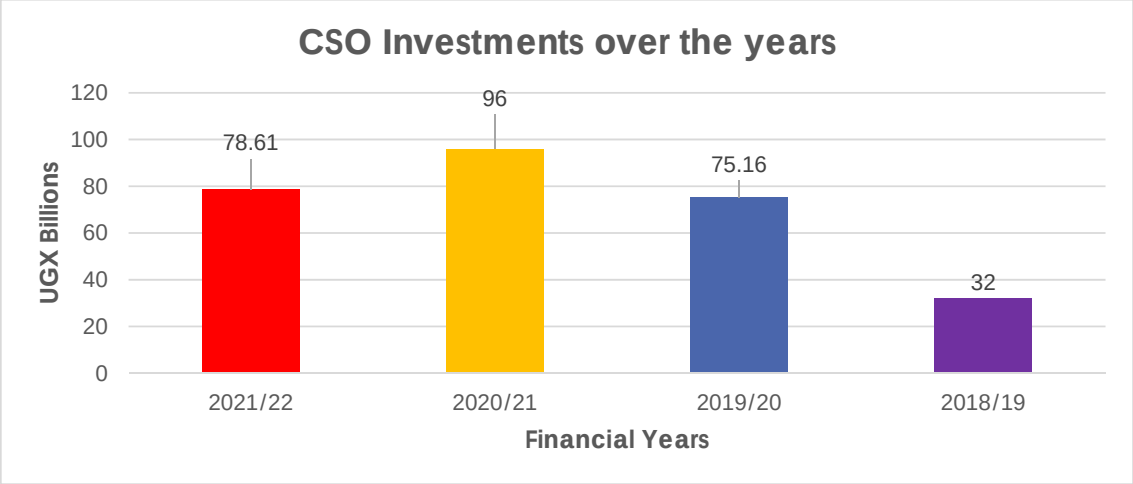


Figure 39: CSO investment trends

Extracts from the NDP III HCD program action plan that accounts for 90% of the CSO investment, indicate a budget of UGX3,021 billion. The total CSO investment in water supply, sanitation, capacity development and research and Development during FY2020/21 was UGX 78.61 billion. This CSO investment is 1.3% of the PIAP planned investment. Table 64 shows the comparison of HCD PIAP investment requirement and actual by CSOs.

Table 64: Comparison of HCD PIAP investment requirement and Actual by CSOs for FY 2020/21

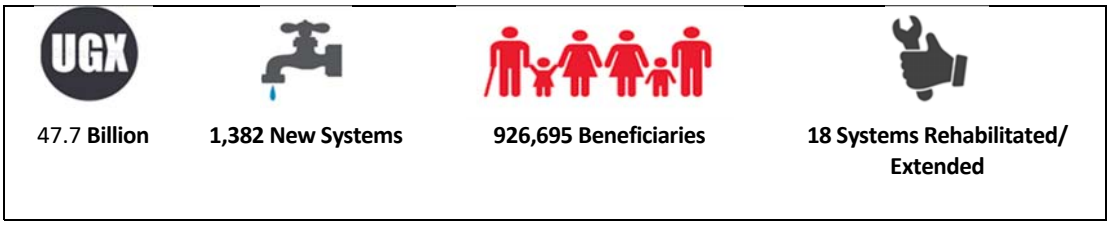
Budget Area	Budget (UGX Bn)
HCD PIAP extracted Budget	**5,901**
UWASNET Investment - Water	55.8
UWASNET Investment - Sanitation	16.4
UWASNET Investment - CB	4.9
UWASNET Investment - R&D	0.3
Total UWASNET HCD Investment	**77.4**
Percentage Contribution	**1.3%**

8.2.6 CSO contribution to district local government budgets

CSOs are development partners to the district local government (DLG) in the districts of operation. Coordinated development planning requires integration of budgets of all development partners in the DLG budget. 61% (42) of the 69 CSOs with interventions during FY2021/22 reported a proportion of their budgets in the DLG budget. Overall, an average of 25% of the CSO budgets goes to the districts.

8.3 CSOs investment in the Human Capacity Development Programme

8.3.1 Access to rural water supply



38 CSOs invested a total of UGX 47.7 billion in financing water supply in FY 2021/22, a decrease of by UGX 13.4 billion or 22% from FY 2020/21.

8.3.2 Access to safe and clean water sources in rural areas

CSOs investment in water supply contributed towards realization of increased access to inclusive safe water supply in rural areas improved access through the respective Program Implementation Action Plan (PIAP) interventions as summarized in the Table 65. These investments also benefitted refugees and hosting districts.

Table 65: CSO Contribution to rural water access

New Water Source	By CSOs	HCD target	CSO PIAP Contribution (%)
Piped Water System	35	20	175%
Point Water Source	666	300	222%
Solar powered piped system	27	70	38.6%

Table 66: CSO Contribution to rural water access (point water sources)

Point Water source	Total of type constructed	Percentage distribution
Protected spring	42	6.3%
Shallow well	64	9.6%
Deep Borehole	560	84.1%
Total	**666**	**100%**

African Water Solutions motorized (with solar power) an existing borehole in Pangieth Parish Alwi Subcounty of Pakwach District and fitted it with 3 Public Stand Posts (PSPs) and 2 yard connections with ability to serve about 500 households in 3 villages. Nonetheless, system functionality is affected by illegal connections due to the high-water demand, inability to pay water user and congestion at the existing Public Standpipes (PSPs). These challenges are being mitigated by empowering the Sub County Water Board to supervise the system under the district oversight.

Photo 8-1 piped water supply by CSO

8.2.9 Villages with access to safe and clean water supply

161 institutional and communal rainwater harvesting (RWH) systems and 493 household water tanks were provided by CSOs. A total of 662 villages were reported to have new water points hence access to safe and clean water supply. Table 67 shows the comparison between the HCD PIAP target and the actual achievement by CSOs in FY 2021/22.

Table 67: Comparison of PIAP HCD target and actual by CSOs in FY 2020/21

PIAP action	Improved water point per village	RWH systems (School and Communal)
By CSOs	662	161
HCD target	3,880	10,000
CSO PIAP Contribution (%)	17%	1.61%

Photo 8-2 Well maintained borehole supported by a CSO

8.3.3 Functionality of rural water systems

CSOs rehabilitated 499 point-water sources and 482 piped water systems. Table 68 shows CSOs contribution to functionality. A 12% contribution to point water source rehabilitation was reported. The 18 rehabilitations, upgrades and expansions of piped water systems are against a PIAP target of 10 resulting in performance of 180% above target. The rehabilitation, upgrade and expansion led to a total of 482 connections (154 -public stand posts,5-yard connections, 1-kiosk, 318- house connections and 4-institutional constitutions). The scale and definition of the PIAP indicators will require refinement to allow for proper comparison of the CSO contribution towards access especially through piped water systems.

Table 68: CSO contribution to functionality of water systems

PIAP action	By CSOs	HCD target	CSO PIAP Contribution (%)
1. Rehabilitation of existing point water sources	499	3,880	12%
2. Rehabilitation, upgrade and expansion of existing Piped Water Systems	18	10	180%

Table 69 presents the list of piped water systems rehabilitated by CSOs during the FY 2021/22.

Table 69: List of Water Systems Rehabilitated

S/No.	Name of the piped water supply system	District where the water supply system is located	Village/Town where the water supply system located
1	Kabende Pipe Water Supply System	Kabarole	Kyakabaseke & Kivakado
2	Nyakigyera Gravity Flow System	Isingiro	Rushayo
3	Nyakigyera Gravity Flow System	Isingiro	Rushayo Village, Nyakigyera Parish, Kagarama Sub-county
4	Kanyabikyere GFS extension	Kitagwenda	PSP KANYABIKERE PSP KIHOGO 1 PSP KIHOGO 2 PSP ZAMBIA PSP KAROKARUNGI PSP OMUKARERE 1 PSP OMUKARERE 2 PSP KYENDANGARA 5 KAROKARUNGI ATM
5	Kanara GFS extension	Kitagwenda	1. Kabeza 2.Kekubo 3. Rweshama 2 4.Kerere
6	Community Drinking Water Kiosks	Mpigi	Kammengo subcounty
7	Repairs on Sindila GFS	Bundibugyo	Busunga Town council
8	bubukwanga GFS	Bundibugyo	bubukwanga
9	Orinya piped water supply system	Obongi	Palorinya Settlement -Zone 2
10	Baratuku Motorized water pipe network	Adjumani	Baratuku Refugees settlement, Adjumani District
11	Alere Mini Water system	Adjumani	Alere refugees settlement
12	Ayilo 2 Motorized water system	Adjumani	Ayilo 2 block F
13	Pagirinya II water system	Adjumani	Pagirinya refugees Settlement Block C
14	Malongwe Piped water system	Buikwe	Malongwe
15	Kasambya Piped water system extension	Kakumiro	Bugonda, kyegegwa and Ndegwe
16	Kihungya Piped water system	Buliisa	Kihungya
17	Acimi Piped water system	Oyam	Acimi A village
18	Lunyo piped water supply system	Busia	Lunyo subcounty

8.3.4 Operation and Maintenance of water supply infrastructure

Maintenance is key to ensuring functionality and sustainability of investment in water supply infrastructure. Activities for maintenance included 78 piped water systems and 91 point-water sources.

Management/ operation of the systems was varied. Majority of the systems are managed by private operators and others by community-based operators like CBOs, schools, local government, CSOs (KARUDEC, ACORD-U, Water Mission Uganda, and Oxfam) and Water Boards. Table 70 shows the operators of the piped water systems provided by CSOs.

Table 70: Summary of operators for piped water systems invested in by CSOs

System operator/manager	National water (NWSC)	Private operator	Community	Other	LG	Total
No. of Systems	2	4	11	59	6	82

The performance of the different operators was relatively good as detailed in **Error! Reference source not found.** 71, apart from NWSC that had missing information on customer satisfaction levels.

Table 71: Key performance indicators of operators for piped water systems invested in by CSOs

System manager	Number of systems	Average Days of full-time water supply in the year	Average Customer satisfaction index
National water (NWSC)	2	260	Not captured
Other	59	342	64.5
Private operator	4	319	100
Community	11	192	86.5
Local Government	6	223	90
Grand Total	82	337	83.4

8.2 Access to inclusive sanitation and hygiene services in rural areas

16.4

Billion

50,364

Households

47,855

Hand Washing Facilities

1,686,082

Beneficiaries

57 CSOs invested UGX 16.4 billion to support 261 interventions in sanitation and hygiene in FY2021/22. This was higher than the invested in FY2020/21 of UGX 8.9 billion.

8.3.5 Sanitation infrastructure

Traditional latrines with slabs/sanplats latrines dominate the sanitation facilities provided (38,720), followed by ecosan toilets (15,124). The infrastructure investments benefited 421,748 people of which 203,741 were females and 35,411 were refugees. Out of latrines/toilets constructed 50,364 were household sanitation facilities. A total of 47,585 functional hand washing facilities were installed. Out of all the investments made in construction of sanitation infrastructure, the average CSO contribution on the total cost was estimated at 30%.

Table 72: Distribution of interventions and sanitation facilities constructed

Type of sanitation facility constructed	Number of Interventions	Total number constructed toilets
Traditional latrines with slabs/sanplats	48	38,720
Unlined VIP latrines	6	908
Lined VIP latrines	50	6,568
Ecosan Toilet	15	15,124

Type of sanitation facility constructed	Number of Interventions	Total number constructed toilets
Pour flush toilets	13	3,807
Automatic flush/ Water borne toilets	3	25
Septic tanks	3	1,274
Other	11	4,776
Total	149	71,202

The distribution of interventions across beneficiary categories is shown in Table 73. Interventions were concentrated on households (62 interventions), followed distantly by schools (53 interventions).

Table 73: Distribution of Interventions among beneficiary categories

Beneficiary Category	Number of Interventions	Percentage
Household	62	45%
Public places (Markets, Taxi parks etc)	7	5%
Schools	53	38%
Health Centres	11	8%
Other	6	4%
Total	139	100%

The WASH interventions were premised on the NDPIII programme objective of improving the foundations for Human Capital Development (HCD) by equipping and supporting all lagging primary and secondary schools, and high education institutions to meet Basic Requirements and Minimum Standards (BRMS). CSOs have contributed through provision of sanitation infrastructure investments where by 69 schools have benefited through several interventions such as sanitation facilities, hand washing facilities and menstrual hygiene rooms. The construction of sanitation facilities has led to the improvement of the pupil: stance ratio from 1:141 to 1:65 in the schools that benefited. Table 74 presents the sanitation infrastructure constructed in schools.

Table 74: Sanitation Infrastructure provided to schools

Facility Type	Number of facilities
Hand Washing Facilities	174
Stances for Boys	112
Stances for Girls	370
Stances for boys and girls (shared)	129
Male Teacher stances	8
Female Teacher stances	8
Persons with Disabilities stances	110

The following lessons were learnt from CSOs school sanitation interventions:

- Concrete handwashing facilities were more sustainable form of infrastructure because they are less prone to vandalism and durable.
- Conducive sanitation facilities keep children in school.
- The low School Facilitation Grant constrains implementation of school WASH and Menstrual Hygiene Management (MHM) initiatives especially infrastructure development. CSOs should therefore complement Government in the construction of school WASH and MHM infrastructure.

8.3.6 Hygiene promotion

47,855
Hand Washing Facilities

3,595
Open Defecation Free (ODF) Villages

526,101
ODF Beneficiaries

Hygiene promotion was a key activity of the CSO COVID-19 response and continued efforts to contribute to desired improved sanitation levels in the country. 47,855 handwashing facilities (HWFs) were provided as part of the interventions.

Table 75: ODF villages achieved in FY 2021/22

ODF road map implementation progress	
Parameter	Result
Villages triggered for ODF	9,451
Villages declared ODF	3,595
Population in Villages declared ODF	526,101
Females in Villages declared ODF	199,505
Number of districts with interventions	86

Hygiene and sanitation improvement campaigns undertaken towards creation of open defecation free (ODF) villages resulted in triggering in 9,451 villages in 86 districts by several CSOs.3,595 villages, with 526,101 residents, of whom 38% are female were declared ODF.

Different hygiene and sanitation promotion approaches were used including community led total sanitation (CLTS), home improvement campaigns (HIC), sanitation marketing (SanMark), Participatory, Hygiene and Sanitation Transformation (PHAST), Follow up MANDONA, child to child approach, Community Service, Market Based Sanitation Implementation Approach (MBSIA), Coaching at household level, household clustering, Incentives in non-triggered blocks. The blue schools[22] concept implemented by ACORD – U is one child to child approach used.

The CSO promotion of private sector involvement in the emptying include the Agago Pit Emptiers association which has contributed to improved faecal sludge management in Agago district- motivated by the business potential and income enhancement of individual members.

8.3.7 Capacity Building

45 out of the 69 CSOs that submitted data over the review period reported to have undertaken at least a capacity building intervention, benefiting 384,736 people (refer to figure 40). The total investment was UGX 9,783,842,566. Capacity building interventions covered training (32%), dialogue meetings (22%), advocacy, sector coordination, demand rights WASH and distantly by policy influence at 6%.

[22] A blue school is a school where pupils get hands-on learning in WASH and environmental conservation

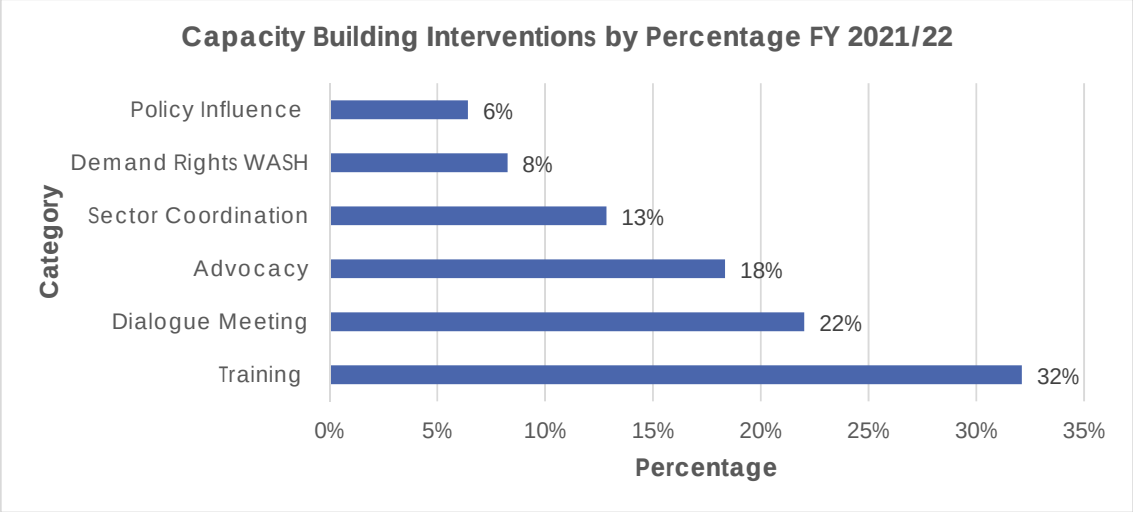


Figure 40: Capacity building interventions

8.3.7.1 Stakeholders Engagement

Stakeholders engaged for capacity development included community members, CSO staff, Local Government, MWE staff, refugees, religious leaders, school children, teachers, training and research institutions, among others.

8.3.7.2 Impact of capacity buiding activities

1,121,898 people were involved in the capacity building activities, 781,976 (70%) of whom were females. The impact behaviors included gender responsive water and sanitation committees, improved good agronomic practices, improved sanitation, and hygiene service delivery, and reduced open defecation.
In addition, more evidence based reporting and planning by CSOs and DLG staff was noted. The International Water and Sanitation Centre (IRC) reported that district and sub-counties were involved in town sanitation planning and accordingly passed ordinances for sanitation improvement.

8.3.7.3 Inclusiveness and vulnerability

The NDP III seeks to reduce vulnerability and gender inequality along the lifecycle. CSOs continued to prioritize inclusiveness in the FY 2021/22 interventions. These interventions included but not limited to inclusive infrastructure design, provision of access subsidies, menstrual hygiene management, and capacity building activities.

8.3.7.4 Inclusive infrastructure

CSOs provided water supply and sanitation facilities for the vulnerable and adopted inclusive designs. For example, World Vision provided for an access ramp and gender segregated toilets, and a seat for Persons with Disabilities (PWDs) and elderly to access the water sources. Sanitation facilities constructed in schools and health care facilities included a separate stance for PWDs fitted with handrails, a seater and a ramp for easy access. Menstrual hygiene provisions at schools allowed for inclusion of the girl child in sanitation planning and management.

8.3.8 Research initiatives

13 CSOs reported 21 interventions in research and development as indicated in Table 76.

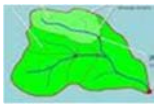
Table 76: Research and development themes

Theme	Subtheme	Number	Overview of topics
IWRM	IWRM	2	Climate Change baseline and vulnerability assessment, Willingness to pay for Watershed services for improved livelihood and production
Water supply	Functionality of water supply systems	5	• Groundwater monitoring • UWASNET Score Card • To find out the performance of the improved handpump riser main systems in delivering rural water supply service. • Safe water coverage and functionality of water sources in Mityana, Kassanda and Mubende Districts • Research on borehole sensors in 15 wells
	Water quality	1	Household water chain management
Sanitation and hygiene	Innovative technologies	6	Manual latrine emptying using gulpers in Adjumani, Viability of Fossa-alterna latrines in waterlogged areas(blocks) in Palabek settlement, Lamwo district. Building evidence to support scaling of a machine learning-enabled safe water optimization tool for humanitarian response Hand Pump reliability Water Quality Testing and Monitoring How to use plastic water bottles to build the water source. Finding a cleaner semi-mechanical pit emptying option for the informal settlements
	Feacal sludge management	2	New twin pit latrine construction Fecal Sludge Management in Small towns
	Functionality of sanitation systems	4	UWASNET WASH Score Card Community Led Total Sanitation (CLTS) WASH Fiscal Decentralization Establishing Sato pan distribution chain in Mid-Western Region of Uganda across 9 districts aimed at promoting improved household sanitation
	WASH in Emergency	1	Emergency to incoming refugees in Kyaka II and Kyangwali refugee settlements.

8.4 CSO INVESTMENT IN THE CLIMATE CHANGE, NATURAL RESOURCES, ENVIRONMENT, AND WATER MANAGEMENT PROGRAM

0.7

Billion



9

Catchments

7,165

Beneficiaries

2,821

Ha. under restoration

8.3.1 Investment in IWRM

The NRECCLWN program supports the efficient and effective management and development of natural resources including water, while ensuring protection of environment. 16 CSOs reported interventions in Integrated Water Resources Management (IWRM), with investments totaling UGX 0.7 billion. This was 85% reduction from UGX 14.87 billion in FY2020/21.

Table 77: Comparison of NRECCLWN PIAP investment requirement and Actual by CSOs for FY 2020/21

Program Area	Budget area	Budget (UGX Bn)
Natural Resources and Environment Climate Change, Land and Water Management	NRECCLWM PIAP extracted budget	1,899
	UWASNET Investment - NRECCLWM	0.7
	Percentage contribution	0.04%

8.3.2 Availability of adequate and reliable quality fresh Water Resources for all uses

8.3.2.1 Water resources management at catchment level

Catchments of intervention

IWRM activities covered 9 sub-catchments with the main focus being Victoria catchment area while Kyoga got the least focus as indicated in Figure 41. Overall, the interventions benefitted 7,165 people and restored 2,821 hectares. 10 management activities were for restoration and livelihood enhancement (7) with interventions in key hotspots of riverbanks (4), followed by wetlands (4) and forests (1), and landing sites (2). Others included degraded croplands and water sheds. Activities included training and mentoring, demonstration of practice, tree planting, establishment of nurseries and woodlots, formation of management structures, natural resource mapping, infrastructure provision, and others like advocacy, gully plugging and regeneration.

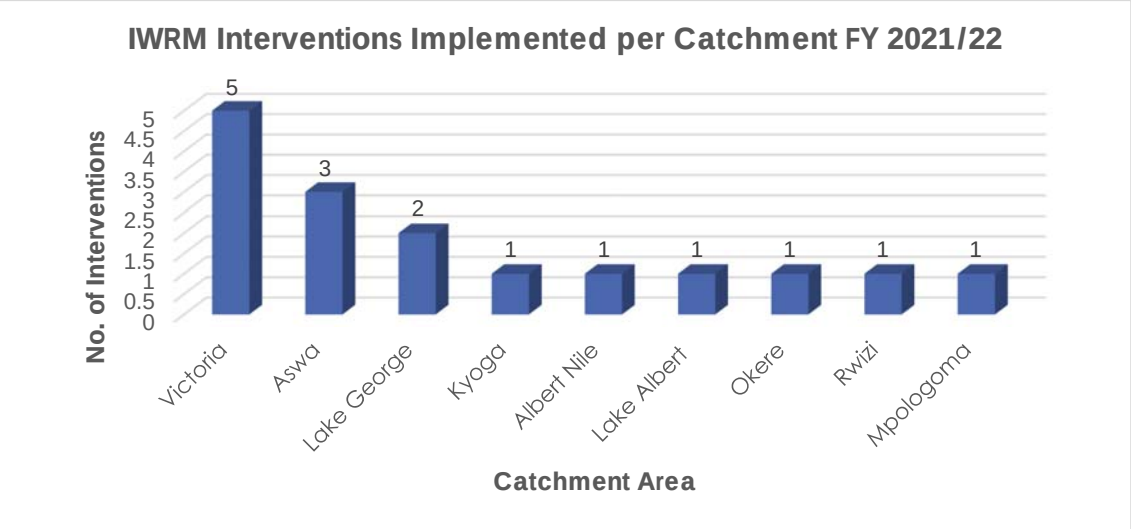


Figure 41: Catchment areas of IWRM activities

8.4 AGRO INDUSTRIALISATION PROGRAM

8.4.1 Water for Production

0.5
Billion

21
Irrigation Systems

10,190 m^3
Storage Capacity

3,000
Beneficiaries

8.4.1.1 Investment in Water for Production

A total of six interventions were implemented over the reporting period with one intervention implemented in each of the five districts of Buhweju, Isingiro, Kazo, Rwampara , Kyankwanzi and Tororo. Table 78 presents water for production interventions by CSOs.

Table 78: CSO water for production interventions

Intervention	Beneficiaries Reached	Female Beneficiaries	No. of irrigation systems
Irrigation systems installation	3,000	579	21
Grand Total	3,000		
Estimated Investment (UGX Billions)			0.5

Figure 42 depicts the trend of investment in water for production by CSOs over the past 5 years.

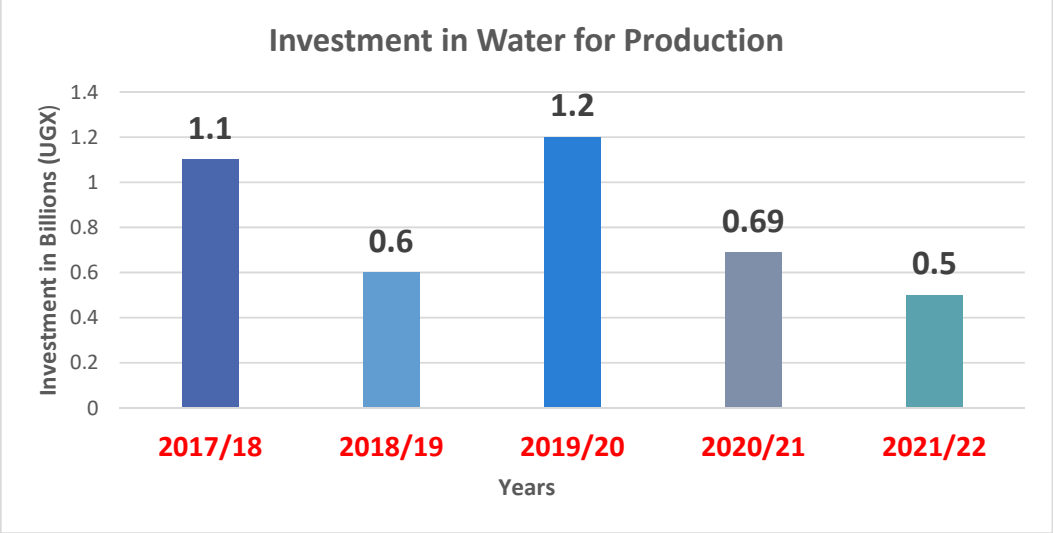


Figure 42: Investment in water for production

8.4.1.2 Water for Production activities

One of the key objectives of the agro-industrialization programme is to increase agricultural production and productivity. This is partly through increasing access and use of water for production. Some NGOs have started engaging in this line of intervention. Interventions in water for production included support to livestock farming, provision of rain water harvesting (RWH) tanks and installation of mini/micro irrigation systems by Agency for Co-operation in Research and Development - Uganda and World vision in Rwampara and Agago districts. The 21 irrigation systems installed provided 10,190 m3 of storage capacity covering 1002.6 hectares under irrigation.

8.5 RECOMMENDATIONS

(i) **Increasing access to safe water:** The Sector should adopt motorized water systems (including being powered with renewable energy e.g., solar) as a way of reducing distance to water points and overcrowding, which will ultimately increase productivity and holistic livelihood improvement. However, technocrats should be conscious that motorized systems if not well planned and managed are affected by illegal connections due to the high-water demand. That operation of motorized systems is affected by inability to pay water user fees. Planners should develop mechanisms of compliance to ensure system functionality. Construction of motorized systems may be expensive, therefore CSOs may consider partnering with each other and pooling resources.

UWASNET to lobby MWE to condition districts to allocate funds to backbone infrastructure e.g., production wells, transmission lines, solar pumps in the short term and reap benefits in the longer term. This implies that some annual performance reports will not report increase in water coverage figures but level of investment in backbone infrastructure.

(ii) **Capacity building and advocacy:** Virtual engagements are the new normal and social media is a learning and advocacy fora. CSOs should explore ways of productively using this medium.

(iii) **Promotion of the WASH value chain:** Lobby MWE to establish lagoons / feacal treatment plants with reuse components in districts as a measure of promoting re-usable sanitation facilities in small towns, rural growth centres and other urban areas.

(iv) **Menstrual Hygiene Management:** Use of re-usable sanitary pads should be promoted as a measure of MHM. UWASNET should study the quantities of water used to wash a re-usable sanitary pad (litres) and how it links up with accessibility to water. This will enable stakeholders to make an informed decision on whether to promote re-usable or disposable sanitary pads.

(v) **CSO reporting:** there is need to enhance and ensure in reporting and submission of data on interventions implemented in the Kobo Tool repository. Some submissions lack financial reporting while some reports have ambiguous figures that do not statistically tally thereby undermining accuracy of their Reports. This therefore calls for UWASNET to have adequate capacity to verify all reports submitted by members. UWASNET should also adopt quarterly reporting as a measure of increasing number of members reporting.

(vi) **Equitable geographical spread of CSOs in WASH:** UWASNET to promote equitable spread out of WASH CSOs across the country to ensure effective complementarity of Government efforts.

(vii) Inclusive pro-poor service delivery

a. **Tariff design:** MWE is undertaking a review of Water Tariffs that are administered by both National Water and Sewerage Cooperation and Umbrella Authorities. UWASNET should continue following up the process to conclusion to enable access and affordability for all.

b. **Access to financing:** Continue dialogue with financial institutions to interest them in developing loan portfolios for all levels of WASH consumers especially the micro and small consumers. A buy for Development Partners is also critical.

(viii) Sector reporting: Utilize and leverage the ongoing NDPIII Mid-Term Review to clear out any grey areas that may be inherent with the Programme Based Approach. WASH falling under three Programmes has inadvertently compounded reporting challenges since the three programmes are not at the same levels of coordination and reporting which disrupts coordinated WASH reporting frameworks built over the years.

CHAPTER 9
CROSS CUTTING ISSUES

9.1 Introduction

Cross-cutting issues are matters that negatively affect the development outcomes if not considered during the development process. The cross-cutting issues considered under this chapter include gender; HIV/AIDS; and Environmental and Social safeguards amongst others. The cross-cutting issues considered are indicated in the sections below.

9.2 Gender Equality and Women Empowerment

The Uganda Gender Policy (UGP), 1997 (Revised 2007), mandates all MDAs to promote gender equality and women empowerment while executing programmes and activities. The Ministry of Water and Environment (MWE) developed a Water and Sanitation Gender Strategy in 2003 (revised in 2010 and 2017) and an Environment and Natural Resources Gender Strategy in 2015 to guide Gender Equality and Women Empowerment (GEWE) efforts in the sector. The sections below indicate the status of GEWE initiatives in the sector.

9.3 Gender Indicators

9.3.1 Percentage of Water and Sanitation Committees (WSC) with at least one woman holding a key position

The performance indicator for gender mainstreaming in rural water interventions is "*Percentage of Water and Sanitation Committees (WSC) with at least one woman holding a key position*". Key positions on WSCs include Chairperson, Vice Chairperson, Secretary and Treasurer. Data from the MWE water supply database as of September 2022, indicates that 87% of WSCs have women holding key positions. This percentage has increased from 86% as of last year. The trend of women in key positions over the years is indicated in figure 43 below.

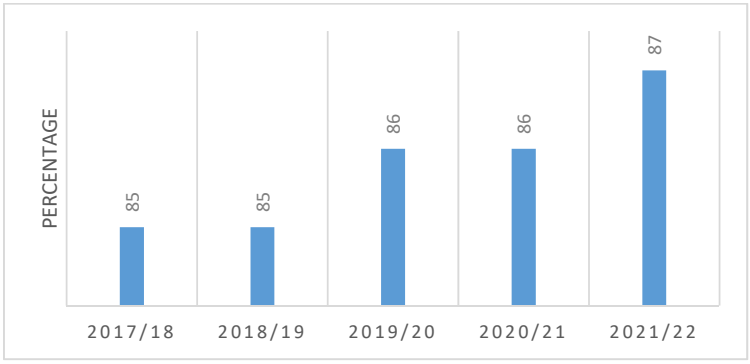


Figure 43: women in key positions

9.3.3 Gender in staff Composition

The National Employment Policy for Uganda (2001), prescribes the collection and dissemination of improved data and statistics on the labour force, disaggregated by sub-sector, and the consideration of women and other disadvantaged groups for employment opportunities if wealth creation and poverty eradication are to be achieved.

Gender Staffing in MWE

MWE Permanent Staff: Data from the human resource division, under the Department of Finance and Administration, indicates that MWE has 411 permanent staff an increment from 361 staff reported last year. A gender analysis of MWE employees indicates that 35% (144) of staff are female and 65% (267) staff are male. The gender composition has varied as of last year whereby female composition has reduced from 36% to 35% and males increased from 64% to 65%.

The gender analysis of permanent staff composition for a period of 5 years (2018 to 2022) indicates

that the number of female staff members has not significantly improved over the last five years with the gender disparity between men and women stagnating for the last three years
The details are indicated in the figure 44.

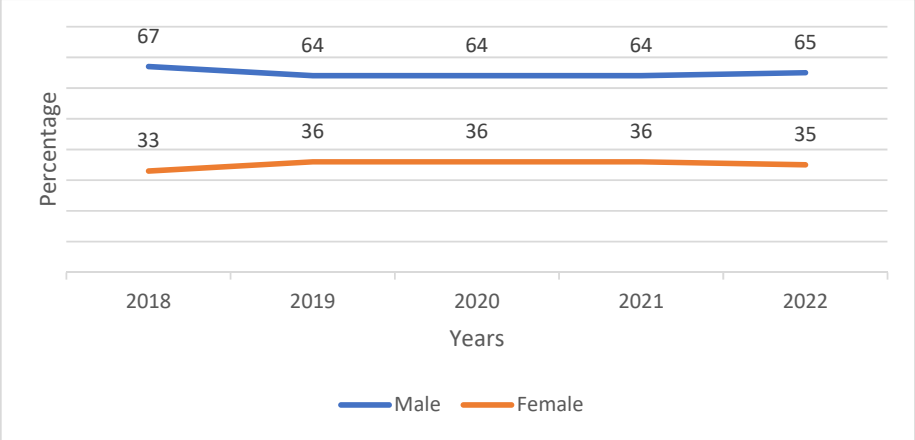


Figure 44: gender staffing over years

Gender by Management Position in MWE

Further analysis of staffing position by management indicates that there are 42 staff members occupying senior management position[23] out of which only 19% are female. This is an improvement from 18% reported last year.

For the middle management level[24], the ministry has 153 staff members of which 35% are female. The Percentage of female in this category has increased from 26% last year to 35% during the reporting period.

At the operational level, there are 118 staff out of which 46% are female. The gender analysis of the staffing by seniority is indicated in table 79.

Table 79: Gender analysis in MWE by seniority

Staff Level	Female		Male	
	No.	%	No.	%
Top Management	8	19	34	81
Middle level Management	54	35	99	65
Operational Level	54	46	64	54
Support Level	39	43	52	57
Total	**155**		**249**	

MWE Contract staff

Data from the Human Resource Department indicates that there are 827 staff employed under contract terms. The analysis of gender composition for contract staff indicates that 30% (251) are female and 70% (576) are male. This indicates a 1% increment in the proportion of females from 29% reported in 2020.

The trend of contract staff composition according to sex, over the last three years indicates that the sector made 1 % progressive improvement in female composition for the last three years. The details are indicated in graph below

[23] Scale U1
[24] Principal and Senior officers, scale U2 and U3

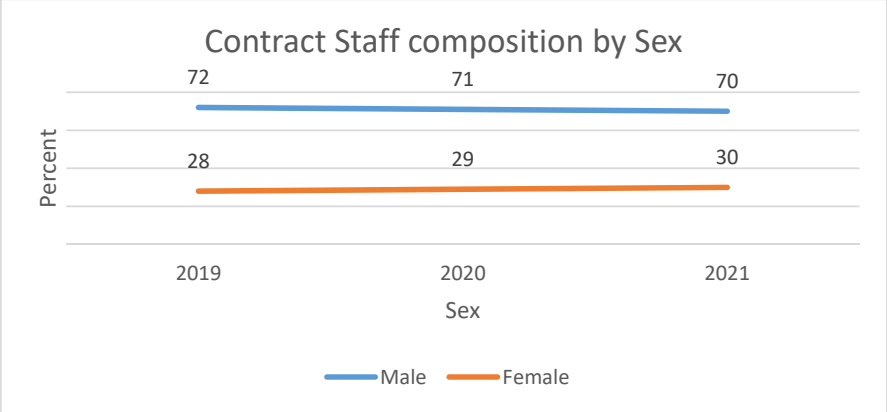


Figure 45: Gender Composition for Contract staff over the years

District Water Office Staffing

The number of female District Water officers occupying district offices still remains low and has reduced from 4% last FY to 3 % during the FY 2021/22 based on data from 135 districts. The districts with female Water officers are Lamwo, Butambala, Katakwi and Kabale.

The data on MWE established staff, Contract and Local Government staffing, indicates that efforts to improve staff gender parity have not yielded the desired results. This calls for proactive and transformative strategies within the MWE, Ministry of Public Service and the Local Governments if the gender parity is to be attained.

National Water and Sewerage Corporation Gender Staff Composition

NWSC has undertaken various efforts towards the inclusion of women, which has increased the number of female participants in the sector. The Corporation is an equal opportunities employer, and this is depicted in the growth of female staff at all levels of Management as a result of affirmative action by government to enhance involvement of women through education. Table 80 below shows the gender employment trends for the last five years.

*Table 80: **Annual Staff Composition for the FY 2017/18 to 2021/22***

Indicator	2017/18	2018/19	2019/20	2020/21	2021/22
Total Number of Female Staff	1,067	1,200	1,256	1,365	1,457
Total Number of Staff	3,452	3,778	4,082	4,244	4,467
% of Female	31%	32%	31%	32%	33%

9.3.4 Gender and equity Responsive Planning and budgeting

Gender and Equity Responsive Planning and Budgeting in Uganda seeks to eliminate discrimination and inequalities against any individual or group of persons on the ground of sex, age, race, color, ethnic origin, tribe, birth, creed or religion, health status, social or economic standing, political opinion or disability, and take affirmative action in favor of groups marginalized for the purpose of redressing imbalances which exist against them (EOC Act, 2007).

This was the second year Programme-based Budget Framework Papers were assessed. The Natural resources, Environment, Climate Change, Land & Water scored 76.00% which was above the minimum score of 60%. The Human Capital Development Programme was the most compliant with a score of 88.0%.

GENDER AND ENR MANAGEMENT - National Environment Management Authority (NEMA)

During the FY2021/22, NEMA engaged 768 people, out of which 433 (56.4%) were men and 335 (43.6%) were women. This shows a decline in women participation in NEMA engagements from 56% in FY 2019/20 to 43.6% in FY 2021/22. Figure 46 shows higher participation of men in environment and natural resources

activities. This is attributed to traditional gender roles whereby men dominate strategic roles while women are mostly engaged in carrying out operational duties.

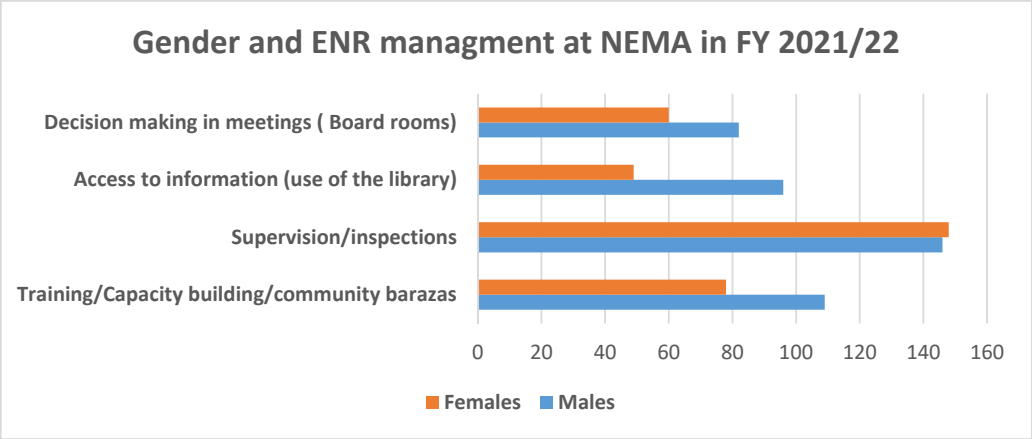


Figure 46:Gender composition of NEMA management in FY 2021/22

Women are still underrepresented in the governance and management of environmental natural resources (ENR). Although the Equal Opportunities Commission (EOC) criticized the level of consideration and inclusion of gender equity factors in environment and natural resources management as well as gender-inclusive reporting by NEMA, gender-responsive reporting improved in FY 2021/22 as compared to the previous financial years.

9.3.5 Economic Empowerment and Initiatives to support the poor and disadvantaged

Article 32 (1) of the 1995 Constitution of the Republic Uganda provides that the State shall take affirmative action in favor of groups marginalized on the basis of gender, age, disability or any other reason created by history, tradition or custom, for the purpose of redressing imbalances which exist against them. Relatedly the Uganda Gender policy (2007) prescribes affirmative action measures in order to reduce historical and traditional imbalances within the community. During the reporting period, the Ministry undertook a number of economic empowerment initiatives to support the poor and disadvantaged groups under the following projects.

Economic Empowerment and Skills Development of Women/ Youth groups in the manufacturing of energy saving stoves, briquettes, and soap

The Ministry with support from the African Development Bank under the Strategic Towns Water Supply and Sanitation Project (STWSSP) has supported 20 women and youth groups in production of energy saving stoves, briquettes and soap products. The purpose of this initiative is to create employment opportunities, boost income, improve health and hygiene in homesteads reduce cost of fuel and to contribute to mitigation efforts for human induced climate change.

The energy saving stoves products include lorena stoves, traditional stoves, household energy saving stoves, and institutional stoves. The soap products include liquid soap, jez, bar soap, shampoo and spirit. The groups have gained practical skills in the making of the above products, marketing and financial skills in addition to acquiring startup capital in the form of materials and equipment.

A total of 858 women and youth have been trained with 607 female and 252 male.
Table 81 presents the groups in the 10 districts.

Table 81: Women/youth Groups support

				Sex		
Town	Group Name	Category	Business category	M	F	Total
Bundibugyo	Kakindo Women's Group	Women	Soap	14	28	42
	Kisenyi Youth Group	Youth	Stoves	6	48	54

Town	Group Name	Category	Business category	Sex		Total
				M	F	
Katooke	Mukore Kwekambe Women's Group	Women	Soap	10	29	39
	Nyabihoma Kakuba Kweyimukya Youth Group	Youth	Stoves	21	23	43
Kyenjonjo	Kikwete United Youth Group	Youth	Stoves	12	23	35
	Women Of Destiny Group	Women	Soap	7	37	44
Dokolo	Acam Cutu Women's Group	Women	Soap	11	29	40
	Youth Action on Environmental	Youth	Stoves	24	30	54
	Protection (YAEP)					
Kapchorwa	Chelboi Women Saving Group	Women	Soap	5	28	33
	Environmental Conservation Advocacy Uganda Youth Group	Youth	Stoves	24	16	40
Nakasongola	Kansirye Tukolelewamu Youth Development Group	Youth	Stoves	13	32	45
	Mukisa Women's Group	Women	Soap	1	44	45
Kayunga	Step-By Step Women's Group	Women	Stoves	10	30	40
	Success Development Group	Youth	Soap	3	40	43
Busana	Bugaddu –A- Youth Association	Youth	Stoves	38	11	49
	Kirikumuno- Kayonjo Women's Group	Women	Soap	9	34	43
Kamuli	Rise and Shine Women's Group	Women	Soap	1	45	46
	Nabikamba Youth Project	Youth	Energy	20	14	34
Buikwe	Buikwe Youth Catering Services	Youth	Stoves	17	18	35
	Abakolera Awamu Development Group	Women	Soap	6	48	54
Total				**252**	**607**	**858**

Photo 9-1: making a rocket stove in Bundibugyo.

Photo 9-2 stove making stop in Nakasongola group

Photo 9-3 Dokolo soap making group

Table 82: Income Generating activities in the Awoja Catchment under Kyoga Water Management Zone.

Income Generating Activities	Type of Support/inputs	District	Target Beneficiary groups	Status	Funding
Production of Improved energy saving cooking stoves. (rocket Lorena & Fire shielded)	• Training in production, business planning and marketing of cook stoves. • Financial support • Tools (moulds, hoes, wheelbarrows, tape measure and	Serere, Ngora, Kween, Kumi, Nakapiripirit & Amudat	6 women Groups (Ajokokipi Women Group, Amani Women Group, Amagoro Women's Group, Asianut Tididiek Women Group, Kasko cookstoves Women's Group and Abolobolo Women Group)	Ongoing - 4,470 stoves produced	GOU/EURECCCA Project
Poultry, animal trade, and goat/sheep rearing	• Formation of a water and environment cooperative society (training & Sensitization) • Financial support towards the revolving fund	Kween	Kiriki Water and Environment Cooperative Society	Pending disbursement of revolving fund	GOU/EURECCCA Project
Poultry, animal trade, and goat/sheep rearing	• Formation of a water and environment cooperative society (training & Sensitization) • Financial support towards the revolving fund	Kween	Kere Water and Environment Cooperative Society	Pending disbursement of revolving fund	GOU/EURECCCA Project
Dairy farming and Fish farming	• Formation of a water and environment cooperative society (training & Sensitization) • Financial support towards the revolving fund	Katakwi	Kapujan Water and Environment Cooperative Society	Pending disbursement of revolving fund	GOU/EURECCCA Project
Poultry (turkey rearing) and Sheep/goat rearing	• Formation of a water and environment cooperative society (training & Sensitization) • Financial support towards the revolving fund	Ngora	Morukakise Water and Environment Cooperative Society	Pending disbursement of revolving fund	GOU/EURECCCA Project
Apiary, piggery and fish farming	• Formation of a water and environment cooperative society (training & Sensitization) • Financial support towards the revolving fund	Serere	Kyere Water and Environment Cooperative Society	Preliminary stage	GOU/EURECCCA Project

9.3.8 HIV/ AIDS Mainstreaming

Commemoration of the World AIDs day

The World AIDs day was globally commemorated on 1st December 2021 but the Ministry celebrated it on 25th February 2022. The theme of the day was 'End Inequities, End AIDS, End Pandemics'. The Ministry celebrated the day with the objectives of raising awareness and improving knowledge about HIV/AIDs issues, and to show solidarity with millions of people living with HIV and AIDS. The celebrations were attended by different stakeholders including Ministry staff and National Disease Control Center both physically and virtually.

Commemoration of the International Candlelight Memorial Day 2022

The candlelight Memorial Day 2022 was held by the Ministry on 28th July 2022. This day is aimed at promoting solidarity with those who lost their dear ones to AIDS, as well as drumming up support for renewed commitment to end AIDS as a public health threat. The International theme for the day was We remember, We take action, We live beyond HIV.' Uganda coined a National theme: **Ending HIV Stigma and Discrimination: Our Collective Responsibility.**

This theme augments the on-going dissemination of the national policy guidelines on ending HIV related stigma and discrimination across all sectors in a bid to end AIDS as a public health threat in Uganda by 2030. The celebration aimed at launching the National HIV Regulations 2022 aimed at improving coordination and collaboration of AIDS service organizations in the country, mobilize over 10 million people/stakeholders in the fight against stigma and discrimination of people living with HIV, and equip communities with messages for intensified fight against HIV and AIDS amidst the COVID 19 pandemic.

9.3.9 Environmental and Social Safeguards

The national policy direction is that all development projects which may pose negative impacts to the environment and the society have modalities for addressing or mitigating them. In order to minimize Environmental and Social Risks and improve overall project performance, the MWE, is making effort aimed at ensuring that safeguard aspects are systematically and consistently considered from concept design, bidding, contracting and implementation of projects. For FY 2021/22 a number of activities were undertaken as presented below:

Capacity building initiatives in Environmental and Social Safeguards

In a bid to strengthen MWE capacity in undertaking Environmental and Social Safeguards (ESS) related activities, a number of capacity building trainings were conducted as shown in table 83 below.

Table 83: Capacity building training, content and participants

Training Venue	Nature of Training	Key Content	Participants	Key Issues
MWE HQ (Virtual)	CESMP Preparation for Busia	a) Overview of the E&S requirements b) Review Comments of the draft CESMP c) Content and structure of the CESMP	53 participants including staff of the contractor and MWE	Contractor to hire competent E&S staff to spearhead CESMP preparation
Fort Portal Regional Center	Overview of Environment and Social Safeguards for Ministry Staff	a) What are ES safeguards b) What is the scope of ES safeguards? c) Why ES Safeguards d) The IWMDP Safeguards Implementation Arrangement e) Critical success factors for safeguards implementation	48 participants all being Ministry staff	There is need for more deeper trainings before commencement of civil works
Kiryandongo District HQs	Environment and Social Safeguards	a) Introduction to E & S b) WB Safeguard Policies c) IWMDP triggered Policies	70 participants including Local Government	There was need to fast track Designs and ESIA to pave

		d) E&S Tools and Instruments for IWMDP e) Implementation Arrangements	Political and Technical Officials and Design and ESIA Consultants	way for civil works and well as involvement of LG Officials
Wakiso Regional Center	Overview of Environment and Social Safeguards for Ministry Staff	a) What are ES safeguards b) What is the scope of ES safeguards? c) Why ES Safeguards d) The IWMDP Safeguards Implementation Arrangement e) Critical success factors for safeguards implementation	41 participants all being Ministry staff	There is need for more deeper trainings before commencement of civil works
Busia Contractor's Campsite	Environment and Social Safeguards Orientation Workshop for Busia WSSP	d) Overview of World Bank and Country E&S requirements e) Key provisions in statutory approvals certificates from NEMA, MGLSD and Local Authorities f) E&S Requirements according to the contract g) Contractual compliance requirements h) Environmental compliance requirements i) Safety compliance requirements j) Social compliance requirements k) Consequences of noncompliance to Environmental and Social requirements to the contractor, consultant and workers	109 (89 males and 20 females) including contractor and consultant's staff, Local Government and Uganda Police	Contractor to revise CESMP, and provide properly signed contracts and copies of code of conduct to every staff
Kasese Resort Hotel	Grievance Management under Catchment Management Activities for Nyamwamba	a) Overview of the Grievance Management System b) The justification of grievance redress c) Common grievances for workers and communities d) Local participation in grievance management e) Formation, training and operation of grievance committees f) Grievance monitoring, reporting and follow up under IWMDP	84 participants including Catchment Management Committee members, Local Government Officials, Contractor and supervision consultant and MWE staff	The Contractor and Local Governments (Municipal and District) to form and train the Grievance Management Committees based on the GRM Guidelines for IWMDP.

In addition, the World Bank conducted trainings for MDAs with World Bank funded projects including Ministry of Water and Environment in the implementation of environment and social safeguards, Geo-enabling initiative for monitoring and Supervision (GEMs), and integration of communication in Environment and Social Safeguards implementation.

Development of IWMDP Environment and Social Impact Assessment Reports (ESIAs) and Resettlement Action Plans (RAPs)

Environment and Social Impact Assessments are conducted to identify and assess social and environmental risks and benefits at the planning stage of an investment, and for building risk mitigation measures into project design and implementation. Resettlement Action Plans (RAP) detail

the procedures to be followed and the actions to be taken in order to properly resettle and compensate affected persons in a project area.
During the reporting period, one ESIA report for Bitsya was approved by NEMA and the RAPs for Bitsya and Kiryadongo were completed.

9.3.10 Pro Poor Strategies

Pro-poor facilities are the Public Stand Post s(PSPs) and the Institutional connections constructed for people to access water. These facilities are accessed at a cost less or equal to that at the yard tap / house connection.

In small towns under Urban Water Supply and Sewerage, a total of 75 pro-poor facilities were constructed with 39 Public Stand Posts and 36 Institutional Connections serving an additional population of 15,000 people. In the large towns, performance trends for the last five years are indicated in table 84 below.

Table 84: Trend of provision of pro-poor water facilities over the past 5 years

Indicator	2016/17	2017/18	2018/19	2019/20	2020/21	Target	Target 2021 Perf.
New PSPs/Kiosks	1,087	1,503	3,550	4,429	3,793	2,000	190%
Total PSPs/Kiosks	10,424	11,927	15,855	21,615	25,393	23,615	108%
Active PSPs	85%	85%	95%	88%	83%	87%	95%

The annual target of 3,000 Pro-poor facilities was surpassed by 793 Pro-poor facilities indicating a performance of over 26.4% above the target.

9.3.11 Challenges for mainstreaming cross- cutting issues

i) Limited data on vulnerable and marginalized groups including elderly, disabled, children and youth, who are usually most affected by inadequate service provision.
ii) Limited funding to support Gender, HIV/AIDS mainstreaming and Environmental and social Safeguards related activities.

NRECCLWM APPR 2022 ANNEXES

CONTENTS

Annex 1: Program Description

The Water, Environment and Natural Resources and Climate Change Management Programme is concerned with sound management and sustainable utilization of water, environment and natural resources management, and mitigation of impact of climate change for socio-economic development of Uganda. The Programme, therefore, is central to realization of the NDP III goal of increased household incomes and improved quality of life of the population, set under the theme "***Sustainable Industrialization for Inclusive-growth, Employment and Wealth Creation***".

The Third National Development Plan (NDPIII) whose goal is to increase household income and improve the quality of life of Ugandans has adopted a programme approach to planning, budgeting, implementation and reporting. This entails programme and performance-based budgeting to address the persistent implementation challenges resulting from uncoordinated planning, weak harmonization, limited sequencing of programmes and poor linkages between outcomes and outputs experienced in the past NDPs.

Overall, eighteen (18) National Programmes have been identified and approved with well-articulated results, objectives and interventions towards achieving the NDP III goal. These are:

S/N	Programme	Chair
1.	Agro-Industrialization	MAAIF
2.	Mineral Development	MEMD
3.	Private Sector Development	MoFPED
4.	Digital Transformation	MoICT&NG
5.	Human Capital Development	MoES
6.	Sustainable Development of Petroleum	MEMD
7.	Manufacturing	MoTIC
8.	Tourism Development	MoTWA
9.	Natural Resources, Environment, Climate Change, Land and Water Management	MoWE
10.	Sustainable Energy Development	MEMD
11.	Integrated Transport and Services	MoWT
12.	Sustainable Urbanisation and Housing	MoLHUD
13.	Technology Transfer and Development	MoSTI
14.	Regional Balanced Development	MoLG
15.	Community Mobilization & Mindset Change	MoGLSD
16.	Public Service Transformation	MoPS
17.	Governance and Security	OP
18.	Development Plan Implementation	MoFPED

The programme approach is meant to enable formulation of national priority development objectives and to realize these objectives through corresponding national programmes formulated and implemented in a coherent, coordinated and participatory manner to ensure sustainability. The programme approach to planning aims to:

i) Focus implementation of the NDPIII programmes on delivery of common results.
ii) Strengthen alignment of planning and budgeting frameworks to provide a logical framework for anchoring the Program-Based Budgeting System (PBS).
iii) Enhance synergies across Ministries, Agencies and Local Governments (MALGs) and other actors to reduce a 'silo' approach to implementation; and,
iv) Provide a coordinated framework for implementation, monitoring and reporting for improving delivery of results.

Implementation of the Programme Approach is designed to address the criticism that Government MALGs work in 'silos' as it provides a framework for inter and intra-Ministerial coordination.

Leadership Structure

Office of the Prime Minister

Overall, the OPM is the leader of Government Business and the overall coordinator for implementation of Government Policies across Ministries, Departments and other Public Institutions, is critical in coordinating the implementation of the 18 NDPIII Programmes.

The roles and responsibilities of OPM are outline below:

The Rt. Honorable Prime Minister will be the overall political programme implementation coordinator. He will be responsible for the following:

i) Steer policy and strategic engagements with all Ministers in charge of implementing particular programmes interventions for the NDPIII results.
ii) Hold Ministers accountable to deliver results; and,
iii) Report to the President on progress of Programme Implementation.

Programme Political Leader(s) - Cabinet Minister of the Lead Ministry

The Minister of Water and Environment is the lead minister for the programme and provides policy guidance and jointly with the Minister for Lands to hold the technical leadership accountable for implementation of the programme.

Programme Technical Leader(s)

The Permanent Secretary of the Ministry of Water and Environment is the designated technical leader and coordinator for the implementation of the programme bringing together all the several state and non-state actors in the programme and steers and chairs the Programme Working Group.

Programme Working Group (PWG)

PWG is the policy working organ, within the overall NDP programme approach, in which Government (*all MDAs under the Programme*) and other stakeholders come together to function, discuss and agree on:

i) Inter and intra agency planning.
ii) Priority interventions and Resource allocation.
iii) Delivery of services; and,
iv) Joint monitoring & evaluation of multi-agency activities.

Vote(S)

Under this programme, there are several institutions (Ministries, Departments, Agencies and Local Governments) which form the basis of the annual budget and appropriations made by Parliament, and the source of accountability, these are.

Vote	Abbreviation	Name
003	OPM	Office of the Prime Minister
012	MLHUD	Mistry of Lands Housing and Urban Development
019	MWE	Ministry of Water and Environment
122	KCCA	Kampala Capital City Authority
150	NEMA	National Environmental Management Authority
156	ULC	Uganda Land Commission

157	NFA	National Forestry Authority
302	UNMA	Uganda National Meteorological Authority
501-850	LGs	Local Governments

Sub-Programmes
These are a group of related interventions/ outputs contributing to Programme Outcomes at various MDA levels. Sub-Programmes, just like Programmes, should be results based. They are derived from the core functions of the agencies and in line with the NDPIII Programmes.

Directorates/Departments
These are administrative units within the institutions that implement activities of the programme.

Projects
These represent a set of activities that primarily involve capital purchases and can be financed by the Government of Uganda and/or Development Partners to facilitate the MDAs to achieve specific. Under the Programme Planning Approach, projects will report to the relevant Departments. It should be noted that some projects cut across programmes as they contribute to more than one Programme. However, the responsibility of these projects will be the respective departments, hence the entire project should be budgeted for under the department. Where a project is multi-sectoral with various components being implemented by respective MDA's, these components should be reflected under the respective responsible departments as projects.

Programme Working Group Secretariat
The Secretariat of the Programme is housed at the Policy and Planning Department of the Ministry of Water and Environment as the leading Ministry in the Programme. The Commissioner Policy and Planning Department is the Secretary to the PWG and responsible for the day to day running of the Programme Secretariat.

Scope of Work of the PWG
The Programme Working Group is the functional organ through which the technical programme leaders undertake coordination of the implementation of Programme interventions at (i) Planning; (ii) Budgeting; and (iii) Reporting, levels.

i. Program Planning
The lead Ministry is responsible for implementation of the Programme. Through the Program Working Group (PWG) coordinated by secretariat under the Planning Department, all stakeholders are convened to set the priorities for implementation, identify the key policy and project requirements, identify key implementation bottlenecks to be resolved, among others. The priorities for the subsequent financial year are set in line with the Budget Process Calendar. The priorities identified must be in line aligned to the NDPIII. The timelines for implementation of the alignment of the Budget to the NDPIII Programme Approach.

The agreed outputs and priorities are then translated into annual programme action plans for each implementing entity. The action plans are submitted annually to the Ministry of Finance, Planning and Economic Development and Office of the Prime Minister for approval.

ii. Budgeting
As a lead vote, the ministry is responsible for coordination and development an annual Programme Budget Framework Paper (PBFP). This is done in consultation with all relevant stakeholders of the programme and entails consolidation of the BFPs of each vote that contribute to that Particular

Programme. The process is guided and overseen by the PWG to ensure that the final budget estimates are intended to finance the agreed priorities and actions of the program approved by the Programme Working Group (PWG).

iii. Performance Monitoring and Reporting

The lead Ministry consolidates, based on submissions from votes and agencies, the quarterly and annual programme reports on the progress of the results of the programme and submits to the OPM, both semi-annual and annual stage as well as Ministry of Finance.

iv. Specific Tasks of the PWG

a) Ensures broad stakeholder consultation in discussing key issues and harmonize Government and stakeholder positions.
b) Formulates Programme Implementation Plans in line with the National Development Plan and the Manifesto of the ruling government.
c) Joint clearance of projects for inclusion in the Public Investment Plan, a requirement by the Development Committee.
d) Ensures Implementation of Program Based Budgeting (PBB) for proper alignment to the NDPIII.
e) Coordinating inter-ministerial and agency budget allocations in a consultative way ensuring transparency and accountability.
f) Ensuring that consultations are carried out between line ministries, and external and internal stakeholders on matters related to the programme.
g) Examines and review of programme related policies and plans, reviewing past performance, emerging policy issues and future spending pressures.
h) identifying key outputs and programme performance targets both annually and in the medium term.
i) Undertaking monitoring and assessment of programme interventions; and,
j) Preparing semi-annual and annual programme reviews and reports.

Outputs

Overall, the PWG is responsible for preparation of the following outputs:

i) Programme Implementation Action Plan (periodic),
ii) Annual Programme Budget Framework Papers (PBFPs),
iii) Quarterly, Semi-Annual and Annual Programme performance reports (APRs)
iv) The medium-term budget strategy documents.
v) Project approvals for submission to the Development Committee in MFPED

Mode of Operations

The PWG conducts its business through meetings, consultancies, sub-programme groups (SPGs), committees and special task forces.

The following sub-programme groups were established under the PWG to enhance effective monitoring and steering of programme:

i) Water, Sanitation Management and Development sub-programme
ii) Climate Change, Environment and Natural Resources sub-programme
iii) Lands sub-programme

Each of the above sub-programme groups (SPGs) constitutes relevant committees and prepare meetings at least quarterly but where need arises more frequent meetings are arranged.

Membership to the PWG

1. Permanent Secretary Ministry of Water and Environment – **Chairperson**
2. Permanent Secretary Ministry of Lands Housing and Urban development – **Alternate Chairperson**

3. Co-Chairs (lead DPs representing WSS, ENR and Lands)
4. Director DWD
5. Director DWRM
6. Director DEA
7. Secretary Uganda Land Commission
8. ED-NEMA
9. ED-NFA
10. ED UNMA
11. MD-NWSC
12. Member MFPED
13. Member OPM
14. Member NPA
15. Member OP
16. Member EoC
17. Members representing CSOs
18. Respective Commissioners
19. Commissioner Policy and Planning – MWE **(Secretary)**

Annex 2: Access to safe water supply in rural and urban areas as of June 2022

District	Rural	Urban	Total
Abim	72%	82%	73%
Adjumani	94%	95%	94%
Agago	95%	95%	95%
Alebtong	94%	95%	94%
Amolatar	88%	77%	86%
Amudat	45%	68%	47%
Amuria	70%	60%	70%
Amuru	87%	67%	86%
Apac	73%	68%	72%
Arua	78%	81%	79%
Budaka	81%	70%	80%
Bududa	67%	44%	66%
Bugiri	68%	95%	69%
Bugweri	63%	95%	65%
Buhweju	60%	95%	62%
Buikwe	76%	36%	64%
Bukedea	66%	59%	65%
Bukomansimbi	85%	95%	86%
Bukwo	76%	62%	75%
Bulambuli	73%	35%	70%
Buliisa	65%	87%	66%
Bundibugyo	57%	74%	61%
Bunyangabu	73%	71%	73%
Bushenyi	94%	58%	85%
Busia	76%	65%	74%
Butaleja	60%	58%	60%
Butambala	95%	95%	95%
Butebo	67%	0%	67%
Buvuma	31%	87%	37%
Buyende	36%	53%	37%
Dokolo	91%	72%	89%
Gomba	86%	95%	87%
Gulu	92%	58%	74%
Hoima	70%	23%	54%
Ibanda	58%	36%	50%
Iganga	67%	80%	69%
Isingiro	45%	40%	45%
Jinja	77%	49%	66%
Kaabong	82%	95%	84%
Kabale	90%	78%	87%
Kabarole	77%	82%	78%

Kaberamaido	79%	27%	77%
Kagadi	56%	81%	59%
Kakumiro	32%	27%	32%
Kalaki	78%	0%	78%
Kalangala	60%	95%	63%
Kaliro	49%	40%	48%
Kalungu	93%	95%	94%
Kampala	0%	80%	80%
Kamuli	77%	81%	77%
Kamwenge	72%	95%	73%
Kanungu	89%	88%	89%
Kapchorwa	75%	95%	77%
Kapelebyong	86%	0%	86%
Karenga	91%	0%	91%
Kasanda	39%	0%	39%
Kasese	58%	62%	59%
Katakwi	89%	95%	90%
Kayunga	67%	95%	69%
Kazo	35%	28%	35%
Kibaale	63%	95%	64%
Kiboga	85%	44%	75%
Kibuku	69%	42%	68%
Kikuube	55%	46%	55%
Kiruhura	46%	52%	47%
Kiryandongo	78%	48%	71%
Kisoro	42%	56%	42%
Kitagwenda	85%	0%	85%
Kitgum	95%	95%	95%
Koboko	78%	84%	79%
Kole	73%	95%	74%
Kotido	76%	95%	78%
Kumi	78%	43%	72%
Kwania	76%	77%	76%
Kween	81%	94%	81%
Kyankwanzi	58%	44%	56%
Kyegegwa	27%	41%	28%
Kyenjojo	62%	88%	66%
Kyotera	61%	54%	60%
Lamwo	95%	95%	95%
Lira	94%	81%	91%
Luuka	79%	42%	77%
Luwero	69%	62%	67%
Lwengo	74%	45%	71%
Lyantonde	41%	71%	46%

Madi Okollo	69%	0%	69%
Manafwa	73%	92%	76%
Maracha	86%	95%	87%
Masaka	76%	52%	67%
Masindi	94%	23%	71%
Mayuge	52%	46%	52%
Mbale	62%	81%	67%
Mbarara	69%	32%	48%
Mitooma	92%	95%	92%
Mityana	79%	74%	77%
Moroto	80%	77%	79%
Moyo	95%	95%	95%
Mpigi	82%	56%	78%
Mubende	36%	0%	32%
Mukono	67%	74%	69%
Nabilatuk	51%	0%	51%
Nakapiripirit	55%	95%	57%
Nakaseke	81%	82%	81%
Nakasongola	79%	95%	81%
Namayingo	60%	54%	60%
Namisindwa	68%	49%	67%
Namutumba	59%	31%	57%
Napak	82%	54%	81%
Nebbi	72%	95%	73%
Ngora	87%	79%	86%
Ntoroko	87%	81%	85%
Ntungamo	79%	58%	76%
Nwoya	59%	30%	56%
Obongi	95%	0%	95%
Omoro	89%	95%	90%
Otuke	91%	95%	91%
Oyam	67%	43%	66%
Pader	95%	95%	95%
Pakwach	63%	17%	54%
Pallisa	63%	53%	62%
Rakai	35%	35%	35%
Rubanda	72%	89%	74%
Rubirizi	67%	33%	63%
Rukiga	95%	95%	95%
Rukungiri	92%	34%	85%
Rwampara	87%	0%	87%
Serere	76%	83%	76%
Sheema	83%	79%	82%
Sironko	81%	55%	77%

Soroti	85%	22%	75%
Ssembabule	36%	39%	36%
Terego	64%	0%	64%
Tororo	58%	64%	59%
Wakiso	40%	26%	34%
Yumbe	48%	52%	48%
Zombo	85%	72%	82%
National Level	67%	60%[1]	65%

Source: MWE MIS Database

[1] ***This urban safe water coverage excludes data on towns covered by NWSC***

Annex 3: Functionality of Rural and Urban Water Facilities as of June 2022

District	Rural	Urban	WfP
Abim	76%	82%	0%
Adjumani	87%	83%	100%
Agago	77%	75%	86%
Alebtong	71%	73%	100%
Amolatar	78%	87%	36%
Amudat	76%	84%	0%
Amuria	93%	100%	71%
Amuru	75%	76%	0%
Apac	76%	81%	60%
Arua	85%	0%	0%
Budaka	95%	80%	100%
Bududa	91%	71%	100%
Bugiri	94%	100%	0%
Bugweri	96%	100%	0%
Buhweju	95%	97%	100%
Buikwe	95%	95%	100%
Bukedea	85%	92%	0%
Bukomansimbi	87%	92%	86%
Bukwo	74%	42%	0%
Bulambuli	97%	68%	0%
Buliisa	72%	98%	0%
Bundibugyo	62%	84%	0%
Bunyangabu	89%	86%	0%
Bushenyi	81%	82%	80%
Busia	94%	76%	100%
Butaleja	91%	90%	0%
Butambala	79%	76%	100%
Butebo	93%	0%	0%
Buvuma	88%	97%	0%
Buyende	92%	95%	69%
Dokolo	86%	96%	0%
Gomba	63%	79%	96%
Gulu	80%	100%	100%
Hoima	84%	85%	0%
Ibanda	76%	88%	0%
Iganga	98%	0%	0%
Isingiro	97%	98%	90%
Jinja	88%	84%	0%
Kaabong	81%	59%	100%
Kabale	88%	93%	100%
Kabarole	82%	83%	0%
Kaberamaido	84%	100%	100%

Kagadi	70%	61%	0%
Kakumiro	81%	87%	0%
Kalaki	93%	0%	100%
Kalangala	90%	95%	0%
Kaliro	95%	100%	0%
Kalungu	82%	86%	100%
Kampala	0%	0%	0%
Kamuli	89%	87%	100%
Kamwenge	87%	95%	100%
Kanungu	89%	83%	10%
Kapchorwa	83%	86%	0%
Kapelebyong	97%	0%	33%
Karenga	86%	0%	67%
Kasanda	86%	0%	93%
Kasese	79%	89%	100%
Katakwi	93%	96%	91%
Kayunga	87%	87%	70%
Kazo	90%	86%	90%
Kibaale	86%	52%	0%
Kiboga	75%	89%	100%
Kibuku	92%	91%	100%
Kikuube	93%	100%	0%
Kiruhura	86%	96%	94%
Kiryandongo	88%	81%	95%
Kisoro	93%	100%	100%
Kitagwenda	98%	0%	0%
Kitgum	60%	74%	63%
Koboko	89%	92%	0%
Kole	81%	80%	67%
Kotido	74%	77%	85%
Kumi	86%	85%	75%
Kwania	74%	83%	20%
Kween	93%	88%	0%
Kyankwanzi	86%	98%	98%
Kyegegwa	74%	56%	50%
Kyenjojo	76%	80%	0%
Kyotera	68%	68%	100%
Lamwo	79%	84%	40%
Lira	87%	0%	20%
Luuka	96%	94%	50%
Luwero	86%	96%	95%
Lwengo	80%	78%	75%
Lyantonde	94%	100%	64%
Madi Okollo	81%	0%	80%

Manafwa	95%	97%	100%
Maracha	66%	71%	0%
Masaka	81%	100%	100%
Masindi	87%	93%	83%
Mayuge	94%	98%	0%
Mbale	87%	90%	0%
Mbarara	94%	95%	88%
Mitooma	83%	83%	75%
Mityana	60%	74%	63%
Moroto	83%	75%	45%
Moyo	88%	71%	0%
Mpigi	72%	81%	0%
Mubende	93%	0%	100%
Mukono	90%	93%	100%
Nabilatuk	65%	0%	100%
Nakapiripirit	82%	67%	70%
Nakaseke	75%	88%	96%
Nakasongola	93%	98%	92%
Namayingo	83%	59%	100%
Namisindwa	98%	100%	0%
Namutumba	88%	90%	0%
Napak	85%	100%	83%
Nebbi	79%	91%	0%
Ngora	93%	81%	60%
Ntoroko	74%	73%	0%
Ntungamo	83%	86%	80%
Nwoya	79%	62%	0%
Obongi	72%	0%	0%
Omoro	44%	31%	0%
Otuke	66%	77%	50%
Oyam	82%	78%	0%
Pader	79%	92%	100%
Pakwach	88%	61%	89%
Pallisa	97%	88%	100%
Rakai	82%	0%	75%
Rubanda	94%	71%	25%
Rubirizi	95%	96%	0%
Rukiga	67%	88%	0%
Rukungiri	86%	92%	100%
Rwampara	97%	0%	33%
Serere	94%	93%	100%
Sheema	87%	84%	0%
Sironko	90%	91%	50%
Soroti	85%	0%	60%

Ssembabule	79%	91%	96%
Terego	81%	0%	100%
Tororo	88%	100%	100%
Wakiso	84%	76%	100%
Yumbe	97%	98%	0%
Zombo	76%	87%	100%
National Level	**85%**	**85%**	**84%**

Source MWE MIS/Database

Annex 4 Community Management and Gender

District	Management [2]	Gender[3]
Abim	80%	94%
Adjumani	96%	97%
Agago	99%	100%
Alebtong	94%	84%
Amolatar	91%	99%
Amudat	83%	82%
Amuria	70%	85%
Amuru	82%	82%
Apac	93%	81%
Arua	95%	77%
Budaka	86%	85%
Bududa	99%	100%
Bugiri	94%	95%
Bugweri	100%	90%
Buhweju	90%	92%
Buikwe	96%	96%
Bukedea	98%	88%
Bukomansimbi	87%	63%
Bukwo	72%	86%
Bulambuli	91%	98%
Buliisa	90%	91%
Bundibugyo	79%	52%
Bunyangabu	65%	77%
Bushenyi	80%	79%
Busia	80%	84%
Butaleja	94%	89%
Butambala	79%	87%
Butebo	74%	87%
Buvuma	93%	97%
Buyende	96%	89%
Dokolo	81%	97%
Gomba	97%	86%
Gulu	81%	76%
Hoima	96%	95%
Ibanda	92%	90%
Iganga	97%	95%
Isingiro	86%	81%
Jinja	88%	92%

[2] Management refers to functioning WSCs

[3] Gender refers to WSCs with at least a woman in key position (Chairperson, Secretary or Treasurer

Kaabong	92%	95%
Kabale	98%	96%
Kabarole	70%	70%
Kaberamaido	99%	100%
Kagadi	97%	75%
Kakumiro	98%	91%
Kalaki	99%	97%
Kalangala	65%	86%
Kaliro	97%	90%
Kalungu	92%	97%
Kampala	0%	0%
Kamuli	91%	89%
Kamwenge	88%	92%
Kanungu	92%	81%
Kapchorwa	95%	90%
Kapelebyong	85%	85%
Karenga	96%	95%
Kasanda	86%	62%
Kasese	93%	98%
Katakwi	92%	83%
Kayunga	90%	81%
Kazo	82%	94%
Kibaale	73%	86%
Kiboga	90%	93%
Kibuku	95%	92%
Kikuube	99%	98%
Kiruhura	91%	77%
Kiryandongo	87%	75%
Kisoro	97%	95%
Kitagwenda	91%	89%
Kitgum	93%	97%
Koboko	66%	76%
Kole	96%	97%
Kotido	88%	97%
Kumi	99%	99%
Kwania	92%	76%
Kween	85%	91%
Kyankwanzi	88%	84%
Kyegegwa	92%	96%
Kyenjojo	75%	73%
Kyotera	78%	66%
Lamwo	95%	93%
Lira	95%	90%
Luuka	80%	80%

Luwero	89%	74%
Lwengo	90%	77%
Lyantonde	91%	37%
Madi Okollo	83%	91%
Manafwa	91%	93%
Maracha	92%	94%
Masaka	77%	58%
Masindi	87%	86%
Mayuge	97%	69%
Mbale	90%	88%
Mbarara	99%	98%
Mitooma	92%	93%
Mityana	87%	81%
Moroto	66%	93%
Moyo	95%	90%
Mpigi	93%	86%
Mubende	83%	79%
Mukono	99%	76%
Nabilatuk	89%	93%
Nakapiripirit	97%	89%
Nakaseke	97%	84%
Nakasongola	97%	92%
Namayingo	89%	82%
Namisindwa	96%	69%
Namutumba	99%	85%
Napak	98%	100%
Nebbi	93%	92%
Ngora	99%	98%
Ntoroko	52%	75%
Ntungamo	77%	82%
Nwoya	92%	75%
Obongi	96%	93%
Omoro	73%	90%
Otuke	84%	73%
Oyam	97%	100%
Pader	92%	99%
Pakwach	97%	98%
Pallisa	81%	88%
Rakai	82%	77%
Rubanda	75%	80%
Rubirizi	89%	92%
Rukiga	88%	83%
Rukungiri	89%	90%
Rwampara	96%	92%

Serere	98%	98%
Sheema	95%	96%
Sironko	97%	96%
Soroti	89%	88%
Ssembabule	94%	98%
Terego	0%	0%
Terego	95%	82%
Tororo	83%	88%
Wakiso	91%	68%
Yumbe	99%	82%
Zombo	78%	75%
National Level	90%	87%

Source: MWE MIS Database

Annex 5: Villages with safe water sources as of June 2022

TSU	District	Village without a source		Village with a source	
		Total	%	Total	%
9	Abim	160	51%	151	49%
1	Adjumani	16	8%	192	92%
2	Agago	325	35%	610	65%
2	Alebtong	130	21%	488	79%
2	Amolatar	121	28%	314	72%
9	Amudat	68	40%	101	60%
3	Amuria	234	58%	170	42%
2	Amuru	0	0%	67	100%
2	Apac	48	14%	291	86%
1	Arua	161	22%	566	78%
4	Budaka	32	12%	236	88%
4	Bududa	506	53%	450	47%
10	Bugiri	47	12%	349	88%
10	Bugweri	7	5%	127	95%
8	Buhweju	46	20%	181	80%
10	Buikwe	130	27%	355	73%
3	Bukedea	10	6%	146	94%
7	Bukomansimbi	28	11%	227	89%
4	Bukwo	239	46%	286	54%
4	Bulambuli	745	62%	464	38%
5	Buliisa	42	32%	89	68%
6	Bundibugyo	276	45%	339	55%
6	Bunyangabu	49	19%	205	81%
8	Bushenyi	209	37%	361	63%
4	Busia	75	14%	468	86%
4	Butaleja	107	25%	316	75%
7	Butambala	28	18%	131	82%
4	Butebo	51	21%	187	79%
10	Buvuma	112	58%	80	42%
10	Buyende	45	13%	306	87%
2	Dokolo	111	24%	355	76%
7	Gomba	50	18%	221	82%
2	Gulu	57	40%	84	60%
6	Hoima	215	64%	123	36%
8	Ibanda	429	66%	219	34%
10	Iganga	45	19%	186	81%
8	Isingiro	225	29%	540	71%
10	Jinja	150	36%	268	64%
9	Kaabong	160	49%	166	51%
8	Kabale	197	29%	487	71%

6	Kabarole	171	35%	323	65%
3	Kaberamaido	47	20%	185	80%
6	Kagadi	230	32%	485	68%
6	Kakumiro	268	66%	138	34%
3	Kalaki	41	19%	179	81%
7	Kalangala	24	23%	79	77%
10	Kaliro	35	11%	272	89%
7	Kalungu	30	11%	251	89%
11	Kampala	870	100%	0	0%
10	Kamuli	85	12%	614	88%
6	Kamwenge	82	22%	286	78%
8	Kanungu	79	15%	439	85%
4	Kapchorwa	378	56%	295	44%
3	Kapelebyong	166	70%	71	30%
9	Karenga	77	40%	115	60%
6	Kasanda	342	60%	227	40%
6	Kasese	253	33%	505	67%
3	Katakwi	48	14%	295	86%
10	Kayunga	50	13%	337	87%
8	Kazo	100	32%	214	68%
6	Kibaale	102	39%	157	61%
5	Kiboga	64	27%	176	73%
4	Kibuku	41	17%	204	83%
6	Kikuube	85	33%	171	67%
8	Kiruhura	60	23%	204	77%
5	Kiryandongo	20	8%	217	92%
8	Kisoro	91	23%	309	77%
6	Kitagwenda	33	13%	221	87%
2	Kitgum	99	18%	439	82%
1	Koboko	68	17%	326	83%
2	Kole	195	34%	374	66%
9	Kotido	28	14%	173	86%
3	Kumi	57	34%	113	66%
2	Kwania	76	19%	323	81%
4	Kween	232	47%	258	53%
5	Kyankwanzi	113	32%	236	68%
6	Kyegegwa	209	45%	254	55%
6	Kyenjojo	161	25%	495	75%
7	Kyotera	46	21%	168	79%
2	Lamwo	63	16%	321	84%
2	Lira	205	26%	570	74%
10	Luuka	68	25%	202	75%
5	Luwero	164	28%	432	72%
7	Lwengo	143	31%	315	69%

7	Lyantonde	61	28%	159	72%
1	Madi Okollo	81	29%	202	71%
4	Manafwa	304	49%	312	51%
1	Maracha	68	16%	346	84%
7	Masaka	97	27%	259	73%
5	Masindi	83	26%	234	74%
10	Mayuge	98	20%	395	80%
4	Mbale	456	48%	504	53%
8	Mbarara	216	40%	318	60%
8	Mitooma	104	19%	449	81%
5	Mityana	223	35%	417	65%
9	Moroto	42	27%	112	73%
1	Moyo	13	8%	147	92%
7	Mpigi	91	25%	279	75%
6	Mubende	420	70%	177	30%
5	Mukono	171	27%	460	73%
9	Nabilatuk	9	16%	46	84%
9	Nakapiripirit	38	31%	85	69%
5	Nakaseke	96	26%	276	74%
5	Nakasongola	51	16%	268	84%
10	Namayingo	61	22%	214	78%
4	Namisindwa	435	52%	394	48%
10	Namutumba	95	26%	266	74%
9	Napak	59	24%	192	76%
1	Nebbi	146	28%	384	72%
3	Ngora	6	4%	132	96%
6	Ntoroko	99	47%	110	53%
8	Ntungamo	240	24%	741	76%
2	Nwoya	11	15%	62	85%
1	Obongi	7	10%	62	90%
2	Omoro	3	2%	147	98%
2	Otuke	181	39%	281	61%
2	Oyam	379	39%	599	61%
2	Pader	137	22%	497	78%
1	Pakwach	149	42%	207	58%
4	Pallisa	60	17%	290	83%
7	Rakai	147	27%	398	73%
8	Rubanda	171	37%	289	63%
8	Rubirizi	71	24%	226	76%
8	Rukiga	52	18%	241	82%
8	Rukungiri	177	21%	655	79%
8	Rwampara	17	7%	225	93%
3	Serere	17	7%	231	93%
8	Sheema	346	60%	228	40%

4	Sironko	732	55%	597	45%
3	Soroti	115	28%	292	72%
7	Ssembabule	123	29%	308	71%
1	Terego	89	25%	274	75%
4	Tororo	216	26%	620	74%
5	Wakiso	150	21%	575	79%
1	Yumbe	134	20%	539	80%
1	Zombo	60	10%	539	90%
Total		**18,892**	**33%**	**39,130**	**67%**

Source: MWE MIS Database

Annex 6: Functionality of Water Sources by Technology as of June 2022

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Abim	11	1	12	20	8	28	305	88	393	13	13	26
Adjumani	32	9	41	63	11	74	666	66	732	19	28	47
Agago	7	13	20	128	38	166	877	124	1,001	17	95	112
Alebtong	284	91	375	168	97	265	342	93	435	20	21	41
Amolatar	1	4	5	4	7	11	459	86	545	7	28	35
Amudat	1	1	2	8	1	9	166	50	216	0	0	0
Amuria	10	11	21	56	22	78	445	3	448	0	2	2
Amuru	123	10	133	40	42	82	422	112	534	11	10	21
Apac	9	2	11	34	33	67	406	58	464	56	59	115
Arua	809	141	950	68	26	94	465	20	485	41	34	75
Budaka	163	3	166	11	7	18	545	18	563	2	17	19
Bududa	581	16	597	3	1	4	15	5	20	50	3	53
Bugiri	197	16	213	152	14	166	773	24	797	126	14	140
Bugweri	39	2	41	106	0	106	268	8	276	6	9	15
Buhweju	293	8	301	26	3	29	1	0	1	45	3	48
Buikwe	822	17	839	176	21	197	219	26	245	70	4	74
Bukedea	231	13	244	102	47	149	236	28	264	6	11	17
Bukomansimbi	133	25	158	237	59	296	84	21	105	276	5	281
Bukwo	83	39	122	16	3	19	2	1	3	15	7	22
Bulambuli	318	8	326	62	9	71	136	3	139	19	0	19
Buliisa	27	10	37	70	39	109	114	46	160	9	7	16
Bundibugyo	198	58	256	1	0	1	8	4	12	31	13	44
Bunyangabu	205	14	219	151	22	173	20	12	32	47	14	61

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Bushenyi	665	178	843	138	24	162	34	5	39	59	11	70
Busia	228	19	247	95	8	103	581	32	613	36	10	46
Butaleja	3	1	4	32	9	41	543	46	589	15	0	15
Butambala	227	33	260	155	85	240	63	21	84	45	5	50
Butebo	171	9	180	13	7	20	260	16	276	8	3	11
Buvuma	26	1	27	48	6	54	56	10	66	17	3	20
Buyende	0	0	0	6	1	7	495	39	534	24	4	28
Dokolo	166	24	190	165	47	212	346	10	356	23	19	42
Gomba	98	27	125	224	186	410	174	64	238	83	21	104
Gulu	67	20	87	63	21	84	358	63	421	22	17	39
Hoima	368	2	370	198	98	296	244	24	268	28	41	69
Ibanda	147	36	183	136	26	162	42	10	52	51	4	55
Iganga	122	1	123	199	3	202	489	4	493	37	7	44
Isingiro	69	4	73	207	28	235	148	54	202	3,570	29	3,599
Jinja	337	11	348	317	68	385	372	61	433	41	13	54
Kaabong	1	0	1	11	11	22	296	76	372	1	0	1
Kabale	562	52	614	3	1	4	16	2	18	193	24	217
Kabarole	237	69	306	404	93	497	27	8	35	91	15	106
Kaberamaido	10	4	14	50	24	74	248	28	276	13	6	19
Kagadi	350	126	476	321	155	476	169	63	232	66	80	146
Kakumiro	118	20	138	177	26	203	182	44	226	37	31	68
Kalaki	23	3	26	17	5	22	313	17	330	11	3	14
Kalangala	26	0	26	50	20	70	1	1	2	121	6	127
Kaliro	1	1	2	33	1	34	523	16	539	10	10	20
Kalungu	88	50	138	378	75	453	94	34	128	132	6	138

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Kampala	0	0	0	0	0	0	0	0	0	0	0	0
Kamuli	19	2	21	427	68	495	877	72	949	36	24	60
Kamwenge	214	72	286	303	71	374	122	20	142	103	16	119
Kanungu	980	90	1,070	35	18	53	27	35	62	100	21	121
Kapchorwa	296	30	326	0	0	0	1	1	2	10	3	13
Kapelebyong	0	0	0	10	9	19	302	2	304	1	0	1
Karenga	2	0	2	17	2	19	203	34	237	1	0	1
Kasanda	19	21	40	165	42	207	188	9	197	57	10	67
Kasese	642	120	762	57	9	66	57	25	82	75	27	102
Katakwi	2	0	2	65	4	69	527	32	559	12	10	22
Kayunga	73	7	80	227	53	280	511	63	574	34	5	39
Kazo	4	0	4	97	30	127	93	34	127	592	30	622
Kibaale	146	43	189	197	43	240	75	8	83	71	14	85
Kiboga	66	28	94	88	73	161	134	27	161	111	11	122
Kibuku	41	1	42	30	7	37	450	28	478	8	7	15
Kikuube	321	0	321	260	6	266	181	50	231	54	3	57
Kiruhura	0	1	1	42	23	65	139	54	193	657	54	711
Kiryandongo	17	4	21	243	54	297	420	36	456	3	6	9
Kisoro	432	64	496	0	0	0	1	1	2	452	12	464
Kitagwenda	238	2	240	302	3	305	20	0	20	63	0	63
Kitgum	4	0	4	14	11	25	773	290	1,063	56	221	277
Koboko	218	33	251	90	14	104	304	27	331	9	4	13
Kole	176	43	219	209	25	234	316	39	355	17	54	71
Kotido	0	0	0	1	1	2	362	157	519	34	4	38
Kumi	208	3	211	116	62	178	378	29	407	19	25	44

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Kwania	18	8	26	88	36	124	376	68	444	15	61	76
Kween	264	13	277	2	0	2	58	10	68	12	1	13
Kyankwanzi	22	1	23	139	33	172	284	20	304	86	26	112
Kyegegwa	49	25	74	171	40	211	94	42	136	24	47	71
Kyenjojo	421	88	509	495	166	661	145	77	222	94	25	119
Kyotera	54	13	67	100	70	170	73	47	120	111	36	147
Lamwo	25	0	25	9	5	14	748	177	925	6	17	23
Lira	538	67	605	433	69	502	433	50	483	40	30	70
Luuka	125	4	129	193	11	204	431	17	448	12	1	13
Luwero	15	1	16	384	79	463	591	47	638	91	33	124
Lwengo	64	45	109	283	163	446	149	81	230	634	8	642
Lyantonde	0	0	0	21	5	26	80	27	107	468	6	474
Madi Okollo	9	0	9	12	6	18	282	63	345	37	9	46
Manafwa	319	6	325	5	0	5	231	21	252	32	3	35
Maracha	223	196	419	64	13	77	228	46	274	20	45	65
Masaka	116	16	132	304	109	413	59	11	70	109	4	113
Masindi	440	17	457	493	77	570	218	70	288	70	10	80
Mayuge	272	7	279	316	35	351	448	31	479	11	0	11
Mbale	584	34	618	38	7	45	301	45	346	33	10	43
Mbarara	130	33	163	60	18	78	137	35	172	1,927	17	1,944
Mitooma	736	191	927	113	13	126	3	17	20	76	9	85
Mityana	91	28	119	107	367	474	318	98	416	416	52	468
Moroto	2	1	3	2	0	2	327	67	394	3	6	9
Moyo	22	12	34	22	5	27	314	33	347	48	12	60
Mpigi	256	17	273	349	195	544	72	44	116	70	26	96

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Mubende	36	5	41	228	24	252	223	9	232	58	1	59
Mukono	617	44	661	284	34	318	394	48	442	166	11	177
Nabilatuk	0	0	0	2	10	12	95	42	137	7	4	11
Nakapiripirit	6	4	10	19	3	22	151	35	186	9	2	11
Nakaseke	9	1	10	238	97	335	339	76	415	155	36	191
Nakasongola	2	0	2	49	9	58	487	26	513	150	16	166
Namayingo	25	12	37	114	46	160	306	31	337	81	32	113
Namisindwa	536	4	540	12	0	12	91	7	98	36	3	39
Namutumba	63	0	63	97	11	108	409	67	476	18	3	21
Napak	6	0	6	1	0	1	430	80	510	36	6	42
Nebbi	126	61	187	39	20	59	516	97	613	41	18	59
Ngora	23	1	24	147	7	154	278	15	293	12	12	24
Ntoroko	67	21	88	83	40	123	60	23	83	15	14	29
Ntungamo	783	83	866	375	95	470	159	115	274	112	23	135
Nwoya	71	9	80	19	26	45	342	68	410	8	11	19
Obongi	0	0	0	2	3	5	132	67	199	24	3	27
Omoro	10	98	108	5	83	88	289	191	480	2	39	41
Otuke	14	22	36	25	42	67	279	94	373	12	6	18
Oyam	183	40	223	271	74	345	501	60	561	3	37	40
Pader	21	4	25	28	22	50	904	178	1,082	13	41	54
Pakwach	0	1	1	12	26	38	135	46	181	47	7	54
Pallisa	115	8	123	50	12	62	475	3	478	9	0	9
Rakai	27	4	31	161	99	260	120	70	190	907	95	1,002
Rubanda	515	27	542	1	0	1	18	10	28	347	13	360
Rubirizi	174	11	185	61	8	69	6	0	6	218	4	222

District	Protected Spring			Shallow Wells			Deep B/holes			Rainwater Tanks		
	F	NF	Tot	F	NF	Tot	F	NF	Tot	F	NF	Tot
Rukiga	201	12	213	1	2	3	23	32	55	45	8	53
Rukungiri	1,181	141	1,322	62	21	83	36	28	64	289	42	331
Rwampara	318	17	335	7	6	13	8	9	17	960	13	973
Serere	30	4	34	255	25	280	658	20	678	18	9	27
Sheema	306	81	387	134	26	160	27	16	43	136	5	141
Sironko	496	16	512	12	7	19	88	14	102	28	5	33
Soroti	71	31	102	134	34	168	589	65	654	57	21	78
Ssembabule	0	0	0	63	103	166	86	93	179	663	4	667
Terego	72	25	97	20	16	36	381	33	414	11	31	42
Tororo	230	5	235	37	3	40	745	119	864	52	13	65
Wakiso	901	90	991	1,044	422	1,466	335	55	390	527	48	575
Yumbe	36	3	39	113	10	123	948	3	951	5	22	27
Zombo	832	170	1,002	23	16	39	137	43	180	28	16	44

Source: MWE MIS Database F=Functional NF = Not Functional Tot = Total

Annex 7: Rural Piped Water Schemes And Provision WASH Support To Institutions

TABLE 1: CONSTRUCTION AND EXTENSION OF PIPED WATER SUPPLY SYSTEM
West Nile, Lango & Acholi Subregions

Sub - region	Districts	Piped Water Supply System	Progress on the Construction of Piped Water Supply System
West Nile	Obongi	Liwa Mini Piped Water Supply System	The construction of Liwa Mini Piped Water Supply System is in two phases. Phase two involves the construction of the transmission main of 5.8 Km, distribution main of 15.5 Km, 90 m^3 capacity pre-stressed steel tank elevated on a 15 m high tower, 5 water kiosks and 10 public stand posts. But of the phase two works, the construction of the 5 water kiosks and 10 public stand posts were the only works funded by the Development Grant and UgIFT PfoR at a cost of 172,145,000 UGX. While the construction of the transmission main of 5.8 Km, distribution main of 15.5 Km and 90 m^3 steel ta4nk was funded by DRDIP at 1,177,867,281 UGX. On the progress of works, 5 water kiosks and 10 public stand posts under the Development Grant and UgIFT financing were already constructed.
	Pakwach	Construction of Boro RGC piped water supply system Phase II Extension of pipe water to Alwi Seed Secondary School and Manekara village in Pangieth subcounty	The construction of Boro RGC piped water supply system was planned into two phases. Phase I works were completed. These works included fencing, construction of the pump house, guard house, scheme operator house, ecosan toilet and reservoir. Phase II works will include the installation of major pumping equipment. Works had not begun because of the delay in the procurement process. Bid evaluation was concluded on 21st January 2022 but no contract award nor signing has been undertaken. The contract agreement for the extension of piped water to Alwi Seed Secondary School and Manekara village in Pangieth subcounty was signed on 15th February 2022 between Pakwach District Local Government and Ilai Group Limited at a contract price of UGX 28,346,049. In addition, the site was handed over to the contractor.
	Yumbe	Construction of Kerwa Water Supply Scheme Phase II	The Kerwa Piped Water Supply System Phase II works involves the construction of the reservoir, transmission main and distribution main. Currently, the excavation of the transmission main is ongoing but works had not begun for the construction of the distribution main and the 100 cm^3 reservoir.
Lango	Dokolo	Construction of piped water supply system at Amwoma RGC Phase I	The construction of Amwoma piped water supply system is in three phases. The first phase of the construction is funded by GoU and this involves the construction of a tank tower. Works at the tower has not begun because a production well must be drilled, and a feasibility study and detailed engineering design must be completed before construction of the tower. By 31st March 2022, a UgIFT PfoR funded production well of 4.5 m3/hr. was drilled at the RGC and the GoU feasibility study and

			detailed engineering design was completed and submitted to Design Committee of the MWE for approval.
	Kwania	Construction of Nambieso Solar Piped Water Supply Scheme Phase I	Although Kwania district had planned and budgeted for the construction of Nambieso Solar Powered Piped Water Supply System-WSS, the construction of the WSS was contracted to Nexus Green (UK) Ltd (Contract No MWE/WRKS/19-202/00010) by the Ministry of Water and Environment. The GoU funding worth 205,498,883 UGX that was planned and budgeted by Kwania DLG for the construction of the solar powered piped water supply system was then reallocated by the District Executive Committee (DEC) without authorization from the MWE for the construction of 1 production well, 6 deep boreholes and rehabilitation of 5 boreholes. In addition to the formation and training of 6 WSCs, reactivation of 5 WSCs, and sensitization of communities to fulfil critical requirements.
	Oyam	Construction of Atepe Kampala RGC Piped Water Supply Scheme	The district is in the process of procuring a contractor. The bid notice for the construction of the UgIFT PfoR piped water supply system was published on 15th April 2022. No physical works has started.
Acholi	Amuru	Construction of Mini Piped Solar Water Supply System in Pyela RGC, Lamogi Subcounty	The contract agreement for the construction of Pyela RGC Water Supply System was signed on 23rd Nov 2021 between Amuru DLG and Allianz Ltd at a contract price of 165,565,860 UGX. The project is funded by UgIFT PfoR Development. Implementation of the Water Supply System (WSS) is phased into two lots. Phase I includes the construction of the reservoir tank, pump station, transmission main and 1 tap stand. As of 29th April 2022, the reservoir tank of 32 cubic meters was installed but no works had been carried out for the pump station, transmission main and the tap stand
	Lam	Construction of Mini Piped Water Supply System in Agoro Subcounty	Funding for the construction of Agoro Subcounty Mini Piped Water Supply System is by both GoU Development and UgIFT PfoR Development. By 29th April 2022, evaluation of the best evaluated bidder was carried out by the Evaluation Committee but the Contracts Committee was yet to approve the evaluation report; therefore, there was no contract agreement in place and no construction had begun.
	Nwoya	Completion of Owee Mini Piped Solar Powered Water Supply System at Owee Village, Lungulu Subcounty	The construction of Owee Mini Piped Solar Powered Water Supply System is funded by GoU Development. The construction of the piped water supply system was phased into two lots. First phase was completed on 24th May 2021 by Ferest Investment Ltd at a contract price of 197,825,472 UGX. The completed works include fencing of the reservoir site. Construction of 40 cubic meter reservoir tank, distribution network and 6 public stand posts. Phase two was also contracted to Ferest Investment Ltd at a contract price of 101,909,520 UGX. The contract agreement was signed on 10th November 2021 between Nwoya DLG and Ferest Investment Ltd. Works specified in the contract agreement include construction of the pump house and transmission main, and the installation of

			solar panels and the submersible pump. By 29th April 2022, plastering of the pump house was at 98%. Unfortunately, the construction of the transmission main, installation of the submersible pump and solar panels had not begun.

Busoga Subregion

Districts	Piped Water Supply System	Progress in the Construction of Piped Water Supply System
Iganga	Partial construction of piped water system in Nawandala RGC	**There was a land agreement in place and the nature of works included construction of a pump house, distribution works, 3 water kiosks with 2 tap stands each, and 4 public stand posts with one house connection. The system was constructed to completion.**
Jinja	Extension of piped water system in Iziru, Busede to Nsozibiri	**The system was constructed to completion.** **Excavated and laid pipes of 12 kilometers, 4 tap stands, and 3 kiosks were constructed.**
Kaliro	Namukooge piped water system phase II	**The location of the system is Namukooge parish, Namukooge village and Namugongo sub county. This phase included works of transmission of supply to the 60 cubic metre tanks of approximately 300 metres and one tap stand at the center in Namukooge. The system is complete.**
Kamuli	Bugobi piped water supply system phase II in Namasagali SC	**The system was constructed to completion.** **This system was constructed in Bugobi village, Kasozi parish, Namasagali sub county. The works carried out were construction of 5 public stand posts, metallic tank stand of 5 metres, extension of fence at water source to include source as well, construction of the guard house at water source, procurement of the generator, security light and a sanitation facility.**
Luuka	Bukoova piped water system	**The system was constructed to completion.** **The system was upgraded to a hybrid of solar and grid. They made a connection of 8 metres, constructed a 30 mm thick mercenary wall around the water source. They fixed metallic doors among other accessories.**
Bugiri	**Construction of Budaya piped water scheme in Mayuge TC**	**The system was constructed in Budaya village, Mayuge town council. The nature of works was erection of the columns for reservoir tank,**

Bukedi Subregion

Districts	Piped Water Supply System	Progress In the Construction of Piped Water Supply System
Budaka	Construction of Mini Piped Solar Water Supply System at Lyama	**The contract agreement for the construction of Lyama RGC Water Supply System was signed on 29th Nov 2021 between Budaka DLG and KARF AQUA Engineering Solutions (U) Ltd at a contract price of 273,228,934 UGX. The project is funded by UgIFT. The physical progress of the works so far is at 30% complete, the contractor was paid 30% of the money (81,968,680 UGX). The completed works as of end of June 2022 include pump house construction, fencing, installation of solar panels, lightening arrestor, pump testing, pipe laying and 6 stand taps.**
	Extension of piped water system from	**The system was constructed to completion.** **The contract agreement for the extension of piped water system from Kamake to Okisiran parish was signed on 7th Jan 2022**

Pallisa	**Kamake to Okisiran parish**	**between Pallisa DLG and Owen Link Holdings Ltd at a contract price of 76,678,908 UGX. The project is funded by UgIFT.**

Elgon Subregion

Districts	Piped Water Supply System	Physical Progress in the construction of rural water systems and extension of piped water systems
Kapchorwa	Pipe laying to Sirinda area	Works completed with 12 community tap stand connections.
	Pipe laying & intake works for Chepterech water supply system	Incomplete i.e., short of 200m of pipe work due to change in direction of transmission line.
	Reconstruction of Shanga spring water supply system	Works completed with water connected to the waterborne toilet and 3 community tap connections made.
Kween	Extension of Benet GFS	Works completed with 4 community tap stands.
	Construction of Kaptoyoy GFS (intake works)	Works completed at the intake.
	Rehabilitation of Kwayiy GFS	Rehabilitation works completed.
Bukwo	Construction of Tasakya GFS Sedimentation tank.	All materials are on site, foundation complete, reinforcement concrete & walls casting ongoing.
	Extension of Bukwo GFS line from Kupopoi Parish to Kortek Parish, Kapses Primary School.	Trenching is complete (4,050m), all pipes & fittings have been supplied, tank supplied (plastic 10 cubic). Pending are pipe laying and 9 community tap stand connections.
Bulambuli	Extension of Sisiyi GFS in Simu S/C	Works completed with 6 community tap stand connections.
	Rehabilitation of water supply system at refugee settlement camp-water tank procurement.	Works completed with procured tank installed.
	Bulegeni GFS rehabilitated.	Works completed i.e., intake works, relaying of lines 1.5km, 3 tap stands, and chambers.
	Supply of pipes for rehabilitation of Bulegeni GFS.	Works completed.
	Extension works for Bulagooc GFS.	Works completed with 3 community tap stand connections.
	Extension works for Buginyanya GFS.	Works completed with 3 community tap stand connections.
	Extension works for Masira GFS.	Works completed with 3 community tap stand connections.
	Extension works for Sisiyi GFS in Sisiyi S/C.	Works completed with 3 community tap stand connections.
	Extension works for Buluganya GFS	Works completed with 4 community tap stand connections.
	Design and documentation of Buwokadala (Bumasobo) GFS	Design submitted to MWE for review and approval.
	Supply of HDPE pipes, GI pipes and 10cubic tank	Works completed.
	Extension of Bumasobo (Buwokadala) GFS	Works completed with 3 community tap stands connected.
	Extension of Suguta GFS in Bugitima S/C	Works completed i.e., 3 community tap stands connected, construction of 15 cubic reservoir,

Sironko		rehabilitation of one intake and construction of second intake.
	Extension of Nalutaso GFS in Bumulisha S/C	Works completed i.e., 3 community tap stands connected, rehabilitation of intake and construction of 15 cubic reservoir tank.
	Extension of Magumba GFS in Bukiyi S/C	Works completed i.e., 3 community tap stands connected, intake construction and construction of 20 cubic reservoir, Works still ongoing; overflow lacking soak pit, control valve chambers not covered.
	Extension of Bugube GFS in Busibale GFS S/C	Works completed i.e., 3 tap stands, intake construction, construction of 18 cubic reservoir and rehabilitation of 40cubic tank.
	Rehabilitation of Nampembo GFS in Nalusala S/C	Works completed i.e., rehabilitation of 2 reservoir tanks, rehabilitation of 5 community taps and extension of 2 new community taps
	Rehabilitation of Kifungo GFS intake	Works completed i.e., construction of intake, rehabilitation of 2 tanks and extension with 2 new community taps.
	Rehabilitation of Sambuku GFS	Works completed i.e., replacement of pipes, rehabilitation of worn-out taps and extension with 2 community taps.
Mbale	Rehabilitation of Bumbobi GFS	Works completed: intake and community transmission lines.
	Bufumbo GFS	Works completed: laying of raw water transmission main, transmission line, 6 tap stands, reservoir tank of 8 cubic reservoir.
Manafwa	Design Nangalwe/Ikaali piped water system	Design submitted to MWE and feedback received. Waiting for approval letter.
	Phase I construction of Nangalwe/Ikaali: includes purchase of Submissive pump, construction of reservoir tank and transmission line	Reservoir complete, pump house complete, pumps have been supplied, transmission (1.7km) laid. UMEME is currently extending a 3-phase line with 2 transformers.
Bududa	Construction of Subisi GFS phase III	Works completed with 33 community tap connections.
	Construction of Bungolo GFS phase I	Works completed with 20 community tap connections.
	Rehabilitation and extension of Bushika	Works completed: 1 tap rehabilitated, intake work, replaced damaged pipelines & repaired BPTs.
	Rehabilitation and extension of Bukibokolo & Bududa GFSs	Works completed with 6 taps for Bukibokolo GFS and intake reconstruction for Bududa GFS.
	Rehabilitation and extension of Bumwalukani	Works completed with 5 tap connections.
	Rehabilitation and extension of Namateshe	Works completed with 6 taps connected and pipe laying done.
Namisindwa	Construction of Mukoto GFS phase II	The system was constructed to 90% completion. So far, accomplished are laying of pipes and reservoir construction. Pending works are tap stand connections for Bunamuluni primary school, trading center.

	Rehabilitation and extension of Buwabwala GFS in Tsekululu S/C	Main work was on rehabilitation; 3 tanks repaired; 4 intakes repaired with 6 tap connections.

Teso And Karamoja Subregions

District	Development Activities	Progress
Karenga	Extension of Piped water to Kakwanga Sub County.	Procurement for the extension of piped water to Kakwanga Sub County is ongoing.
Kotido	Construction of Nayan Piped Water System Phase one in Kotido Sub County.	The delays in procurement had an effect on the implementation; the activities for last FY are now ongoing.
Nakapiripirit	Construction of Phase two of Nakale Piped Water System. Nakale Primary School and Alamacar Primary School.	The physical progress so far includes 1 pump house constructed, 3.3km of distribution pipes were laid and 10 tap stands installed.
Nabilatuk	Construction of Nataperangan piped water system phase two in Nabilatuk Sub County.	The construction status is that a 60,000L tank was installed; 3km of distribution pipe and 16 tap stands were constructed.
Napak	Construction of Piped Water Supply System (Borehole Pumped) for Lorengchora Seed secondary School.	The construction status is that an 800m of distribution pipe was laid; 3 institutional taps, 12m tower and two 10,000L tanks installed.
Katakwi	Construction of piped water supply system (borehole pumped) at Aketa Trading Centre.	A tank stand constructed, two 8,000L tanks were installed, 6 public stand posts constructed, installed solar water pumping system and 5km of distribution line laid.
Soroti	Construction of piped water supply system (borehole pumped) at Adamasiko RGC-Phase Two.	Constructed Chlorination House and Water Office
Kumi	Extension of piped water in Dr. Aporu seed secondary school in Ngero subcounty.	4.5km of pipeline was laid and installed 1 tap stand at the school.
Serere	Construction of piped water in Apapai RGC.	Procurement for construction of piped water in Apapai RGC is ongoing.

South- Western Subregion

Districts	Project	Physical Progress
Bundibugyo	Construction of Karangitsyio Water Treatment Plant	The system was constructed to 100% completion.
Kabarole	Construction of Busaiga Piped Water Supply System in Phase II in Harugongo S/C.	Busaiga WSS Works was constructed to 100% completion with 6km distribution line laid and Electromechanical Works at the Pump House complete.
Kagadi	Extension of Kiduuma - Kiryanga WSS	The extension of Kiduuma - Kiryanga WSS was constructed to 100% completion.
Kasese	Bitere GFS Phase II	Bitere WSS progress of works was at 100%.

Kibaale	Imara Water Supply System Phase I	Imara Water Supply System Phase I works are at 100% (Ecosan and 8/8 public stand posts, transmission and distribution completed).
Kitagwenda	Construction of Ntara WSS, phase I; Kanara WSS Consultancy for siting and Drilling of production well	A memorandum of Understanding was signed with Mid-Western Umbrella. In addition, Kanara WSS siting was completed.
Kyegegwa	Construction of Rwemitwaro Phase III	Construction of Rwemitwaro Phase III was at 85%.

Central Region

Districts	Project Name	Physical Progress
Nakaseke	Construction of Kyabakazi mini solar piped water system in Kikamulo sub county.	Substantially complete and in use. 4 public stand posts installed, districbution pipeline of 770m^2 PVC tanks each with capacity of 10m^3 and pumphouse and source in a chain link fence, trasmission line of 25m.
Kayunga	1. Extension of the water supply system from Kitimbwa to Nkokonjeru.	The supply system was substantially completed with 6.7 km of distribution line laid and 6 public stand posts constructed in Nkokonjeru RGC.
	2.Extension of piped water supply system from Bukamba to Kilindi in Nazigo S/C.	The system was substantialy complete with transmission line of 6.1km, distribution of 1.7km and 6 public stand posts. Water from bukanba system was also exteded to Nazingo seed secondary school 1.2km of pipeline.
Nakasongola	Design of Nalukenge RGC piped water systems in Lwabyata sub-county.	The system is to utilize an already drilled production well of 3.2 cubic meters. The consultant will complete the design in October 2022.
Kiboga	Design for Bulaga RGC water supply system. Costruction of kindeke Solar powerd piped watersystem.	Design for Bulaga RGC water supply system was completed. The system is to utilize a high yielding spring with an estimate yield of 6 cubic meters to serve over 800 people in 2 villages with 8 Public stand posts. Phase I completed comprising of 350m of transmission main, installation of 16m^3 resevoir and 1 ecosan toilet of 2 stance.
Kyankwanzi	Design of Piped Water Supply System in Watuba Town Council.	A feasibility study was completed. There was drilling of handpump borehole.
Kiryandongo	Extension of Apodorwa Piped Water System.	Extension for 500m with 1N.o public stand post was completed. The system is in use under defects liability period.

	Extension of Zirobwe water supply system. Extension of Wobulenzi - Katikamu System by 2.8km.	100% completion of the extension of Zirobwe water supply system by 1km. 100% complete of extension of Wobulenzi -Katikamu system by 2.8km.
	Extension of Butuntumula water supply	100% completion of the extension of Butuntumula water supply including 9.2km to serve villages of vumba, buzirandulla,wanonda, kabanyi and nanadwa having 7 public stand posts.
Kalangala	Kaazi Bugaba solar powered piped water system in Bufumira Sub County.	100% completion of the solar powered piped water system with transmission line of 1.2km, 24m^3 tank, 3.3km of distribution lines and 8 public tap stands.
Mukono	Upgrade of Koome piped water scheme Phase I and Phase II in Ntunda Sub County.	The water scheme was upgraded under phase I. The works included reservoir tank of 80 cubic, guard house, 5.2 km 9km of disrtibution network and 9 public stand pipes. Under phase II, the works included 3.9km of disrtibution network and additional 5 public stand pipes.
RAKAI	Rehabilitation of Lwanga piped water scheme in Kacheera Sub County.	Rehabilitation works was completed and facility in use serving 400 people. System was extended to Kalyeregyeza pipeline of 3km and a resevoir tank installed of 10m^3
Lwengo	Construction of mini solar pwered scheme in Kibuye RGC, with 1 public stand post of 4 spouts and resevoir of 10m^3 Extension of Nkoni piped water systemto Kamenya -Migo , 7km pipeline and instalation of 2 public stand posts.	Construction is at 100% completion and serving a population of 1,500. Extension is at 100% completion and serving a population of 3,500.
Sembabule	Construction of Kyatuba Solar Solar Scheme.	Completed with transmision of 700m, distribution lines of 1.3km and installed 3 public stand posts prepaid meters.
Kyotera	Extension of Kasensero piped water system and Kirumba -Kakyanga piped systems.	Completed with 5 public stand posts on Kasensero system and 3 public stand posts on Kirumba -Kakyanga system.
Wakiso	Construction of piped water supply system at Bussi Sub County phase II.	Phase II construction ongoing, system completion delayed by importation of 200M^3 resevoir from China instead of Kenya as earlier planned.
	Extension of Lukwanga mini piped system.	The system is at 100% completion serving 13 Public stand posts.
Gomba	Contruction of PhaseII Matongo Parish solar powered System.	The system is at 100% completion and serving a population of 4,000 persons.

Bukomansimbi	Extension of Butenga water supply system from kawoko to Buwenda. Extension from Buyonga water supply system to Uganda matyrs secodary school.	Completed and serving population of 1,500 in 6 villages. Completed the extension from Buyonga water supply system to Uganda matyrs secodary school by 1km.
	Construction of Saala solar powered scheme	Completed with $20m^3$ resevoir and 6 public stand posts.
Mpigi	Extension of Kamengo water supply system	The extension was for 15km with 6 public stand posts and Jeza-Buduma WSS for 12km with 4 Public stand posts completed.
Buvuma	Construction of Namatale piped water system in Bweema sub-county.	The works for Phase I & II are complete and Phase III is ongoing. The key components include chemical house, sedimentation tank, rapid sand filtration unit and foundation for floculator.
Mityana	Construction of Namugwo- Mpiligwa piped water system.	Phase I was completed. The works comprised of distribution network of 7.1km, 2 public stand posts serving an estimated population of 950 in Ziira village in Mpiigwa Parish. The system utilizes an extension from the NWSC line from the municipality. The system is to serve 3 parishes of Namugo, Kasangula and Mpiligwa . The total served is 13 villages. Phase one shall cover 12km for 5 villages in Mpiligwa.
	Namungo- Mpiligwa RGC water scheme	The hydrological surveys were conducted and 4 production boreholes are ready for drilling.

Western Uganda Region

Districts	Location	Physical Progress
Kanungu	Rehabilitation of 2 GFS, is Mhenyi,kihanda Kayungwe in Rugyeyo sub county	Rehabilitation of Kayungwe GFS is ongoing with major works that include source re-protection, reconstruction of 1,500L sedimentation tank, rehabilitation of the 60,000L reservoir tank, replacement of 500m pipeline, repairs of 20 public tap stands and construction of 1 new tap at the source.
	Kihanda Parish, Kirima sub county	Rehabilitation of Kihanda GFS is ongoing with major works that include construction of new 1,500L sedimentation tank, protection of 1 new water source, supply and installation of 3,000L reservoir tank, extension of 3Km pipeline and construction of 4 public tap stands.
	Extension of piped water to 5 villages of Mpangango, Kanyambeho, Nyakahita, Kasiro and Karonde	The extension of piped water has 4.3km pipeline laid and construction of 10 public stand posts (2 in each village).

	villages in Nyakinoni sub county	
Ntungamo	Nyarubare Parish	Rehabilitation and extension of Kyagara GFs to Nyarubare HC I and Rutente village.
Kabale	Design and extension of Nkamiro piped water to Kasheregyenyo HCIII,	Design and extension have 300m distribution main was laid and installed; constructed and installed 2 plastic tanks each 24000cm.
Rukiga	Nyakagabagada Rwamucucu	Extension of Nyakagabagada GFS. Rwamucucu seed school
Rubanda		Construction of bushura water supply system, phase IV in Bubare Construction of piped water at Burimbe and Nyamabale in Ikumba subcounty Construction of 2 rainwater tanks at Nyamwero seed school and at Mpungo H/CIII
Kisoro	Construction of Muyove GFS phase III Extension of Gasovu GFS to Sedwaba market	Construction of Muyove GFS phase III Extension of Gasovu GFS to Sedwaba market
Kiruhura	Extension of solar piped system in Sanga by 3km with 5 tap stands. Construction 2 tanks one in Kyenshonde H/CIII and another in Nyakashashara seed school.	Extension of solar piped system in Sanga by 3km with 5 public stand posts. Construction 2 tanks one in Kyenshonde H/CIII and another in Nyakashashara seed school.
Kazo	Kyampangara Subcounty	Construction of Akashayi piped water scheme Phase I in Ibaare Akashayi RGC, Kyampangara Subcounty. The works so far done are 456m 75mm OD PN10 HDPE transmission main with all accessories (bulk meter, pressure gauge, etc), 33m^3 steel reservoir tank, pump house, guard house with ecosan latrine and 180m chain-link fencing and gate.
Rukungiri	Design and implementation of Kateramo mini-solar system phase I. Supply of 10,000 litres institutional plastic tanks at Mabanga HCIII.	Design and implementation of Kateramo mini-solar system phase I. Supply of 10,000 litres institutional plastic tanks at Mabanga HCIII
Mitooma	Nkinga -Mushunga	Construction of Nkinga -Mushunga GFS phase I is ongoing.
Buhweju	Kajumbura	Construction of Kajumbura GFS is ongoing.
Bushenyi	Kyabukumu	Completion of Kyabukumu GFS phase III is ongoing.
Lyantonde	Lyakajura	Extension of water from NWSC to Lwamabara Seed School and to Lyakajura HC III is ongoing.
Isingiro	Kashumba	Construction of new Kashumba piped system in Kashumba subcounty serving Kashumba HC III. The works

		included 4.0 km of transmission of Pipeline and 5.57km of Distribution pipeline laid; 100m3 Cold Pressed Steel Tank; 12m Steel Tower supplied and installed including fencing; and 5-stance lined pit latrine and 02 kiosks constructed. No.16 tap stands constructed including supplying Kashumba HC III, Kashumba Preparatory Primary School, Kashumba Catholic Church, Kashumba sub county Offices
Rwampara	Kashuro	Construction of Kashuro mini solar water supply phase III
Shema	Kasanda sub county. Rugarama sub county.	Construction of rainwater harvest system at Kihara H/C III in Kasanda sub county. Extension of piped water system to Rugarama H/C III in Rugarama sub county.
Rubirizi	Rutoto	The Rutoto piped system is supplying kasenyere HCIII and Rwamitagu Primary school. The works include construction of powerhouse, sedimentation and sump tanks, a reservoir tank of 84m^3, water born toilet, inspection chambers and fencing off the source fence.
Mbarara	Kagongi sub county	Construction and extension of Kyandahi phase 4 in Kagongi sub county at 149 meters.
Ibanda	Nyamarebe sub county	Extension of piped water to Nyamarebe sub county is ongoing.
	Bwahwa sub county	Construction of piped water to Bwahwa sub county is ongoing.
	Kijongo sub county	Extension of Kijongo piped water system is ongoing with rehabilitation of 2 boreholes and shallow wells.

TABLE 2: PROVISION OF PORTABLE WATER TO SEED SECONDARY SCHOOLS

West Nile, Lango & Acholi Subregions

Districts	Progress in the Construction of Rural Water Systems-Extension of Water to Seed Secondary Schools
Arua	Aroi Seed Secondary School borehole was drilled. The borehole has an estimated yield of 4 cm^3/hr. Note: The Technical Planning Committee approved a new site for the seed school. The site was changed from Manibe subcounty to Aroi subcounty. Therefore, the seed school is Aroi Seed Secondary School but not Manibe Seed Secondary School.
Maracha	Tara Seed Secondary School borehole was drilled. The estimate yield of the borehole was 7 cubic m^3/hr. Maracha Seed Secondary School: The District Executive Committee approved a new site for the Seed Secondary School. The location was changed from Maracha Town Council to Agai Town Council. Agai TC water supply area was handed over to Nexus Green Project. Therefore, the school will be one of the beneficiaries of the Nexus Green Project.
Moyo	Dufile Seed Secondary School motorized borehole is about 50m from school.
Pakwach	Alwi Seed Secondary School will be supplied from Nyarwodo piped water supply system. Wadelai Seed Secondary School will be supplied from Nyarwodo piped water supply system.
Zombo	Atyak Seed Secondary School borehole was drilled at Atyak Seed Secondary School. The estimated borehole yield is 2.6 cm^3.

Lango Subregion

Districts	Progress in construction of rural water systems-extension of water to seed secondary schools
Amolatar	Muntu Seed Secondary School borehole was constructed.
Apac	Apac Seed Secondary School borehole was drilled using funding from the Development Grant. The estimated borehole yield is 1.2 m^3/hr.
Apac MC	Arocha Seed School was connected to tap water that is supplied by NWSC.
Lira	Agali Seed School borehole is a low yielding well of 0.75 m^3/HR. The borehole is located within the school compound.
Otuke	Ogor Seed Secondary School borehole was drilled using funding from the Development Grant. Currently, students access safe water from a borehole at a nearby primary school.

Acholi Subregion

Districts	Progress In the Provision of Water Sources to Seed Secondary Schools
Amuru	Amuru Subcounty Seed Secondary School borehole was constructed with funding from the Development Grant. The estimated borehole yield is 1.3 m^3/hr. Amuru TC Seed Secondary School is supplied by Amuru TC Piped Water Supply System. The system is managed by Northern Umbrella of Water and Sanitation.
Gulu	Palaro Seed Secondary School borehole was constructed within the school.
Kitgum	Labongo Amida Seed Secondary School borehole was drilled at the school with funding from GoU Development. Labongo Layamo Seed Secondary School borehole was drilled with funding from the GoU Development.
Nwoya	Got Apwoya Seed Secondary School borehole was drilled with funding from the GoU Development. Lungula Seed Secondary School borehole was drilled with funding from the Development Grant. The estimated yield of the borehole is 1 m^3/hr.
Pader	Latanya Seed Secondary School borehole was drilled at the school in this FY 2021/2022 with funding from the Development Grant. The source has an estimated yield of 0.55 m^3/hr.

Busoga Subregion

Districts	Progress In the Provision of Water Sources to Seed Secondary Schools
Buyende	**Buyende seed school in Buyende SC and Baligeya seed school in Nkondo subcounty have benefitted from the drilling of deep boreholes.**
Iganga	**Nawanyingi seed secondary school in Nawanyingi subcounty have benefitted from the drilling of deep boreholes.**
Kamuli	**Kitayunja seed secondary school in Kitayunja subcounty have benefitted from the drilling of deep borehole.**

Bukedi Subregion

Districts	Progress In the Provision of Water Sources to Seed Secondary Schools
Butaleja	**Nakwasi Seed Secondary School borehole was drilled using funding from GoU Development. Muhula Seed School works have been advertised.**
Pallisa	**Constructed boreholes in Oroki seed school (1) Apopong seed school (1) and Gogonya seed School (1) using funding from UgIFT.**

Butebo	**Constructed 1 borehole in Kanginima Seed School using funding from UgIFT.**
Namayingo	**Constructed 1 borehole in Mutumba Seed secondary school.**
Kibuku	**Kasasira Seed Secondary school and Kabweri Seed secondary school were provided with piped water.**

Elgon Subregion

Districts	School and Phase of upgrade	Progress in construction of rural water systems-extension of water to seed secondary schools
Kapchorwa	Kabeywa seed school (Phase I)	Has a tap connected to Kabeywa-Gamogo GFS
Kween	Kitawoi Seed School (Phase I)	Tap connected to Kwosir GFS
	Kaptum Seed School (Phase II)	When the Kaproron GFS is worked on, it will serve the school as well, water table too low to drill boreholes
	Moyok Seed School (Phase II)	Can be connected Kwanyiy GFS
Bukwo	Eastern College Chebinyiny seed school (Phase I)	Metered tap connected to Chebinyiny GFS-old system
	Kapkworos seed school (Phase II)	Tap connected to Tasakya GFS
Bulambuli	Bunambutye seed school (Phase I)	Bunambutye GFS at design stage
	Sisiyi seed school (Phase II)	Extension underway
Sironko	Buteza seed school (Phase I)	Planned for a water connection this FY 2022/23 under Buteza GFS
Mbale	Bubentsye seed school (Phase I)	Has tap connection
Manafwa	Buwagogo seed school (Phase I)	Tap connected to Nabweya GFS
	Sibanga seed school (Phase I)	Borehole planned for next FY 2022/23
	Khabutoola seed school (Phase II)	Borehole is within the adjacent primary school. Although piped water can be connected through Nangalwe/Ikaali piped water system in 2022/23 FY
Bududa	Situmi seed school (Phase I)	Tap connected to Bukibokolo GFS
	Bumayoka seed school (Phase I)	Tap connected to Bumayoka GFS
	Bubita seed school (Phase II)	Tap connected to Namateshe GFS
	Nakatsi seed school (Phase II)	There is a scheme near, Bumwalukani GFS
Namisindwa	Mukoto seed school (Phase I)	Tap connection from Bukoto GFS connected during phase one
	Namboko seed school (Phase II)	District to review water source to provide. Either drill a borehole and motorize it or connect them to Lirima GFS under NWSC

South-West Subregion

Districts	Seed Schools	Status
Kagadi	Kagadi Seed Luteete Seed	Served Served (Borehole)

Kakumiro	Birembo Seed	Served borehole
Kyegegwa	Rwentuha Seed	Served with Borehole
Masindi	Budongo Seed	Served - Borehole
Mubende	Mugungulu Butologo	Served by NWSC Served with Borehole
Buliisa	Gwedo seed	Served with b/hole

TABLE 3: PROVISION OF PORTABLE WATER TO NEWLY UPGRADED HEALTH CENTER IIs TO HEALTH CENTER IIIs

West Nile, Lango & Acholi Subregions

Sub regio	Districts	Progress in construction of rural water systems-extension of water to HCs
West Nile	Adjumani	Arinyapi HC III borehole was constructed by UNICEF
	Koboko	Chakulia HC III has a production well that was drilled in FY 2018/2019 and was motorized by UNICEF in 2021
	Maracha	Ajikoro HC III production well was drilled in the FY 2020/201 by Ministry of Health. Curube HC III borehole has an estimated yield of 1 cm^3/hr. Liko HC III has no safe water source.
	Moyo	Lama HC III has a low yielding borehole of 0.6 cm^3/hr. The borehole was constructed in the FY 2016/17
	Nebbi	Oweko HC III borehole was rehabilitated in FY 2019/2020. The borehole is over 15 years old.
	Yumbe	Mocha HC III borehole was drilled in the FY 2013/2014. Kerwa HC III borehole was drilled and motorized by UNICEF.
	Zombo	Theruru HC III borehole was drilled this FY 2021/2022 using the Development Grant.
Lango	Alebtong	Angetta HC III has an old functional borehole Anara HC III borehole was drilled in the FY 2020/21 Abia HC III borehole was rehabilitated in FY 2021/22 Awei HC III borehole was drilled in the FY2014/15 and was motorized by Rotary International in the FY 2016/17
	Amolatar	Nakatiti HC III has a low yielding borehole that is about 0.5 km to 1 km from the health center Anamwany HC III borehole was rehabilitated. Biko HC III borehole was constructed. The estimated yield is 3.9 m^3/hr. Alyecmeda HC III has no borehole. The nearest borehole is about 2 km Kidilani HC III is not in Amolatar District Awonangiro HC III borehole was constructed in the FY 2015/16 and rehabilitated in the FY 2019/2020
	Apac	Olelpek HC III borehole was drilled more than 15 years ago Kungu HC III borehole was drilled in the FY 2008/2009 by UNICEF
	Dokolo	Adok HC III borehole was constructed in the FY 2011/2012 by UNICEF. The estimated yield is 0.5 m^3/hr. Adagmon HC III has access to two sources which are 50m and 300m respectively Abalang HC III borehole was constructed by UNICEF in the FY 2015/2016. The estimated yield is 3.6 m^3/hr.

		Awelo HC III borehole was constructed by UNICEF in the FY 2014/2015. The borehole yield is 2.3 m^3/hr. Amwoma HC III borehole was constructed in the FY 2015/2016 by UNICEF. The yield is 1.8 m^3/hr.
	Kole	Ayer HC III borehole was rehabilitated by LTP. Okole HC III borehole is within the compound
	Kwania	Akali HC III deep borehole was drilled 300 meters from the Akali HC II. The borehole was rehabilitated by ILF in the current. The DWO plans to upgrade it to piped water in the next FY 2022/2023 Owiny HC III deep borehole was drilled by RHITES North Lango. The estimated yield is 1 m^3/hr.
	Lira	Anyangatir HC III borehole was drilled more than 10 years ago. The yield is 1.3 m^3/hr.
	Otuke	Ogwette HC III deep borehole was drilled by TGS
	Oyam	Atura HC III is served by a Atura Mini Piped Water Supply System Loro HC III borehole was constructed in the FY 2012/13. Abela HC III borehole was constructed in the FY 2009/2010 Ariba HC III Iceme HC III has tap water that is supplied by a mini piped water system that was constructed by World Vision Acimi HC III has a piped water system that was constructed by World Vision.
Acholi	Agago	Layita HC III is supplied by Longor Coodong Water Supply Area under Orom Water Supply and Sanitation Project. The project was funded AfDB and GoU. Management of the water supply and sanitation project was handed to Northern Umbrella of Water and Sanitation on September 8th2021. Pacer HC III mini piped water supply system was constructed by World Vision in the FY 2018/2019 Lapirin HC III: plans are underway by the water office to construct a deep borehole in the FY 2022/23. Omot HC III borehole was constructed in the FY 2015/16 using funding from the Development Grant.
	Amuru	Otwee HC III deep borehole was constructed in the FY 2015/16
	Kitgum Municipal Council	Pandwong HC III is supplied by NWSC. There is tap water at health center which was connected by NWSC.
	Lamwo	Katum HC III deep borehole was constructed outside the fence in the FY 2015/2016.
	Nwoya	Koch Lii HC III deep borehole was constructed in the FY 2016/2017. Para HC III tap water is supplied by the piped water system from Para Safari Lodge. Todora HC III deep borehole was rehabilitated this FY 2021/2022 using funds from the Development Grant. The borehole is at the health center and it's estimated yield is 1 m^3/hr.
	Omoro	Abwoch HC III deep borehole was constructed by UNICEF in the FY 2006/2007 Acet HC III deep borehole was constructed by UNICEF in the FY 2006/2007. Tekulu HC III deep borehole was constructed by UNICEF in the FY 2006/2007 Loyoajonga HC III deep borehole within the health center was constructed by UNICEF in the FY 2006/2007. Lakwatomer HC III community borehole was constructed by UNICEF in the FY 2006/2007. The borehole is outside the borders of the health center.
	Pader	Lapul Ocwida HC III deep borehole was drilled at the health center in the FY 2009/2010. The estimate yield is 0.8 m^3/hr.

Busoga Subregion

Districts	Progress In the Provision of Portable Water to Upgraded HC IIs
Bugweri	**Buyanga HC III benefitted from a borehole.**
Kamuli	**A borehole was drilled in Bubago HCIII. In Kagumba HCIII, a borehole was drilled under emergency response by ministry of water.**
Mayuge	**The district drilled borehole in Muggi HC II which was upgraded to HCIII in Mpungwe subcounty.** **The district also drilled in Nkombe HC III in Imanyiro subcounty.** **It also drilled one in Bukatube HCIII in Bukakutube subcounty. However, Jaguzi HCIII in Jaguzi subcounty had no access to a rig.**

Bukedi Subregion

Districts	Progress In the Provision Of Portable Water To Upgraded HC IIs
Busia	**Majanji and Buwembe HC IIIs were upgraded, Majanji HC III has a rainwater harvesting tank, Buwembe HC III has a borehole drilled by Hope 4 Kids International. Bumunji, Sikuda,Buwumba and Busime HC IIIs have 1 borehole drilled for each HC using DWSCG funds.**
Budaka	**Namusita HC III has 1 borehole drilled F/Y 2020/2021 using funding from GoU Development.**
Butaleja	**Constructed 10 boreholes in 10 sub-counties and 1 borehole in 1 town council**
Kibuku	**For Lyama HC which is currently being upgraded from HC II to III, provision of water source is included in the upgrade budget.**
Butebo	**Kanyum HC III**
Namutumba	**Constructed boreholes in Kagulu HC III (1) Nabiseji HC III (1) and Magada HC III (1) in F/Y 2020/2021, all are functional and have panned to construct a borehole in Namutumba HC II in F/Y 2022/2023.**

Elgon Subregion

Districts	Progress in construction of rural water systems to the HCs
Bukwo	Mutushet HC II (2018/2019); Tap connected to Bukwo GFS
	Amanang HC II (2019/2020); Tap connected to Bukwo GFS
	Kwirwot HC II (2019/2020); Tap connected to Swam GFS
	Prim HC II (2020/2021); Tap connected to Bukwo GFS
	Chepkwasta HC II (2020/2021); Tap connected to Chemwamat GFS
	Tulel HC II (2021/2022); Tap connected to Bukwo GFS
	Kapkworos HC II (2021/2022); Tap connected to Tasakya GFS
	Aralam HC II (2021/2022); Have a shallow well near the facility
Bulambuli	Bunangaka HC II (2018/2019); Connection in progress
	Bulaago HC II (2019/2020); Connected
	Bwikhonge HC II (2019/2020); Connected
	Bumugibole HC II (2020/2021); Connection underway

	Bukibologoto HC II (2021/2022); Connection underway
Sironko	Bundege HC II (2018/2019); Borehole constructed by an NGO
	Mutuufu HC II (2019/2022); Tap connected to Nalutaso GFS
	Buyobu HC II (2020/2021); Tap connected to Bugigomu GFS
	Simukondo HC II (2020/2021); Application form for connection by Umbrella to Bukedea GFS was filled & submitted
Manafwa	Bukimanayi HC II (2019/2020); Tap stand connected to Kaato GFS
Bududa	Bubungi HC II (2018/2019); Tap stand yet to be connected to Bushika GFS
	Bunamono HC II (2019/2020); Rainwater harvesting. Tap connected to Nabweya GFS which passes nearby
	Bumusi HC II (2020/2021); Nakokolo scheme to be constructed this FY 2022/23 & connected to the facility
Namisindwa	Bukokho HC II (2020/2021); Near Bumbo GFS which can be connected to facility this FY 2022/23

South- West Subregion

Districts	Health Centres	Status
Kamwenge	Kabambiro HC II	Served with Piped Water
Kassanda	Kikandwa HCII	Served with PipeWater
	Busereganyu HC II	Served with B/H
Bunyagabu	Kabahango HC II	Served with Piped Water
Bundibugyo	Bupomboli HC II Burondo HC II Bundimulangya HC II Mirambi HC II	Served Served Served Served
Kabarole	Nyakitokoli HC II Kituule HC II Nyabuswa HC II	Served with piped water Served with piped water Served with piped water
Kakumiro	Kitaihuka HC II Kabuubwa HC II Masaka II	Served borehole- Served- borehole Served -borehole
Kasese	Railway	Served
Kitagwenda	Kanara HC II	Served with pipe water
Kyenjojo	Kigoyera HC II Myeri HC II Kyankaramata HC III	Served – Borehole Served- Borehole Served Borehole
Masindi	Katesenywa HC II	Served NWSC
Mubende	BUtologo HC II Butawata HC II	Served -B/hole Served-Piped
Buliisa	Butiaba HC II KIGWEra HC II	Served with piped water Served with piped

Annex 8: District Sanitation and Hand washing coverage as of June 2022

Regions in Uganda	*District*	*Handwashing Coverage*	Access to Basic Sanitation	Sanitation Coverage
Kampala	Kampala	0.0	79	94.0
Kampala Total		**0.0**	**79**	**94.0**
Karamoja	Abim	0.0	7	71.8
	Amudat	0.0	1	27.6
	Kaabong	20.7	4	23.8
	Karenga	19.8	9	33.9
	Kotido	8.0	1	16.4
	Moroto	11.0	0	45.6
	Nabilatuk	1.4	0	16.2
	Nakapiripiriti	59.0	0	49
	Napak	19.3	6	39.8
Karamoja Total		**16.1**	**3**	**36.1**
West Nile	Adjumani	83.3	20	90.8
	Arua	36.9	18	75.5
	Koboko	0.0	0	80.3
	Madi Okollo	23.1	0	63.5
	Maracha	4.3	3	8.8
	Moyo	48.7	16	88.5
	Nebbi	41.1	19	75.8
	Obongi	42.0	0	87.0
	Pakwach	0.0	0	82.9
	Terego	29.5	11	63.5
	Yumbe	9.9	16	67.4
	Zombo	35.1	8	77.3
West Nile Total		**16.7**	**7**	**43.0**
Lango	Alebtong	25.0	17	79.2
	Amolatar	33.1	16	81.0
	Apac	39.2	17	89.7
	Dokolo	22.4	19	75.0
	Kole	18.4	15	79.2
	Kwania	34.1	15	79.9
	Lira	30.1	18	81.1
	Otuke	21.0	12	83.3
	Oyam	30.7	16	79.5
Lango Total		**28.0**	**16**	**80.3**
Kigezi	Kabale	33.5	9	90.5

	Kanungu	52.0	14	96.0
	Kisoro	32.7	9	78.6
	Rubanda	37.8	5	92.9
	Rukiga	24.7	8	90.1
	Rukungiri	13.1	16	99.2
Kigezi Total		**32.6**	**11**	**91.9**
South Buganda	Bukomansimbi	34.9	46	82.1
	Butambala	38.0	40	69.1
	Gomba	28.3	15	74.7
	Kalungu	54.0	9	89.0
	Kassanda	28.0	25	83.8
	Kyotera	25.2	25	69.5
	Lwengo	24.5	10	69.9
	Lyantonde	59.5	25	92.0
	Masaka	31.2	20	84.0
	Mpigi	30.0	24	68.0
	Rakai	43.5	21	61.7
	Sembabule	26.6	15	83.0
South Buganda Total		**33.6**	**22**	**76.6**
Teso	Amuria	37.3	20	75.2
	Bukedea	58.9	11	72.5
	Kaberamaido	0.0	0	87.3
	Kalaki	30.3	17	75.0
	Kapelebyong	25.2	2	62.8
	Katakwi	38.0	7	76.0
	Kumi	32.9	24	82.1
	Ngora	61.5	19	89.9
	Serere	39.1	14	75.9
	Soroti	44.3	20	83.9
Teso Total		**37.1**	**13**	**78.0**
Bukedi	Budaka	23.0	19	79.2
	Busia	48.0	20	91.1
	Butaleja	53.3	18	79.7
	Butebo	16.3	16	74.4
	Kibuku	27.7	17	81.6
	Pallisa	30.9	18	85.8
	Tororo	40.6	20	75.6
Bukedi Total		**37.8**	**19**	**81.6**
Bunyoro	Buliisa	39.2	8	68.6
	Hoima	56.0	23	79.3

	Kagadi	26.7	7	73.3
	Kakumiro	50.0	20	85.9
	Kibaale	26.5	24	81.7
	Kikuube	62.1	7	72.4
	Kiryandongo	35.0	28	74.2
	Masindi	16.5	15	59.5
Bunyoro Total		**38.0**	**15**	**73.7**
Acholi	Agago	23.7	12	60.9
	Amuru	14.7	18	62.2
	Gulu	21.8	21	86.7
	Kitgum	28.0	18	72.0
	Lamwo	66.2	10	57.6
	Nwoya	35.0	16	85.6
	Omoro	65.4	9	76.2
	Pader	88.2	12	69.0
Acholi Total		**38.4**	**15**	**71.9**
Toro	Bundibugyo	38.5	27	73.5
	Bunyangabo	43.9	22	91.1
	Kabarole	19.4	19	73.2
	Kamwenge	49.0	20	84.1
	Kasese	29.7	21	79.1
	Kitagwenda	61.8	20	80.7
	Kyegegwa	60.0	21	86.4
	Kyenjojo	49.5	28	98.2
	Ntoroko	11.0	18	56.0
Toro Total		**40.9**	**23**	**83.5**
Elgon	Bududa	41.6	17	79.1
	Bukwo	18.8	9	64.0
	Bulambuli	72.2	11	83.7
	Kapchorwa	54.0	12	84.3
	Kween	31.0	1	77.0
	Manafwa	54.1	3	88.8
	Mbale	23.7	28	73.2
	Namisindwa	19.5	14	71.1
	Sironko	97.0	15	83.9
Elgon Total		**44.2**	**17**	**77.4**
North Buganda	Buikwe	0.0	0	75.0
	Buvuma	14.0	0	38.1
	Kalangala	33.4	11	60.8
	Kayunga	29.2	27	82.3
	Kiboga	24.4	25	72.0

	Kyankwanzi	61.2	25	64.1
	Luwero	29.9	27	83.2
	Mityana	29.4	31	78.1
	Mubende	63.1	37	83.5
	Mukono	62.6	27	90.6
	Nakaseke	40.4	24	82.2
	Nakasongola	37.8	38	72.0
	Wakiso	58.1	46	80.8
North Buganda Total		**46.3**	**34**	**79.1**
Ankole	Buhweju	28.7	16	85.5
	Bushenyi	72.5	16	99.2
	Ibanda	25.3	28	84.9
	Isingiro	41.7	21	92.7
	Kazo	66.0	7	90.8
	Kiruhura	51.5	24	97.0
	Mbarara	35.6	29	93.6
	Mitooma	58.9	33	97.9
	Ntungamo	56.0	28	92.0
	Rubirizi	45.5	25	92.5
	Sheema	42.2	14	90.8
Ankole Total		**49.2**	**24**	**92.5**
Busoga	Bugiri	60.0	29	76.1
	Bugweri	32.7	29	93.6
	Buyende	38.5	14	86.3
	Iganga	47.3	30	88.1
	Jinja	26.6	32	82.2
	Kaliro	59.1	26	85.9
	Kamuli	45.4	17	83.6
	Luuka	41.0	31	77.0
	Mayuge	89.0	3	82.0
	Namayingo	52.2	17	81.7
	Namutumba	35.9	15	63.0
Busoga Total		**49.4**	**21**	**81.0**
Grand Total		***35.8***	***24***	***77.1***

Source: MWE MIS Database

Annex 9.1 NWSC Operational Areas as of June 2022

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
KAMPALA METRO-POLITAN REGION	1	Kampala Water	Kampala City	1
			Mukono Municipality	2
			Kira Municipality	3
			Nansana TC	4
			Wakiso TC,Buloba	5
			Kakiri	6
CENTRAL REGION	1	Entebbe	Entebbe	7
			Kajjansi	8
	2	Jinja	Jinja	9
			Njeru	10
			Buwenge	11
			Kagoma	12
	3	Lugazi	Lugazi	13
			Nkonkonjeru	14
			Buikwe	15
			Najjembe	16
	4	Iganga	Iganga	17
			Mayuge	18
			Kaliro	19
			Naluwerere	20
			Busembatya	21
			Luuka	22
			Buwuni	23
	5	Bugiri	Bugiri	24
	6	Mityana	Mityana	25
	7	Masaka	Masaka	26
			Mukungwe	27
			Bukakata	28
			Suunga	29
	8	Kalungu	Kalungu	30
			Lukaya	31
	9	Sembabule	Sembabule	32
			Lutuuku	33
			Kyambi	34
			Mabirizi	35
			Mateete	36
			Mitete	37
			Ntuusi	38
			Lwebitakuli	39
			Lugushuru	40
	10	Mpigi	Buwama	41
			Mpigi	42
			Kayabwe	43
			Gombe	44
			Kyabadaza	45
			Kibibi	46

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
	11	Luweero	Luweero	47
			Wobulenzi	48
			Bombo	49
			Zirobwe	50
			Semuto	51
			Nakaseke	52
			Bukomero	53
	12	Nakasongola	Nakasongola	54
	13	Kapeeka	Kapeeka	55
	14	Mubende	Mubende	56
			Kiganda	57
	15	Kigumba	Kigumba	58
	16	Bweyale	Bweyale	59
			Kiryandongo	60
	17	Kamuli	Kamuli	61
			Kisozi	62
			Mbulamuti	63
	18	Kyotera	Kyotera	64
			Kalisizo	65
			Sanje	66
			Kakuuto	67
			Rakai	68
			Mutukula	69
	19	Lwengo Area	Lwengo	70
			Kyazanga	71
			Kinoni -Lwengo	72
NORTHERN REGION	1	Apac	Apac	73
			Aduku	74
			Ibuje	75
			Kayei Landing Site	76
	2	Arua	Arua	77
			Wandi	78
			Omugo	79
			Kubala	80
			Okpkotani	81
	3	Gulu	Gulu	82
			Unyama	83
			Anaka	84
	4	Lira	Lira	85
			Amach	86
			Dokolo	87
	5	Kitgum	Kitgum	88
	6	Pader	Pader	89
			Pajule	90
			Patongo	91
			Kalongo	92
	7	Nebbi	Nebbi	93
			Paidha	94

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
			Nyapea	95
			Okollo	96
	8	Pakwach	Pakwach	97
	9	Adjumani	Adjumani	98
	10	Koboko	Koboko	99
			Yumbe	100
	11	Moyo	Moyo	101
EASTERN REGION	1	Mbale	Mbale	102
			Budadiri	103
			Sironko	104
			Butebo	105
	2	Bukedea	Kachumbala	106
			Bukedea	107
	3	Tororo	Tororo	108
			Malaaba	109
			Nagongera	110
			Kwapa SC	111
			Mella SC	112
			Busia	113
	4	Manafwa	Bubuto SC	114
			Bunabwana SC	115
			Sisuni SC	116
			Butiru TB	117
			Manafwa	118
			Lirima	119
			Lwakhakha	120
			Bumbo SC	121
			Buwoni SC	122
			Magale	123
	5	Soroti	Soroti	124
			Osukuru SC	125
			Atiriri	126
			Kalaki	127
			Amuria	128
			Serere	129
	6	Kaberamaido	Kaberamaido	130
			Otuboi	131
	7	Kumi	Pallisa	132
			Ngora	133
			Kumi	134
	8	Kapchorwa	Kapchorwa	135
			sipi	136
			Kaserem(Upper Sipi)	137
	9	Moroto	Matany	138
			Moroto	139
			Kangole	140
	10	Kotido	Kotido	141
			Kaabong	142

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
WEST & SOUTH WESTERN REGION	1	Hoima	Hoima	143
	2	Kyankwanzi	Bukwiri	144
			Banda	145
			Kasambya	146
			Misango	147
			Kyankwanzi	148
	3	Bushenyi	Bushenyi	149
			Ishaka	150
			Itendero	151
			Ryeru	152
			Magambo	153
			Kyabugimbi	154
			Irembezi	155
			Katerera	156
			Kashenshero	157
			Mitooma	158
			Kyangyenyi	159
			Rutookye	160
			Kabira	161
			Buhweju/Nsiika	162
			Mayanga-Omuribiri	163
			Kanyabwanga-Omukabanda	164
			Bitereko-Iraramira	165
			Kati-Rwempungu	166
			Kisiizi-Kengyera	167
	4	Sheema	sheema/shuku	168
			Kabwohe	169
			Kitagata	170
			Bugongi	171
	5	Rubirizi	Rubirizi	172
	6	Kisoro	Kisoro	173
	7	Mbarara	Mbarara	174
			Kinoni	175
			Rubindi	176
			Bwizibwera	177
			Kashaka	178
			Biharwe	179
			Kaberebere	180
			Nyeihanga	181
			Kagongi	182
			Nakivale	183
			Oruchinga	184
	8	Fort Portal	Fort Portal	185
			Kichwamba	186
			Rubona	187
			Katebwa	188
			Kicucu	189
			Kiko	190

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
			Kasunga-nyanja	191
			Kabale-Kabarole	192
			Kyenjojo	193
			Mugusu	194
			Kijura	195
	9	Kasese	Kasese	196
			Rugendabara	197
			Rwimi	198
	10	Bunyangabu	Kibiito	199
			Hima	200
	11	Masindi	Masindi	201
	12	Kabale	Kabale	202
			Muhanga	203
			Kamwezi	204
	13	Rukungiri	Rukungiri	205
			Kebisoni	206
			Buyanja	207
			Nyakagyeme-Rwerere	208
	14	Kanungu	Kanungu	209
			Kihihi	210
			Kambuga	211
			Butogota	212
			Kanyampanga	213
			Kanyantorogo	214
			Nyamirama	215
			Kateete	216
			Nyakinoni	217
			Nyanga	218
			Kirima	219
	15	Ibanda	Ibanda	220
			Rwenkobwa	221
	16	Kamwenge	Kamwenge	222
			Ishongorero	223
			Bisozi	224
			Kahunge	225
			Bigodi	226
			Katalyeba	227
			Kabuga	228
			Rukooko	229
	17	Lyantonde	Lyantonde	230
			Kasagama	231
			Kaliro	232
			Kinoni	233
			Katovu	234
			Kinuka	235
	18	Ntungamo	Ntungamo	236
			Omungyenyi	237
			Rubare	238

REGION	Administrative Area		Town/ Urban Centers	No. of Towns
			Kagarama	**239**
			Rwentobo	**240**
			Rweshemeire	**241**
			Kyempene-Rugarama	**242**
			Nyabihoko	**243**
			Nyamunuka	**244**
			Itojo	**245**
			Kiziba	**246**
	19	Rushere	Rushere	**247**
			Kiruhura	**248**
			Kazo	**249**
			Sanga	**250**
			Kanyareru	**251**
			Kikatsi	**252**
	20	Mpondwe	Mpondwe -Lhubirha	**253**
			Katwe	**254**
			Harukungu	**255**
	21	Ruhama-Kitwe	Ruhama	**256**
			Kitwe	**257**
			Kikagati	**258**
			Mirama Hills	**259**
			Rukoni	**260**
	22	Ntoroko	Ntoroko	**261**
			Rwebisengo-Kanara	**262**

Source: NWSC Database

Annex 9.2: NWSC Water Production (m3) and Capacity Utilization (%) as of 30th June 2022

Area	Practical capacity m^3/day	Total Water Produced m3	Average Production m^3/day	Capacity Utilization (%)
Kampala Metropolitan	396,500	100,924,750	276,506	70%
Central Region				
Bugiri	475	98,158	269	57%
Bweyale	908	236,291	647	71%
Entebbe	28,000	9,122,825	24,994	89%
Iganga	1,968	199,577	547	28%
Jinja	25,466	8,933,293	24,475	96%
Kalungu	1,916	248,227	680	35%
Kamuli	1,418	197,711	542	38%
Kapeeka	5,908	638,478	1,749	30%
Kigumba	571	157,122	430	75%
Kyotera	3,021	682,668	1,870	62%
Lugazi	2,506	478,471	1,311	52%
Luweero	7,812	718,927	1,970	25%
Lwengo	913	280,373	768	84%
Masaka	8,272	2,756,998	7,553	91%
Mityana	4,246	910,073	2,493	59%
Mpigi	2,860	493,030	1,351	47%
Mubende	3,015	724,734	1,986	66%
Nakasongola	-	-	-	-
Sembabule	1,729	368,093	1,008	58%
Sub Total	**101,003**	**27,245,049**	**74,644**	**74%**
Eastern Region				
Kapchorwa	2,820	504,431	1,382	49%
Kotido	803	172,712	473	59%
Kumi	2,620	501,059	1,373	52%
Manafwa	6,400	247,148	677	11%
Mbale	17,131	2,758,210	7,557	44%
Moroto	1,918	323,995	888	46%
Soroti	7,626	1,853,155	5,077	67%
Tororo	14,003	1,561,718	4,279	31%
Kaberamaido	259	94,219	258	100%
Bukedea	658	91,685	251	38%
Sub Total	**54,238**	**8,108,332**	**22,215**	**41%**
Northern Region				
Adjumani	2,819	437,644	1,199	43%
Apac	3,777	270,253	740	20%
Arua	18,480	1,622,989	4,447	24%
Gulu	7,672	1,959,273	5,368	70%
Kitgum	3,760	405,200	1,110	30%
Koboko	1,502	362,840	994	66%

Area	Practical capacity m^3/day	Total Water Produced m3	Average Production m^3/day	Capacity Utilization (%)
Lira	9,300	2,521,317	6,908	74%
Moyo	636	221,887	608	96%
Nebbi	2,561	792,024	2,170	85%
Pader	2,680	263,267	721	27%
Pakwach	1,500	346,239	949	63%
Sub Total	**54,687**	**9,202,933**	**25,214**	**46%**
				Western & Southwestern
Bushenyi	5,520	1,479,274	4,053	73%
Bunyangabu	1,800	352,292	1,662	92%
Fort Portal	5,322	1,586,237	4,346	82%
Hoima	7,984	692,496	1,897	24%
Ibanda	1,477	400,243	1,097	74%
Kabale	9,200	823,351	2,256	25%
Kamwenge	2,923	570,893	1,564	54%
Kanungu	2,490	566,763	1,553	62%
Kasese	3,827	1,396,848	3,827	100%
Kisoro	4,580	525,206	1,439	31%
Kyankwanzi	159	54,601	150	94%
Lyantonde	2,948	711,538	1,949	66%
Masindi	3,300	1,121,815	3,073	93%
Mbarara	20,000	6,411,768	17,566	88%
Mpondwe	2,300	525,592	1,440	63%
Ntoroko	1,884	142,066	389	21%
Ntungamo	1,826	521,488	1,429	78%
Rubirizi	30,000	277,264	760	3%
Ruhama	1,400	190,030	521	37%
Rukungiri	887	250,287	686	77%
Rushere	556	144,151	395	71%
Sheema	4,330	383,225	1,050	24%
Subtotal	**114,713**	**19,127,428**	**53,100**	**46%**
Total	**721,142**	**164,608,492**	**451,679**	**63%**

Source: NWSC Database

Annex 9.3 NWSC Status of Mains Extensions (Km) as of June 2022

Area	Water Mains (Km)		Sewer Mains (km)	
	New Extensions	Total Pipe Network	New Extensions	Total Pipe Network
Kampala	**171.417**	**3,840**	**12.034**	**301.713**
Central Region				
Bugiri	6.764	94.164	0.00	0
Bweyale	5.4	188.5	0.00	0
Entebbe	35.078	513.028	0.40	63.74
Iganga	40.5	384.53	0.10	6.16
Jinja	39.9	844.88	0.50	89.564
Kalungu	34	116.9	0.00	0
Kamuli	7	153.52	0.00	0
Kapeeka	26.6	151.6	0.00	0
Kigumba	9	233.7	0.00	0
Kyotera	13.5	231.6	0.00	0
Lugazi	23.5	220.9	0.00	0
Luweero	13.3	672.3	0.00	0
Lwengo	5.886	222.996	0.00	0
Masaka	25.73	368.93	0.00	26.4
Mityana	23.5	275	0.00	0
Mpigi	10	229.5	0.00	0
Mubende	22.55	290.38	0.00	0
Nakasongola	10.2	130.59	0.00	0
Sembabule	34.62	356.58	**0.00**	**0**
Subtotal	**387.028**	**5,679.60**	**1.00**	**185.86**
Eastern Region				
Kapchorwa	5	137.2	0.00	0
Kotido	7.5	85.05	0.00	0
Kumi	36.2	306.269	0.00	0
Manafwa	13.2	233.2	0.00	0
Mbale	26.6	612.97	0.80	37.065
Moroto	12.4	109.2840833	0.00	0
Soroti	26.935	297.085	0.00	25.1
Tororo	40.05	489.05	3.70	35.078
Kaberamaido	5	169	0.00	0
Bukedea	**5**	86	**0.00**	**0**
Subtotal	**177.89**	**2,525.11**	**4.50**	**97.24**
Northern Region				
Adjumani	5	143.4	0.00	0
Apac	16.2	168.7	0.00	0
Arua	33.5	529.9	6.50	32.922
Gulu	28.8	300.214	0.00	17.6
Kitgum	5	139.754	0.00	0
Koboko	11.5	122.5	0.00	0

Area	Water Mains (Km)		Sewer Mains (km)	
	New Extensions	Total Pipe Network	New Extensions	Total Pipe Network
Lira	23	338.815	0.00	23.3
Moyo	5.9	85.4	0.00	0
Nebbi	27	124.815	0.00	0
Pader	18.3	275.25	0.00	0
Pakwach	**15**	201.4	**0.00**	**0**
Subtotal	**189.2**	**2,430.15**	**6.50**	**73.82**
Western & Southwestern Region				
Bushenyi	48.69	432.37	5.60	5.6
Bunyangabu	4.20	205.20	0.00	0
Fort Portal	18.70	474.86	0.00	2.1
Hoima	21.87	274.98	4.00	4.6
Ibanda	21.00	301.09	0.00	0
Kabale	13.30	364.40	0.20	18.04
Kamwenge	27.00	497.49	0.00	0
Kanungu	11.30	498.18	0.00	0
Kasese	4.00	237.52	0.00	0
Kisoro	31.70	323.45	0.00	4.5
Kyankwanzi	5.00	26.00	0.00	0
Lyantonde	10.10	346.48	0.00	0
Masindi	5.00	328.10	2.00	16.2
Mbarara	36.20	819.20	0.00	34
Mpondwe	0.00	144.40	0.00	0
Ntoroko	6.84	72.72	0.00	0
Ntungamo	10.00	366.00	0.00	0
Rubirizi	14.70	109.90	0.00	0
Ruhama	20.20	280.50	0.00	0
Rukungiri	3.50	345.72	0.00	0
Rushere	36.90	425.64	0.00	0
Sheema	**28.90**	444.90	**0.00**	**0**
SUB TOTAL	**379.10**	**7,319.09**	**11.80**	**85.04**
TOTAL	**1,304.6**	**21,794.4**	**35.83**	**743.68**

Source: NWSC Database

Annex 9.4 NWSC Status of Household Connections as of June 2022

Area	New Water Connections	Total Household Connections	Active Household Connections	Inactive Household Connections
Kampala	**20,448**	**328,902**	**283,318**	**45,584**
Central Region				
Bugiri	77	1,441	1,042	399
Bweyale	126	1,645	1,503	142
Entebbe	1,917	38,015	30,476	7,539
Iganga	585	9,216	7,251	1,965
Jinja	1,648	30,353	23,077	7,276
Kalungu	108	2,140	1,881	259
Kamuli	135	2,786	2,336	450
Kapeeka	244	2,333	2,252	81
Kigumba	89	1,550	1,255	295
Kyotera	349	5,107	4,549	558
Lugazi	270	4,163	3,727	436
Luweero	625	9,017	8,132	885
Lwengo	149	2,659	2,327	332
Masaka	625	15,653	12,294	3,359
Mityana	493	5,578	5,012	566
Mpigi	339	4,461	4,069	392
Mubende	228	4,871	4,151	720
Nakasongola	41	449	407	42
Sembabule	399	2,035	1,954	81
Subtotal	**8,447**	**143,472**	**117,695**	**25,777**
Eastern Region				
Kapchorwa	200	2,216	2,027	189
Kotido	50	770	558	212
Kumi	193	2,726	2,440	286
Manafwa	83	5,273	4,111	1,162
Mbale	965	18,251	13,611	4,640
Moroto	78	924	738	186
Soroti	327	7,420	5,105	2,315
Tororo	578	11,756	7,920	3,836
Kaberamaido	21	484	390	94
Bukedea	30	848	619	229
Subtotal	**2,525**	**50,668**	**37,519**	**13,149**
Northern Region				
Adjumani	201	2,913	2,457	456
Apac	134	2,158	2,051	107
Arua	546	8,639	6,570	2,069
Gulu	964	8,999	7,865	1,134
Kitgum	163	3,620	3,198	422

Area	New Water Connections	Total Household Connections	Active Household Connections	Inactive Household Connections
Koboko	112	1,835	1,585	250
Lira	710	12,964	10,016	2,948
Moyo	124	2,405	2,223	182
Nebbi	266	4,267	3,872	395
Pader	98	2,592	2,112	480
Pakwach	78	1,632	1,246	386
Subtotal	**3,396**	**52,024**	**43,195**	**8,829**
Western & Southwestern Region				
Bushenyi	643	8,602	8,070	532
Bunyangabu	119	3,618	3,230	388
Fort Portal	1002	10,447	9,528	919
Hoima	272	4,996	4,152	844
Ibanda	251	4,739	4,025	714
Kabale	395	7,218	6,057	1,161
Kamwenge	237	3,683	3,486	197
Kanungu	391	4,590	4,082	508
Kasese	294	7,624	6,283	1,341
Kisoro	285	3,821	3,485	336
Kyankwanzi	25	119	116	3
Lyantonde	139	2,572	2,023	549
Masindi	256	5,410	4,673	737
Mbarara	2405	27,316	24,477	2,839
Mpondwe	145	3,504	2,918	586
Ntoroko	2	570	490	80
Ntungamo	364	4,049	3,492	557
Rubirizi	108	1,475	1,350	125
Ruhama	84	1,754	1,216	538
Rukungiri	189	3,663	3,305	358
Rushere	134	1,824	1,781	43
Sheema	429	5,241	4,856	385
Subtotal	**8,169**	**116,835**	**103,095**	**13,740**
TOTAL	**42,985**	**691,901**	**584,822**	**107,079**

Source: NWSC Database

Annex 9.5 NWSC Status of Pro-Poor Connections as of June 2022

Area	Public Stand Pipes (PSPs)			
	New PSPs	Active Accounts	Inactive Accounts	Total PSPs
Kampala	**404**	**4,761**	**2,438**	**7,199**
Central Region				
Bugiri	3	59	11	70
Bweyale	23	233	11	244
Entebbe	23	410	82	492
Iganga	55	577	28	605
Jinja	109	1264	194	1458
Kalungu	16	88	0	88
Kamuli	7	182	13	195
Kapeeka	20	126	1	127
Kigumba	12	92	3	95
Kyotera	12	219	11	230
Lugazi	21	203	8	211
Luweero	31	256	16	272
Lwengo	0	1179	163	1342
Masaka	24	344	65	409
Mityana	20	347	0	347
Mpigi	14	252	4	256
Mubende	10	238	9	247
Nakasongola	0	29	0	29
Sembabule	29	136	0	136
Sub Total	**429**	**6,234**	**619**	**6,853**
Eastern Region				
Kapchorwa	20	95	12	107
Kotido	2	49	11	60
Kumi	31	121	8	129
Manafwa	51	264	35	299
Mbale	40	657	358	1015
Moroto	2	73	30	103
Soroti	29	351	133	484
Tororo	65	800	399	1199
Kaberamaido	6	43	5	48
Bukedea	3	**46**	**0**	**46**
Sub Total	**249**	**2,499**	**991**	**3,490**
Northern Region				
Adjumani	3	81	12	93
Apac	11	246	4	250
Arua	10	291	50	341
Gulu	24	242	111	353
Kitgum	9	108	8	116

Area	Public Stand Pipes (PSPs)			
	New PSPs	Active Accounts	Inactive Accounts	Total PSPs
Koboko	10	134	3	137
Lira	30	664	196	860
Moyo	1	73	12	85
Nebbi	35	396	2	398
Pader	13	139	12	151
Pakwach	78	153	2	155
Sub Total	**224**	**2,527**	**412**	**2,939**
Western & Southwestern Region				
Bushenyi	240	1135	6	1141
Bunyangabu	6	400	40	440
Fort Portal	36	411	47	458
Hoima	20	164	13	177
Ibanda	22	193	13	206
Kabale	92	461	53	514
Kamwenge	57	633	27	660
Kanungu	89	872	63	935
Kasese	13	199	16	215
Kisoro	36	244	7	251
Kyankwanzi	3	26	0	26
Lyantonde	32	277	52	329
Masindi	13	281	23	304
Mbarara	62	566	74	640
Mpondwe	2	260	9	269
Ntoroko	6	68	4	72
Ntungamo	16	258	40	298
Rubirizi	7	203	29	232
Ruhama	29	210	57	267
Rukungiri	8	334	30	364
Rushere	4	171	1	172
Sheema	42	397	10	407
Subtotal	**835**	**7,763**	**614**	**8,377**
Total	**2,141**	**23,784**	**5,074**	**28,858**

Source: NWSC Database

Annex 9.6 NWSC Status of Sewer Connections as of June 2022

Area	New Sewer Connections	Sewer Connections		
		Active	Inactive	Total
Kampala	**477**	**13,045**	**996**	**14,041**
Central Region				
Bugiri	0	-	-	-
Bweyale	0	-	-	-
Entebbe	6	453	39	492
Iganga	4	180	48	228
Jinja	13	4,138	579	4,717
Kalungu	0	-	-	-
Kamuli	0	-	-	-
Kapeeka	0	-	-	-
Kigumba	0	-	-	-
Kyotera	1	-	-	-
Lugazi	0	-	-	-
Luweero	0	-	-	-
Lwengo	0	-	-	-
Masaka	0	334	131	465
Mityana	0	-	-	-
Mpigi	0	-	-	-
Mubende	0	-	-	-
Nakasongola	0	-	-	-
Sembabule	0	-	-	-
Subtotal	**24**	**5,105**	**797**	**5,902**
Eastern Region				
Kapchorwa	**0**	0	0	0
Kotido	**0**	0	0	0
Kumi	**0**	0	0	0
Manafwa	**0**	0	0	0
Mbale	**38**	2447	360	2807
Moroto	**0**	0	0	0
Soroti	**2**	412	121	533
Tororo	**3**	410	137	547
Kaberamaido	**0**	0	0	0
Bukedea	**0**	**0**	**0**	**0**
Subtotal	**43**	**3,269**	**618**	**3,887**
Northern Region				
Adjumani	**0**	-	-	-
Apac	**0**	-	-	-
Arua	**1**	224	15	239
Gulu	**3**	785	41	826
Kitgum	**0**	-	-	-

Area	New Sewer Connections	Sewer Connections		
		Active	Inactive	Total
Koboko	**0**	-	-	-
Lira	**5**	437	119	556
Moyo	**0**	-	-	-
Nebbi	**0**	-	-	-
Pader	**0**	-	-	-
Pakwach	**0**	-	-	-
Subtotal	**9**	**1,446**	**175**	**1,621**
Western & Southwestern Region				
Bushenyi	**0**	0	0	0
Bunyangabu	**0**	0	0	0
Fort Portal	**7**	227	19	246
Hoima	**0**	88	25	113
Ibanda	**0**	0	0	0
Kabale	**6**	688	136	824
Kamwenge	**0**	0	0	0
Kanungu	**0**	0	0	0
Kasese	**0**	0	0	0
Kisoro	**1**	168	14	182
Kyankwanzi	**0**	0	0	0
Lyantonde	**0**	0	0	0
Masindi	**2**	217	31	248
Mbarara	**7**	781	162	943
Mpondwe	**0**	0	0	0
Ntoroko	**0**	0	0	0
Ntungamo	**0**	0	0	0
Rubirizi	**0**	0	0	0
Ruhama	**0**	0	0	0
Rukungiri	**0**	0	0	0
Rushere	**0**	0	0	0
Sheema	**0**	**0**	**0**	**0**
Subtotal	**23**	**2,169**	**387**	**2,556**
TOTAL	**576**	**25,034**	**2,973**	**28,007**

Source: NWSC Database

Annex 9.7 NWSC Status of Public Toilets Constructed and Cesspool Emptiers as of June 2022

#	Region / Area	Public Toilets as at June 2020	New Public Toilets Constructed			Emptier trucks as at June 2022
			2020/21	2021/22	Location – 2021/22	
1	**Kampala**	**100**	**0**	**0**	**N/A**	**3**
Central Region						
1	Jinja	0	0	0	N/A	0
2	Entebbe/Kajansi	0	0	0	N/A	1
3	Masaka	2	0	0	N/A	1
4	Kalungu	0	0	0	N/A	0
5	Mubende	0	0	0	N/A	0
6	Lugazi	0	0	0	N/A	0
7	Luweero	0	0	0	N/A	0
8	Nakasongola	0	0	0	N/A	0
9	Mityana	0	0	0	N/A	0
10	Kigumba	0	0	0	N/A	0
11	Bweyale/Kiryandongo	0	0	0	N/A	0
12	Kyotera	0	0	0	N/A	0
13	Iganga	0	0	0	N/A	1
14	Bugiri	0	0	0	N/A	0
15	Kamuli/Mbulimuti	0	0	0	N/A	0
16	Mpigi	0	0	1	Kibibi, Butambala	1
17	Sembabule	0	0	0	N/A	0
18	Kapeeka	0	0	0	N/A	0
19	Lwengo	0	0	0	N/A	0
Total Central Region		**2**	**0**	**1**	**0**	**4**
Eastern Region						
1	Tororo	2	0	0	N/A	0
2	Manafwa	0	2	0	N/A	0
3	Mbale	0	0	0	N/A	0
4	Bukedea	0	0	0	N/A	0
5	Soroti	0	0	0	N/A	0
6	Kaberamaido	0	3	0	N/A	0
7	Moroto	0	0	0	N/A	0
8	Kapchorwa	0	0	0	N/A	0
9	Kumi	0	0	0	N/A	0
10	Kotido	0	0	0	N/A	0
Total Eastern Region		**2**	**5**	**0**	**0**	**0**
Northern Region						
1	Lira	0	0	0	N/A	0
2	Gulu	29	0	0	N/A	1
3	Arua	8	0	0	N/A	1

#	Region / Area	Public Toilets as at June 2020	New Public Toilets Constructed			Emptier trucks as at June 2022
			2020/21	2021/22	Location – 2021/22	
4	Pader	0	0	3	Achol Pii, Lagile Primary School	0
4	Nebbi/Paidha	0	0	0	N/A	0
5	Kitgum	0	0	0	N/A	0
6	Apac/Aduku	0	0	1	Awila - Ibuje	0
7	Adjumani	0	0	0	N/A	0
8	Moyo	0	0	0	N/A	0
9	Koboko	0	0	0	N/A	0
10	Pakwach	0	0	0	N/A	0
Total Northern Region		**37**	**0**	**4**	**0**	**2**
Western & Southwestern						
1	Mbarara	0	0	0	N/A	0
2	Bushenyi/ Ishaka	0	0	4	Bushenyi, Ishaka, Kabira and Buhweju	0
3	Sheema	0	0	0	N/A	0
4	FortPortal	0	0	0	N/A	0
5	Bunyangabo	0	0	0	N/A	0
6	Kasese	0	0	0	N/A	0
7	Hoima	0	0	0	N/A	0
8	Kyankwanzi	0	0	0	N/A	0
9	Masindi	0	0	0	N/A	0
10	Kabale	0	0	0	N/A	0
11	Kisoro	0	0	0	N/A	0
12	Rukungiri	0	0	2	Rukungiri Municipality offices and Ntungamo Stage	0
13	Ibanda	0	0	0	N/A	0
14	Kamwenge	0	0	0	N/A	0
15	Kanungu	0	0	0	N/A	0
16	Lyantonde	0	0	0	N/A	0
17	Rushere	0	0	0	N/A	0
18	Ntungamo	0	0	0	N/A	0
19	Mpobdwe	0	0	0	N/A	0
20	Ruhaama	0	0	0	N/A	0
21	Rubirizi	0	0	0	N/A	0
22	Ntoroko	0	0	0	N/A	0
Total Western & Southwestern		**0**	**0**	**6**	**N/A**	**0**
Overall Total		**141**	**5**	**11**	**N/A**	**9**

Source: NWSC Database

Annex 9.8 NWSC Percentage of Water Supply Systems Operated Using Solar Energy Packages as at June 2022

#	Region / Area	Solar Powered Systems as at June 2020	New Solar Systems Installed		Solar Powered Systems as at June 2022	Hydro - electricity	Generator/ Fuel	Gravity Flow	% of Green Energy
			FY 2020/21	FY 2021/22					
1	**Kampala**	**0**	**0**	**0**	**0**	**20**	**1**	**0**	**0%**
				Central Region					
1	Jinja	0	0	0	0	5	0	0	0%
2	Entebbe/Kajansi	0	0	0	0	2	0	0	0%
3	Masaka	0	0	0	0	5	0	0	0%
4	Kalungu	0	0	0	0	4	3	0	0%
5	Mubende	0	0	0	0	7	0	0	0%
6	Lugazi	2	0	0	2	11	0	0	15%
7	Luweero	2	0	0	2	17	0	0	11%
8	Nakasongola	0	0	0	0	0	0	0	0%
9	Mityana	0	0	0	0	4	0	0	0%
10	Kigumba	0	0	0	0	4	0	0	0%
11	Bweyale/Kiryandongo	0	0	0	0	7	0	0	0%
12	Kyotera	0	0	0	0	21	0	0	0%
13	Iganga	2	0	0	2	6	1	0	22%
14	Bugiri	0	0	0	0	4	1	0	0%
15	Kamuli/Mbulimuti	0	0	0	0	6	1	0	0%
16	Mpigi	0	0	0	0	2	0	0	0%
17	Sembabule	1	0	0	1	4	0	0	20%
18	Kapeeka	0	0	0	0	7	0	0	0%
19	Lwengo	0	0	0	0	4	0	0	0%
Subtotal Central		**7**	**0**	**0**	**7**	**120**	**6**	**0**	**5%**
				Eastern Region					
1	Tororo	0	1	0	1	16	0	0	6%
2	Manafwa	2	0	0	2	0	0	1	67%
3	Mbale	0	0	0	0	5	0	1	0%
4	Bukedea	0	0	0	0	4	0	0	0%
5	Soroti	1	0	0	1	4	0	0	20%
6	Kaberamaido	1	0	0	1	1	0	0	50%

#	Region / Area	Solar Powered Systems as at June 2020	New Solar Systems Installed		Solar Powered Systems as at June 2022	Hydro - electricity	Generator/ Fuel	Gravity Flow	% of Green Energy
			FY 2020/21	FY 2021/22					
7	Moroto	1	0	1	2	7	1	0	20%
8	Kapchorwa	0	0	0	0	3	0	1	0%
9	Kumi	0	0	0	0	5	0	0	0%
10	Kotido	3	0	0	3	3	1	0	43%
Subtotal Eastern Region		**8**	**1**	**1**	**10**	**48**	**2**	**3**	**16%**
Northern Region									
1	Lira	0	0	0	0	2	0	0	0%
2	Gulu	2	0	1	3	7	0	0	30%
3	Arua	2	0	0	2	7	3	0	17%
4	Pader	0	0	1	1	8	2	0	9%
5	Nebbi/Paidha	0	0	0	0	6	3	0	0%
6	Kitgum	0	1	1	2	9	0	0	18%
7	Apac/Aduku	0	1	0	1	10	0	0	9%
8	Adjumani	0	0	0	0	8	0	0	0%
9	Moyo	0	0	0	0	4	0	0	0%
10	Koboko	2	0	0	2	2	4	0	25%
11	Pakwach	0	0	0	0	1	0	0	0%
Subtotal Northern Region		**6**	**2**	**3**	**11**	**64**	**12**	**0**	**13%**
Western and Southwestern Region									
1	Mbarara	0	0	0	0	8	0	0	0%
2	Bushenyi/ Ishaka	0	1	1	2	20	0	0	9%
3	Sheema	1	0	0	1	3	0	6	10%
4	FortPortal	0	0	0	0	3	0	0	0%
5	Bunyangabo	0	0	0	0	0	0	1	0%
6	Kasese	0	0	0	0	1	0	0	0%
7	Hoima	0	0	0	0	9	0	0	0%
8	Kyankwanzi	0	0	0	0	1	2	1	0%
9	Masindi	0	0	0	0	1	0	0	0%
10	Kabale	0	0	0	0	3	0	3	0%
11	Kisoro	1	0	0	1	2	0	0	33%
12	Rukungiri	0	0	0	0	9	0	4	0%

#	Region / Area	Solar Powered Systems as at June 2020	New Solar Systems Installed		Solar Powered Systems as at June 2022	Hydro - electricity	Generator/ Fuel	Gravity Flow	% of Green Energy
			FY 2020/21	FY 2021/22					
13	Ibanda	0	0	1	1	2	0	6	11%
14	Kamwenge	6	0	1	7	5	0	0	58%
15	Kanungu	2	0	0	2	12	0	0	14%
16	Lyantonde	0	0	0	0	1	2	0	0%
17	Rushere	0	0	0	0	9	2	0	0%
18	Ntungamo	0	0	0	0	10	0	4	0%
19	Mpondwe	0	0	0	0	2	0	1	0%
20	Ruhama	1	0	0	1	7	1	0	11%
21	Rubirizi	0	0	0	0	0	0	1	0%
22	Ntoroko	1	0	0	1	1	1	0	33%
Subtotal Northern Region		**12**	**1**	**3**	**16**	**109**	**8**	**27**	**10%**
Overall Total		**33**	**4**	**7**	**44**	**361**	**29**	**30**	**9%**

Source: NWSC Database

Annex 9.9 NWSC Number of Staff as of June 2022

Area	Male	Female	Total Staff	% Female	Water Connections	Staff Productivity
Head Office	**304**	**264**	**568**	**46%**	**0**	
Kampala Metropolitan	**1,190**	**543**	**1,733**	**31%**	**390,707**	**4**
Central Region						
Bugiri	8	4	12	33%	1,755	7
Jinja	88	42	130	32%	38,524	3
Entebbe/Kajansi	77	53	130	41%	48,428	3
Masaka	56	19	75	25%	19,326	4
Kalungu	13	5	18	28%	2,595	7
Mubende	16	14	30	47%	6,541	5
Lugazi	14	13	27	48%	5,170	5
Luweero	33	16	49	33%	10,988	4
Mityana	18	9	27	33%	7,151	4
Kigumba	11	8	19	42%	2,170	9
Bweyale/Kiryandongo	14	2	16	13%	2,678	6
Kyotera	24	15	39	38%	6,458	6
Iganga	26	22	48	46%	10,967	4
Kamuli/Mbulamuti	13	5	18	28%	3,523	5
Mpigi	20	12	32	38%	5,539	6
Sembabule	14	3	17	18%	2,539	7
Lwengo	12	7	19	37%	4,652	4
Kapeeka	12	7	19	37%	3,029	6
Nakasongola	3	1	4	25%	791	5
Subtotal	**472**	**257**	**729**	**35%**	**182,824**	**4**
Eastern Region						
Kapchorwa	15	4	19	21%	2,597	7
Kotido	14	1	15	7%	1,137	13
Kumi	22	7	29	24%	3,503	8
Manafwa	16	7	23	30%	5,745	4
Mbale	83	28	111	25%	22,406	5
Moroto	12	3	15	20%	1,544	10
Soroti	35	14	49	29%	11,436	4
Tororo	42	18	60	30%	15,394	4
Bukedea	9	4	13	31%	1,192	11
Kaberamaido	8	3	11	27%	832	13
Subtotal	**256**	**89**	**345**	**26%**	**65,786**	**5**
Northern Region						
Adjumani	11	2	13	15%	3,505	4
Apac	21	5	26	19%	2,884	9
Arua	37	13	50	26%	11,231	4
Gulu	54	17	71	24%	12,291	6
Kitgum	14	6	20	30%	4,806	4
Koboko	12	4	16	25%	2,346	7
Lira	53	14	67	21%	16,895	4

Area	Male	Female	Total Staff	% Female	Water Connections	Staff Productivity
Moyo	10	2	12	17%	2,777	4
Nebbi	23	7	30	23%	5,809	5
Pader	25	6	31	19%	3,604	9
Pakwach	11	2	13	15%	2,123	6
Sub-Total	**271**	**78**	**349**	**22%**	**68,271**	**5**
Western & Southwestern Region						
Mbarara	106	52	158	33%	33,745	5
Bushenyi/ Ishaka	45	19	64	30%	11,419	6
Fortportal	37	13	50	26%	13,633	4
Kasese	41	21	62	34%	9,316	7
Hoima	16	9	25	36%	6,756	4
Kyankwanzi	4	0	4	0%	170	24
Masindi	18	9	27	33%	7,091	4
Kabale	35	7	42	17%	9,204	5
Kisoro	19	3	22	14%	4,982	4
Rukungiri	20	11	31	35%	4,437	7
Ibanda	10	8	18	44%	5,904	3
Kamwenge	24	6	30	20%	5,128	6
Kanungu	21	7	28	25%	6,036	5
Lyantonde	20	7	27	26%	3,433	8
Rushere	14	14	28	50%	2,663	11
Ntungamo	19	13	32	41%	5,178	6
Mpondwe	17	7	24	29%	4,422	5
Ruhama	15	5	20	25%	2,438	8
Rubirizi	14	3	17	18%	1,980	9
Ntoroko	10	3	13	23%	717	18
Sheema	12	9	21	43%	6,395	3
Bunyangabu	0	0	0	0%	4,712	0
Subtotal	**517**	**226**	**743**	**30%**	**149,759**	**5**
Total	**3,010**	**1,457**	**4,467**	**33%**	**857,347**	**5**

Source: NWSC Database

Annex 10 Annual Performance of Umbrella Authority of Water and Sanitation

Table 1: Performance of Northern Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	FY 2019/20			FY 2020/21			FY 2021/22		
	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)
Technical									
New Connections (No.)	800	978	122	900	722	80	1100	2305	210
Non-Revenue Water (%)	35	43	82	33	33	100	30	28	94
Metering Ratio (%)	100	100	100	100	100	100	100	97	97
Continuity of supply/Functionality (Hrs/Day)	12	21	179	14	19	136	16	22	139
Water quality Compliance (%)	70	82	117	75	90	120	80	95	119
Technical Sustainability									
Backstopping Support (%)	80	40	50	90	70	78	95	355	373
Commercial									
Active Connections (No.)	6,052	8,101	134	6,952	9,482	136	8,052	27,747	345
Water sales growth (m^3)	311,410	487,120	156	313,010	405,041	129	390,010	583,794	150
Collection efficiency (%)	70	81	116	80	91	113	85	88	104
Financial Viability									
Operating cost coverage ratio (%)	60	115	192	70	81	115	80	87	109
Budget for investments (%)	0				0		0	0	0
Pro-Poor									
Pro-Poor Connections Growth (%)	50	206	312	50	215	430	50	473	946
Customer Satisfaction									
Customer Satisfaction (%)	80	0	0	80	0	0	85	85	106

Source: MWE MIS Database

Table 2: Performance of South-Western Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	FY 2019/20			FY 2020/21			FY 2021/22		
	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)
Technical									
New Connections (No.)	5,000	2,567	51	6,000	2,118	35	6,500	1,958	30
Non-Revenue Water (%)	35	29	120	32	27	120	30	29	97
Metering Ratio (%)	95	96	101	100	99	102	100	98.7	99

Continuity of supply/Functionality (Hrs/Day)	15	14	91	15	15	99	18	22	122
Water quality Compliance (%)	80	89	111	90	87	97	95	88.71	93
Technical Sustainability									
Backstopping Support (%)	20	-		20			40	4	10
Commercial									
Active Connections (No.)	8,800	4,482	51	14,800	6,624	45	21,300	9,014	42
Water sales Growth (m^3)	250,000	337,134	135	300,000	385,669	128	350,000	524,836	150
Collection efficiency (%)	80	77	96	85	93	109	100	85.5	86
Financial Viability									
Operating cost coverage ratio (%)	90	67	74	105	67	64	110	105.1	96
Budget for investments (%)	-						10		
Pro-Poor									
Pro-Poor Connections Growth (No.)	250	106	42	300	35	12	300	148	49
Customer Satisfaction									
Customer Satisfaction (%)	80	-	-	85	-	-	-	-	-

Source: MWE MIS Database

Table 3: Performance of Mid-Western Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	FY 2019/20			FY 2020/21			FY2021/22		
	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)
Technical									
New Connections (No.)	9,000	2,238	25	12,000	1,245	10	15,000	1,367	9
Non-Revenue Water (%)	20	38	54	17	31	55	14	31.8	44
Metering Ratio (%)	85	90	105	90	85	94	98	90	98
Continuity of supply/Functionality (Hrs/Day)	15	-	-	17	19	112	18	18.5	103
Water quality Compliance (%)	85	80	94	90	82	91	95	93.825	99
Technical Sustainability									
Backstopping Support (%)	33	8	24	26	10	38	20	5.75	28.75
Commercial									
Active Connections (No.)	17,105	10,915	63	26,195	12,087	46	40,370	14,605	36
Water sales Growth (m3/qtr)	1,224,800	228,548	19	1,959,696	720,063	37	2,755,822	971,963	35
Collection efficiency (%)	80	67	83	85	60	71	95	90.6	95

Financial Viability									
Operating cost coverage ratio (%)	120	90	75	150	87	58	170	80.875	48
Budget for investments (%)	20	-	-	-	-		70		
Pro-Poor									
Pro-Poor Connections Growth (No.)	100			175	104	59	104	41	17.083
Customer Satisfaction									
Customer Satisfaction (%)	75			85		-	90	64.75	0.719

Source: MWE MIS Database

Table 4: Performance of Central Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	**FY 2019/20**			**FY 2020/21**			**FY 2021/22**		
	Target	**Achieved**	**Level Achieved (%)**	**Target**	**Achieved**	**Level Achieved (%)**	**Target**	**Achieved**	**Level Achieved (%)**
Technical									
New Connections (No.)	1,000	1,041	104	1,200	1,203	100	1,500	1,874	124.9
Non-Revenue Water (%)	30	32		28	33	117	25	33.9	135.6
Metering Ratio (%)	90	92	102	95	93	98	100	96.8	96.8
Continuity of supply/Functionality (Hrs/Day)	12	22	181	15	22	145	18	16	88.8
Water quality Compliance (%)	85	96	113	90	95	105	92	96	104
Technical Sustainability									
Backstopping Support (%)	40	100	250	60	33	54	65	22.5	34.6
Commercial									
Active Connections (No.)	18,200	14,781	81	20,000	18,898	94	23,000	26,803	116.5
Water sales Growth (m3/qtr)	580,000	1,173,066	202	600,000	1,211,568	202	620,000	1,532,850	247
Collection efficiency (%)	90	94	104	95	86	91	97	95	97.9
Financial Viability									
Operating cost coverage ratio (%)	90	96	107	102	163	160	110	106	96.4
Budget for investments (%)				2	-	-	10	-	-
Pro-Poor					-				
Pro-Poor Connections Growth (No.)	150	85	57	200	39	19	200	33	16.5
Customer Satisfaction					-				
Customer Satisfaction (%)	82	79	97	85	-	-	87	85.8	98.6

Source: MWE MIS Database

Table 5: Performance of Karamoja Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	FY 2019/20			FY 2020/21			FY2021/22		
	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)
Technical									
New Connections (No.)	800	370	46	900	279	31	1,100	709	64.4
Non-Revenue Water (%)	30	38	79	28	28	102	25	30	120
Metering Ratio (%)	92	99	108	94	99	105	96	98	102
Continuity of supply/Functionality (Hrs/Day)	9	9	94	11	9	82	13	10.75	82.6
Water quality Compliance (%)	90	82	91	92	89	97	96	79.75	83
Technical Sustainability									
Backstopping Support (%)	80	27	34	85	65	76	90	43	47.7
Commercial									
Active Connections (No.)	2,635	1,922	73	3,535	2,205	62	4,635	2,689	58
Water sales Growth (m3/qtr)	233,385	130,606	56	313,009	148,258	47	410,515	159,815	38.9
Collection efficiency (%)	70	68	97	75	79	105	80	76	95
Financial Viability									
Operating cost coverage ratio (%)	80	73	91	92	127	138	110	117.5	106.8
Budget for investments (%)	-	-		-	22		10	17.5	175
Pro-Poor									
Pro-Poor Connections Growth (No.)	20	1	5	40	-	-	60	3	5
Customer Satisfaction									
Customer Satisfaction (%)	75	73	97	80	-		85	-	-

Source: MWE MIS Database

Table 6: Performance of Eastern Umbrella Authority of Water and Sanitation (FY 2019/20 - FY 2021/22)

Key Performance Indicators	FY 2019/20			FY 2020/21			FY 2021/22		
	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)	Target	Achieved	Level Achieved (%)
Technical									
New Connections (No.)	1000	447	45	1200	1659	138	1,500	1820	121
Non-Revenue Water (%)	38	36	106	35	36	97	30	31.7	105
Metering Ratio (%)	80	93	116	90	96	106	95	96.875	101.9
Continuity of supply/Functionality (Hrs/Day)	10	8	80	12	-		14	21.5	153.5
Water quality Compliance (%)	82	66	80	85	93	109	90	93.5	103.8
Technical Sustainability									

Backstopping Support (%)	50	5.3	11	45	56	125	40	60.25	150.6
Commercial									
Active Connections (No.)	10800	10956	101	11300	13156	116	12,000	15,910	132.5
Water sales Growth (m3/qtr)	36733	509835	1388	40000	576591	1441	42,000	828,978	1973
Collection efficiency (%)	80	82	103	85	104	122	90	88.5	98.3
Financial Viability									
Operating cost coverage ratio (%)	90	112	124	102	135	132	125	33	26.4
Budget for investments (%)	0	0		25	0	0	40	0	
Pro-Poor									
Pro-Poor Connections Growth (No.)	30	20	67	40	0	0	50		
Customer Satisfaction									
Customer Satisfaction (%)	75	0	0	85	-		85	-	-

Source: MWE MIS Database

Annex 11: Performance of Land Management Sub-Programme Interventions

INTERVENTIONS	OUTPUT	INDICATORS	FY 2021/22 Target	Actual FY2021/22	NDP-III 2021/22 Budget (Ugx	MTEF Allocation FY2021/22	Cumulative Release FY2021/22 (Ugx Bn)	Cumulative Spent FY2021/22	Reasons for variation	Responsible MDA
OBJECTIVE. 3.0. STRENGTHEN LAND USE AND MANAGEMENT										
3.0. Strengthen land use and management										
3.1. Complete the automation and integration of the Land Management Information System with other systems	LIS automated and integrated with other systems	Number of systems integrated with the LIS	3	3	5.80	5.80	5.80	5.80		MoLHUD, URA, NIRA, KCCA, UBOS, NBRB, UNRA, Judiciary, ULC, NITA-U, MoICT, MoLG
		Status of rollout of online services	40%	5%	11.2	8.36	8.44	4.18	Rolled out to only KCCA MZO. The remainig MZOs to be covered under the CEDP extension	MoLHUD
		Number of NLIC staff capacities built	4	4	1.2					
			500		1.4					
		Number of Districts where the LIS has been rolled out	5		1.5					
		Number of MLHUD call centers established	5	1	2.5					
		Number of mobile offices established	5		1.5					

		Number of mobile offices maintained	5		0.8					
	Revised topographic maps, large scale maps and National atlas.	Number of maps revised	41	63	2.90	0.24	0.24	0.24	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
	Data Processing Centre established	Percentage establishment of the data processing center	50%		4.40					MoLHUD
		Number of SLAAC upgrades conducted	1		2.5					
		Number of overlapping surveys and titles harmonized desegregated by region and sex	200 Cadastral sheets (1:2500)		3.1					MoLHUD
			200,000 Titles							MoLHUD
			200,200							MoLHUD
		Number of Archive centers established	1	1	3.5					MoLHUD
. **Fast track the formulation, review, harmonization, and implementation of land laws, policies regulations, standards and guidelines**	NLP and NLUP disseminated and implemented	Number of districts where the NLP and NLUP have been disseminated	20	8	1.20	0.06	0.05	0.05	Inadequate MTEF to match the NDPIII requirement	MoLHUD
		Status of review of the NLP and NLUP	50%	0%	1.0					
	Land Acquisition and Resettlement Act and Land Acquisition and Resettlement Policy adopted and implemented	Number of Districts where the Land Acquisition, Resettlement and Rehabilitation policy has been disseminated	34	0	0.70	0.10	0.10	0.10	Inadequate MTEF to match the NDPIII requirement	MoLHUD, ULC,

	Land Act and Land Regulations reviewed	Status of review of the Land Act and Land regulations	50%	30%	0.50	0.05	0.04	0.04		MoLHUD
	Five (5) land related laws/ bills finalized, adopted and disseminated	Number of bills finalized and adopted	3	2	2.5	0.18	0.15	0.15	Inadequate MTEF to match the NDPIII requirement	MoLHUD
		Status of review of the Condominium Property Act and regulations	40%		0.5					MoLHUD
		Status of review of the Trustees Incorporation Act and regulations	40%		0.5					MoLHUD
. **Undertake a comprehensive inventory of Government land**	A Comprehensive and up to date government land inventory undertaken	Proportion of government land captured in the inventory	32.6%	32%	3.00	4	0.62	0.52	Budget cuts.	ULC
			34 MDAs & 36LGs		1					ULC
		Revenue generated through lease of government land	5bn	13.352	1.5	5.09	4.06	3.88	Budget cuts.	ULC
3.4. **Capitalize the Land Fund to ensure access to land by lawful and bonafide occupants**	Land fund Capitalized	Hectares of Land purchased from absentee Landlords desegregated by sex	40		29.4					ULC
			6,000	3,130	31.37	60.309	66.980	66.680	The funds included supplementary budget released to clear Church of Uganda (Church Commissioners Holding Company Limited) Presidential pledge. And Domestic arrears.	
			1		0.03					

		No. of titles processed for bona fide occupants	1,500	6,314	3.0	3	4.843	4.336		ULC
		No. of bona fide occupants accessing land fund	1,500		3.0					ULC
			0		0					ULC
			1		0.1					ULC
			0		0					ULC
3.5. Strengthen the capacity of land management institutions in executing their mandate geared towards securing land rights	DLBs and ALCs trained in land management	No. of land management institutions trained in land management (DLBs)	14	13	0.60	0.21	0.105	0.105	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
		Retooling of Land Inspectorate and Reform Department	1		0.8					MoLHUD
			0.2		0.3					MoLHUD
		Number of Land registration training centers established and operationalized	1		3					MoLHUD
		% level of retooling of the Directorate of LAM and MZOs	50%		2.5					MoLHUD
		No. of land management institutions trained in land management (ALCs)	206	180	0.5	0.21	0.105	0.105	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
	Traditional institutions trained and supported	No. of traditional institutions trained	3	0	0.1					MoLHUD
3.6. Promote land consolidation, titling and banking	Titled land area	Percentage of land titled	24%	22.31%	0.8	0.48	0.38	.038	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD

		Number of land titles issued desegregated by sex	79,459	38,976	0.2	12.25	9.50	9.49	The funds include expenses for day-today running and maintenance of MZOs. The low volume of titles is attributed to low awareness levels of importance of land titling in the country	MoLHUD
		Number of CLAs formed	50	14	3.0					MoLHUD
		Number of CCOs issued desegregated by sex	20000	4032	4.0					MoLHUD
		Number of Certificates of Occupancy issued desegregated by sex	20000		4.0					MoLHUD
		Number of blue pages converted into White pages	3750		4.0					MoLHUD
	Land bank facility established	Hectares of Hectares of government land secured for infrastructure corridors ('000s)	10.0		15.80					ULC
3.7. Promote tenure security including women's access to land	SLAAC program in 135 districts implemented	Number of Districts implementing Systematic Land Adjudication and Certification (SLAAC)	24	13	11.6	7.18	7.30	0.69	Delayed Approval of the CEDP AF extension to fund the activity	MoLHUD
	Women's access to land strengthened	Percentage of land titles issued to and owned by women	29		0.2					MoLHUD
		Status of review of the Gender strategy for NLP	50%		0.70					
		Number of districts where the Gender strategy for the NLP is disseminated	45		0.5					

	Fit-for-purpose approach adopted and implemented in planning	Level of implementation of the fit for purpose approach in planning, %	30		0.3					MoLHUD
	Land dispute mechanisms reviewed through regulations	Number of land tribunals operationalized	0		0					MoLHUD
		Number of land awareness campaigns held in all regions of the country	10		0.60					MoLHUD
		Number of persons compensated for loss of land desegregated by sex	0		0					MoLHUD
		Number of land disputes handled desegregated by sex	100	142	1.76					MoLHUD
		Number of matters adjudicated upon desegregated by sex	100		1.07					MoLHUD
		Number of mediation committees established and trained	30		0.5					MoLHUD
3.8. Establish the National Spatial Data Infrastructure (NSDI) to enhance data integration for planning and development	UNGN rehabilitated and modernized	Number of UNGN Points rehabilitated and modernized	38	8	1.10	0.19	0.19	0.19	Inadequate MTEF to match the NDPIII	MoLHUD
		Status of development of the Law and policy on NSDI	40%		0.25					MoLHUD
		Number of Administrative unit boundaries demarcated and marked	4	3	0.5	0.15	0.15	0.15	Inadequate MTEF to match the NDPIII	MoLHUD
		Number of Cities whose boundaries have been demarcated and marked	4		1					MoLHUD
	International boundaries affirmed	Km of international border reaffirmed	546	62	4.60	1.02	1.02	1.02	Inadequate MTEF to match the NDPIII	MoLHUD

3.9. Develop and implement a Land Valuation Management Information System (LAVMIS)	National Valuation Standards and Guidelines developed and disseminated	Functional Land Valuation Management Information System (LAVMIS)	1		1.6	1.00	0.54	0.54	Inadequate MTEF to match the NDPIII	MoLHUD
		Number of valuation standards and guidelines developed	0	0	0.6	0.37	0.20	0.20	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
	Property index for taxation and valuation developed and implemented	Percentage of Land valuation databank developed	10%	0%	3	1.87	0.62	0.61	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
		Number of Property indices for taxation and valuation developed and published	2	1	1.2	0.75	0.80	0.80	Inadequate MTEF to match the NDPIII costing coupled with budget cuts.	MoLHUD
3.10. Promote integrated land use planning	Integrated physical and economic development plans for regions	Proportion of regions and districts with integrated physical and economic development plans	50%		9.00					MoLHUD
		Number of Road and Water easements captured in the LIS	5		0.8					MoLHUD
	Local governments physical planning priorities profiled	Number of subdivisions and consolidation plans registered and integrated in the LIS	10000		4.0					MoLHUD
		Number of integrated land use layers and plans captured in the LIS	10		0.3					MoLHUD
		Number of LGs whose Physical planning priorities are profiled	20		0.3					MoLHUD
TOTAL RESOURCE REQUIREMENTS FOR THE OBJECTIVE					**213.18**	**114.709**	**113.123**	**101.136**		

Annex 12:OPM Disaster Preparedness and Management Planned Outputs and Achievements for FY 2021/22

Key Output	Planned Outputs	Achievements
130201 Effective preparedness and response to disasters	1. 30 Disaster Risk Assessments conducted at District and community level	-Carried out eighty-two (82) district Disaster Risk Assessments (i.e., the Fire incident at Bilal Primary school in Kawempe division, Kampala City, Kabira TC Market- Mitooma district the effects of floods, heavy rains, landslides, food insecurity in Kasese, Abim, Kotido, Moroto, Gulu, Amuru, Kitgum, Lamwo, Bududa, Manafwa, Sironko, Namisindwa, Bulambuli, Rubanda, Masaka, Buyende, Buliisa, Nakasongola, Ntoroko, Agago, Kampala, Bundibugyo, Bunyangabu, -Comprehensive assessment of IDPs in Ntoroko. districts and Floods and landslides hazard risk and vulnerability mapping of Bundibugyo and Bunyangabo districts. This which informed the disaster response and preparedness strategies. -Assessment of Kisoro, Kasese, Bundibugyo districts on impact of refugees. -Analysis of Food security and Nutrition data for Karamoja sub region.
	2. National Emergency Coordination and Operations Centre (NECOC) & DECOCs equipment maintained, updated and staff capacities enhanced	-Enhanced the capacity of National Emergency Coordination and Operations Centre (NECOC) & DECOCs through conducting dissemination and training sessions in thirteen (13) districts of Napak, Moroto, Katakwi, Buhweju, Ibanda, Hoima, Bullisa, Kikuube, Ntoroko, Madi-Okollo, Maracha, Koboko, and Yumbe which informed the DECOCs for response and preparedness. -Enhanced the National Early Warning System against Disaster risks through practicing use of chatbot and digitized Damage and loss assessment tool which provides real time information to aide decision. -Conducted One (01) Assessment of suitability of solar system installation to support DECOC activities for update and capacity enhancement. -Procured and installed Equipment to enhance capacities of staff in eleven DECOCs of Bukedea, Moroto, Kween, Kasese, Kabale, Adjumani, Amuru, Nakasongola, Butaleja, Namayingo and Bududa districts that enhanced DECOCs and staff capacities. -Kisoro DLG works procured for damaged school infrastructure such as pit-latrines.

	3. National Disaster monitoring, early warning and disaster reporting system enhanced	-Produced and disseminated twelve (12) monthly Uganda National Integrated Early Warning systems (UNIEWS) bulletins on potential disaster occurrences that facilitated disaster preparedness. -Conducted sensitization on UNIEWS in Rakai, Lwengo, Ibanda, Buhweju, Madi Okollo, Obongi, Pakwach, Luuka, Namayingo, Kayunga in addition to Karamoja, Acholi, Lango, Teso, Bukedi, Bunyoro, Elgon & Sebei sub regions. -Conducted National Risk Atlas Dissemination in seventeen (17) districts of Kole, Lira, Otuke, Apac Kwania, Amolator, Bugiri, Bugweri, Jinja, Iganga, Kaliro, Namutumba, Namayingo, Mayuge, Luuka, Kamuli, Buyende. As a result of the above interventions, awareness has been created for preparedness against disasters. -Coordinated the launch of the National Oil Spill Contingency Plan 2020 which established the national preparedness and response system for oil spill prevention, preparedness and response. -Disseminated National Risk Vulnerability Atlas dissemination in five (05) districts of Iganga, Kaliro, Namutumba, Namayingo and Mayuge that facilitated disaster preparedness and response. -Conducted One (01) Inter- Agency Consultative meeting on rapid needs assessment tools that made a number of recommendations to facilitate disaster preparedness and response. -Reconnaissance of oil spill vulnerability in Hoima, Buliisa & Kikuube
	4. 30 DDMC resilience and contingency planning Trainings conducted	-Conducted forty eight (48) DDMCs/DRR resilience trainings in Moroto, Amudat, Kaabong, Karenga, Dokolo Amuru, Pader, Kyegegwa, Isingiro, Bundibugyo, Bunyangabu, Nwoya, Pakwach, Katakwi, Amolatar, Ngora, Bukedea, Kumi, Kwania, Kapelebyong, Bududa, Bulambuli, Namisindwa, Sironko, Manafwa, Paliisa, Butaleja, Kitagwenda, Buliisa, Kibuku, Butebo, Bugweri that enhanced the capacity across DLGs on resilience and awareness against disasters. -Supported the development of twenty-one (23) district contingency Plans (DCPs) for Kikuube, Kamwenge, Ntoroko, Bundibugyo, Kasese, Obongi, Nakapiripirit, Koboko (and 8 sub counties in Koboko), Karenga, Amuru, Pader, Kisoro, Ngora, Kanungu, Pakwach, Nwoya, Yumbe, Obongi, Koboko, Katakwi, Ngora, Serere and Amolator that enhanced the capacity across DLGs on resilience and awareness against disasters.
	5.National Disaster Preparedness and Management Bill drafted	-Developed National Disaster Risk Management Plan approved by Cabinet which would inform the preparation of the National Disaster Preparedness and Management Bill. -Reviewed principles of the National DPM Bill. -Annual State of Disaster Report data collected in 58 districts.

	6. 1,250 persons living at high risk of landslides in five disaster prone districts of Bududa, Manafwa, Sironko and Bulambuli resettled	-Reviewed MOUs for MDAs implementing resettlement activities in Bulambuli. -Resettled twenty-two (34) Households of 170 persons living at high risk of landslides in five disaster prone districts of Bududa, Namisindwa, Manafwa, Sironko and Bulambuli to Bunambutye, Bulambuli. -Completed the preparation for resettlement of sixty-six (66) Households 330 persons living at high risk of landslides to Semuliki wildlife reserve in Kanara Town Council. -Land procurement and wetland investigation for Kasese and Kayunga displaced persons.
130204 Relief to disaster victims	1.200,000 disaster affected persons supported with 2,000MT of food, and 2,000 pieces of non-food items	Supported 498,180 disaster affected Households with relief food (34,438) bags of maize flour 100kgs each, 16,367 bags of beans 100kgs each and 76,800kgs of sugar) and non-relief food items (9,200 tarpaulins, 300 wheelbarrows, 1,800 blankets, 600 pangas, 7,000 spades, 1,100 pairs of shoes, 1,950 basins, 300 bars of soap, 1,950 jerry cans, 400 sleeping mats, 4408 iron sheets and 3,200 mosquito nets) which enhanced the livelihood of the disaster affected persons across the country. -Food relief distribution monitoring in Karamoja, WestNile, Central, Bugisu, Sebei, Bunyoro, Busoga, southwestern and Teso Subregions.
130203 IDPs returned and resettled, Refugees settled and repatriated	1. Block farming and environmental restoration in Bunambutye for resettled households supported	-Drafted work plan for resettlement of persons at High risk of landslides in Elgon sub region to Bunambutye and flood victims in Ntoroko district.
	2. Basic amenities like water, electricity, access roads for Resettled households provided.	-Verified eleven (11) displaced households during the October mudslides in Bududa district for resettlement.
	3.Disaster incidents / events in 30 most disaster-prone districts assessed	-Conducted Post-Disaster (windstorms, hailstorms, floods, landslides) losses and damage assessments in 32 districts which informed Government responses mechanisms and planning. -Allocating land for block farms in Bunambutye.

130204 Relief to disaster victims	1. 200,000 disaster affected households supported with food and non-food items	-Supported 111,839 (559,196 persons) disaster affected persons with relief food (31,055 bags of maize flour 100kgs each, 13,166 bags of beans 100kgs each and 106,460kgs of sugar) and non-relief food items (10,500 tarpaulins, 1,800 blankets, 1,950 basins, 554 bars of soap, 4,200 jerrycans, 300 sleeping mats, 4,200 iron sheets, 3,500 mosquito nets and 44 cartons of moringa and tea leaves) for livelihood.
	2. 100 Disaster displaced households supported with basic services like shelter, water and sanitation	
130252 Transfer to other Government units	1. 100 resettlement housing units in Bunambutye constructed	
	2. Construction of 2nd phase of Bunambutye Primary school for resettled children completed	
130272 Government Buildings and Administrative Infrastructure	1. A security and retaining wall constructed at Namanve relief stores	

Annex 13: UWASNET Members who submitted Reports for FY 2021/22

Sn	Organization Name	Acronym (If Applicable):	Organization Category	Intervention Areas
1)	African Agency For Integrated Development	AAID	Local Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions
2)	Agency For Cooperation In Research And Development	ACORD-U	Local Ngo	Sanitation Promotion Interventions
3)	Africa Community Technical Service Uganda	ACTS UGANDA	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
4)	Africa Community Technical Service Uganda	ACTS UGANDA	International Ngo	Capacity Building, Sanitation Promotion Interventions
5)	Action For Rural Women's Empowerment	ARUWE	Local Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure
6)	Avsi Foundation	AVSI	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions
7)	Avsi Foundation	AVSI	International Ngo	Capacity Building, Sanitation Promotion Interventions
8)	Africa Water Solutions	AWS	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
9)	The Busoga Trust	BT	Local Ngo	
10)	Child Care And Youth Empowerment Foundation	CCAYEF	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions
11)	Community Integrated Develppment Initiatives	CIDI	Local Ngo	
12)	Community Integrated Development Initiatives	CIDI RAKAI	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
13)	Caritas Moroto Diocese	CMD	Fbo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
14)	Church Of Uganda Teso Dioceses Planning And Development Organization	COU-TEDDO	Fbo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
15)	Days For Girls	DFGU	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
16)	Drink Local Drink Tap	DLDT	Local Ngo	Water Supply Infrastructure, Capacity Building
17)	Environmental Alert	EA	Local Ngo	Sanitation Promotion Interventions

18)	Fields Of Life	FOL	International Ngo	Sanitation Promotion Interventions
19)	Fronasa Veterans Association Bududa	FVAB	Cbo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure
20)	Hope 4 Kids International	H4KI	Local Ngo	Water Supply Infrastructure
21)	Habitat For Humanity Uganda	HFHU	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
22)	International Aid Services	IAS	International Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure
23)	Irc International Water And Sanitation Centre	IRC	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
24)	Joint Effort To Save The Environment	JESE	Local Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure
25)	Joint Effort To Save The Environment	JESE	Local Ngo	Sanitation Promotion Interventions
26)	Join For Water	JFW	International Ngo	Sanitation Promotion Interventions, Sanitation Infrastructure
27)	Jinja Area Communities Federration	JIACOFE	Local Ngo	Capacity Building
28)	Karamoja Peace And Development Organization	KAPDA	Local Ngo	Capacity Building, Sanitation Promotion Interventions
29)	Kigezi Diocese Water And Sanitation Programme	KDWSP	Fbo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
30)	Katosi Women Development Trust	KWDT	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
31)	International Lifeline Fund	LIFELINE	International Ngo	Capacity Building
32)	Link To Progress	LTP	Local Ngo	Sanitation Promotion Interventions
33)	Lutheran World Federation Uganda	LWF	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
34)	Living Water International Uganda	LWIU	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
35)	Mission 4 Water Limited	MISSION 4 WATER	Local Ngo	Sanitation Promotion Interventions
36)	Mukono Multipurpose Youth Organisation	MUMYO	Cbo	Sanitation Promotion Interventions, Sanitation Infrastructure

37)	National Association For Women's Action In Development	NAWAD	Local Ngo	Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
38)	Netwas For Water And Sanitation Uganda	NETWAS	Local Ngo	Water Supply Infrastructure, Capacity Building
39)	Norwegian Refugee Council	NRC	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
40)	One By One Initiative For Vulnerable Communities In Uganda	OBOIVU	Local Ngo	Capacity Building, Sanitation Infrastructure, Water Supply Operation And Maintenance
41)	Partners For Community Transformation	PACT	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Water Supply Operation And Maintenance
42)	Partners For Community Transformation	PACT	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions
43)	Plan International	PIU	International Ngo	Water Supply Infrastructure, Capacity Building, Research And Development, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
44)	Rural Water Initiative For Climate Action	RWICA	Cbo	Water Supply Infrastructure, Sanitation Promotion Interventions
45)	Snv Netherlands Development Organisation	SNV	International Ngo	Research And Development, Sanitation Infrastructure, Water Supply Operation And Maintenance
46)	The Water Trust	TWT	International Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions
47)	Uganda Muslim Rural Development Association	UMURDA	Local Ngo	Integrated Water Resource Management, Sanitation Promotion Interventions
48)	Voluntary Action For Development	VAD	Local Ngo	Capacity Building
49)	Viva Con Agua	VCA	Local Ngo	Integrated Water Resource Management, Sanitation Promotion Interventions
50)	Water And Sanitation Entreprenuers Association Uganda	WASEU	Private Sector	Sanitation Promotion Interventions, Sanitation Infrastructure
51)	Wateraid Uganda	WAU	International Ngo	Water Supply Infrastructure, Capacity Building, Integrated Water Resource Management, Sanitation Promotion Interventions, Water Supply Operation And Maintenance

52)	Westnile Regional Civil Society Network	WECISNET	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
53)	Welthungerhilfe	WHH	International Ngo	Water Supply Infrastructure, Capacity Building, Research And Development, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
54)	Wells Of Life	WOL	International Ngo	Water Supply Infrastructure, Capacity Building, Research And Development, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
55)	World Vision Uganda	WVU	International Ngo	Capacity Building
56)	Youth Environment Service	YES	Local Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
57)	Youth Environment Service	YES	Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Infrastructure
58)	Jf Well Works Africa		Local Ngo	Water Supply Infrastructure, Capacity Building, Water For Production, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
59)	Whave Solutions Ltd		Ugandan Non-Profit Social Enterprise	Water Supply Infrastructure, Capacity Building, Integrated Water Resource Management, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
60)	Water For People		International Ngo	Water Supply Infrastructure, Capacity Building, Water For Production, Integrated Water Resource Management, Sanitation Promotion Interventions, Water Supply Operation And Maintenance
61)	Butakoola Village Association For Development		Local Ngo	Water Supply Infrastructure, Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
62)	Water Compass		Local Ngo	Water Supply Infrastructure, Sanitation Promotion Interventions, Sanitation Infrastructure
63)	Amref Health Africa Uganda		International Ngo	Capacity Building, Sanitation Promotion Interventions
64)	Caritas Fort Portal-Hewasa		Fbo	Water Supply Infrastructure, Capacity Building, Research And Development, Integrated Water Resource Management, Sanitation Promotion Interventions, Water Supply Operation And Maintenance
65)	Oxfam International		International Ngo	Water Supply Infrastructure, Capacity Building, Research And Development, Integrated Water Resource Management, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance
66)	Unbound Kampala		Local Ngo	Sanitation Promotion Interventions

67)	Save The Children International		International Ngo	Capacity Building, Sanitation Promotion Interventions, Sanitation Infrastructure
68)	Save The Children International		International Ngo	Capacity Building, Sanitation Promotion Interventions
69)	Caritas Mbarara		Fbo	Water Supply Infrastructure, Capacity Building, Water For Production, Integrated Water Resource Management, Sanitation Promotion Interventions, Sanitation Infrastructure, Water Supply Operation And Maintenance

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